CHAPTER 5

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5.4 Notes and Reference


5.1 Persian Gardens

The origin of the Mogul gardens in India is discussed in this thesis. According to the analysis, it can be said that most of the gardens built during and within Mogul Empire, are all built in the style of Persian gardens. In addition to understand and study of the Mogul and Persian gardens, there is a need to have a glance at the history of Mogul period in India and the same period in Iran. The researcher believes that, Mogul Emperor and the political situation of this period have played the main role to introduce the Persian garden style in India and beside that, the Safavid kings and political conditions in Iran also have majorly contributed to this process by sending architects, artists and craftsmen to India.

5.1(a) Brief history of Iranian dynasties coinciding with the Mogul dynasty in India


5.1 (a1) Safavid dynasty (1501- 1736 A.D)

The Safavid period is considered to be one of the most important historical periods of Iran, because even nine hundred years after the Sassanian dynasty, a centralized kingdom could rule the country. After Sassanian several Persian monarchies such as Safarian, Samanids, Taherian, Ziyarid, Buwayhid and Sarbedaran came on, but none were able to cover entire Iran and integrate Iranian people. This period was one of the most important chapters of Iranian history and also the peak period of Islamic civilization.

Founder of the Safavid dynasty (Map 2), is Shah Ismail I, and the last, Shah Sultan Hussein, who succumbed to Afghans that led to the loss of the Safavid dynasty.
During this period, relations between Iran and European countries due to hostility of the Ottoman Empire and the Safavids and trade, flows, especially the trade of silk from Iran, was spread widely. In the Safavid period, especially in its first half, many wars took place between Iran and the Ottoman Empire in the West and the Uzbeks in the East which was due to terrestrial movements and religious wars.

Iran in the Safavid era, in the fields of: military, Shiite jurisprudence, culture, arts (architecture, calligraphy, music, painting, etc.) and Persian literature had considerable progress. Safavid architecture style had special attention towards palaces, road construction, city planning and buildings in public places, so that it is visible in Isfahan. Shah Abbas the Great and his successors tried for beautification of this city by constructing beautiful buildings that surrounds Shah Square.

In addition, Gardens, landscape and trees, have covered the city's long and short ways and made it as an example and a sign of beauty and harmony. As the French writer, Jean Chardin states in the logbook (1643 - 1713 A.D), that he wondered once he visited the golden age of the city, beautiful palaces, green and pleasant gardens and beautiful pools and many other things that Iran was privileged in them, including Iranian poetry. Safavids did not pay attention only to the palaces - such as Chehel Sotun (Forty Columns) Palace and Hasht Behesht Palace - but also took markets, caravanserais in large cities and main roads into consideration.¹

**Ismail I** (14501-1524 A.D)

Sheikh Safi Al Din Ardabili (1334 A.D) was the grandfather of the Safavid Dynasty who was mystic and poet and had many followers and disciples. One of his descendants named Ismail by relying on the Alawite followers of the Sufi path established the Safavid dynasty and sat on the throne as Shah Ismail in the year 14501 A.D. He took up the monarchy when he was around
thirteen years old. He chose Tabriz as his capital and minted coins in his name and proclaimed Twelver Shi'a as the state religion.

Shah Ismail was a bold man and with great power created his new dynasty. In his time, the greatest artists of the Safavid dynasty turned to his court.

Shah Tahmasp I (1524-1576 A.D)

Ismail I's successor was Tahmasp the first, had a long and eventful reign (1524 - 1576 A.D). His achievements in the great masterpieces of Iranian art are more than architecture. Since the capital was near to the Ottoman Empire had been in constant danger, in 1546 A.D, Shah Tahmasp moved the capital from Tabriz to Qazvin. He brought long period of peace and stability to Iran.

At this time, palaces, mosques, forts and some magnificent porches were built that dazzled the eyes of European travellers. In addition, the previous buildings were constructed and expanded. But in general at the time of Shah Tahmasp, tremendous growth in various arts such as painting, carpet weaving and textile can be seen, because the Safavid king gave special attention to the arts and supported them, but compared to other Safavid kings had lesser attention towards architecture. However, internal turmoil and external pressures from both the East and West as well as religious transformation, had a big blow to the status of Persian Literature and Culture. The blow led to migration of a number of poets and writers and even Iranian scientists, to the Ottomans or India.

Shah Ismail II (1576-1578 A.D)

There was a disagreement over the succession of Shah Tahmasp and finally Ismail Mirza took over the throne as Shah Ismail II. He was jovial, cruel and foolish. He ruled Iran for a year and a half, during which time killed many of his nephews and close relatives. Shah Ismail II, was
artist and an artist-loving person. In the reign of Shah Ismail II, the Royal Library was the centre of famous scholarly literature and artists. This King reopened the Royal Library which was closed during Shah Tahmasp’s time and gathered many renowned artists in there. He also supported poets.

Shah Ismail II was interested in architecture and design of buildings in which he was an expert. He made many changes to palaces he settled in. Shah Ismail II, destroyed or made substantial changes in many government buildings that were built by Shah Tahmasp I. Shah Ismail II, in a short period of his reign also constructed many nice buildings. He had a very good taste in drawing, design, layout and design of buildings and constructions.

After the death of Tahmasp I, Akbar Shah sent a delegation to offer condolences and also congratulations on the occasion of the coronation of King Ismail II with exquisite gifts to the court of Qazvin. Shah Ismail II instead of establishing political relationship with Indian emperor Akbar Shah wrote a letter to his brother and ruler of Kabul Mirza Mohammad Hakim in which he called him a king, and asked him to send his political representatives to Iran. However, the relationship of Akbar Shah the Indian king with Shah Ismail II was not hostile.

Since Deccan sultans had friendly relations with Shah Ismail I in Iran, they tried to maintain the same with Shah Ismail II. In 1577 A.D, Nizam Shah ambassadors ruler of the Deccan, came to the court of Iran’s king with precious gifts and presents and announced the desire of the Shah to strengthen friendly relations between the two countries. Shah Ismail II accepted his ambassadors and gifted sumptuous clothes and permitted them to return.

**Sultan Muhammad Khodabandeh (1578-1587 A.D)**

After news of the death of Shah Ismail II, Mohammed Mirza, brother of the king who ruled Shiraz, moved to Qazvin and named himself as Khodabandeh. Due to disease and being
half blind he had survived to be killed by Shah Ismail II’s family. Because of his blindness, to attract heads of state and Ghezelbash rulers and soldiers paid massive donations and emptied the court treasury that was filled during the reign of Shah Tahmasp I.

Because of internal disputes among Ghezelbash rulers, Sultan Muhammad Khodabandeh failed to recapture Tabriz from the Ottomans and until Shah Abbas I, the city remained in the hands of the Ottoman Empire. He reigned for ten years and his rule came to end when his son Abbas Mirza with the help of Murshid Quli Khan the ruler of Mashhad, gained power. With the reign of Shah Abbas I, he completely withdrew from politics, until the ninth year of the reign of Shah Abbas I in Qazvin when he died from some disease.

**Shah Abbas I** (1587 - 1629 A.D)

Shah Abbas I with help of Mashhad’s ruler Murshid Quli Khan claimed to be king while his father was still alive and took his place on the throne. This period is known as the golden age of Safavid architecture. After the repression of the Uzbeks and capturing Khorasan, Shah Abbas had a desire to demand Kandahar from the Indians; therefore he sent several ambassadors with expensive gifts to the court of Mogul India and requested for Kandahar but did not get the right response.

Shah Abbas came to know that with friendly request he cannot gain Kandahar. Therefore in the year 1622 A.D went to Khorasan and from there on the pretext of a hunting excursion headed to Kandahar. Shah Abbas, shortly after the siege of Kandahar and crushing the city towers, occupied the city.

He was interested in poetry, painting, music, architecture and liked scholars and artists. Mulla Sadra, Mir Damad, Mirfendereski, Sheikh Bahai, etc. were the scholars of this period. As mentioned earlier, architecture was very advanced in this period as it was the golden age of
architecture in the Safavid dynasty. The most important monuments were built in this period in Iran, and Safavid architectural style became famous and well recognized.

In the year 1597 A.D, Shah Abbas I decided to choose Isfahan for his capital. The King came personally to Isfahan to supervise and monitor on the new architecture and main part of city which should have been created around Naghshe Jahan square and from there by creating neighbourhoods, gardens and beautiful buildings continued to Zayanderud River. Since then, architects and engineers, had been actively engaged in work and began to make beautiful plans for surrounding areas of Naghshejahan square, Qaisariya Bazaar, Chahar-bagh, Abbas Abad, palaces and gardens that needed to be constructed around Chahar-bagh and Abbas Abad (which was extended to South Chahar-bagh up to the foot of the mountain).

Shah Abbas is parallel to what Tahmasp had done in Qazvin and even in some cases with the same names, led rulers and the country dignitaries to help him to complete the project and each one to build a garden around Chahar-bagh.

One of the authors about the purpose of Shah Abbas` action in Isfahan wrote: "The purpose of it was to look so nice, so big, aromatic and green, not to be exaggerated, if it is called second paradise. After crossing the Isfahan square, from the Chahar-bagh (four Gardens), you step into a street with the length of two miles (about three kilometres and two hundred meters), as wide as London Holborn street, with most of it on both sides are covered with garden walls. The street leads to Hezar Jarib (thousand acres) street which is a grove full of fruit trees. There is a three mile (nearly five kilometres) wall around it which has three magnificent gates built in it. In the middle of the garden, there is a large polygon pool which has twelve equal sides and the width of each side is five feet and from all sides beautiful fountains sprinkle water on this
pool...It can be called Shah Abbas Heaven. For this reason famous French writer Henri Stierlin called Isfahan as a picture of paradise.²

Construction of buildings, gardens, streets and neighbourhoods of the city continued. Naghshejahan square was the shiner of this plan to date architecture and engineering from that era of Shah Abbas, continues to dazzle the viewer's eyes. Constructions that were done by Shah Abbas I and his successors, gradually made Isfahan the most beautiful city of Iran and even in the world. A foreign traveller, Thomas Herbert, two years after the death of Shah Abbas, described Isfahan as: Gardens of this city, in terms of glory and beauty is in such a way that has no equal example in Asian cities, slightly away from the city of Isfahan; gardens are like a huge grove that brings out the beauty in mind.³

Unfortunately due to wrong behaviour and bad deal which Shah Abbas had committed with his sons and his own imprudence to prepare and train a competent successor, soon after this great king, the kingdom and the Safavid throne was given to incompetent or low powered kings and day by day its glory and prestige decreased and once again foreign enemies took the step to attack Iran.⁴

Shah Safi (1629 - 1642 A.D)

After the death of Shah Abbas I, his grandson Shah Safi succeeded and was crowned in 1629 A.D. His fear of losing power, made him to kill many people, including Safavid princes and Georgian nobles.

Alimardan Khan, son of Ganjali Khan, was one of the famous commanders of Shah Abbas I (Shah Abbas I). Ganjali Khan was from the Zeke clan of Iran. After the strange death of Ganjali Khan, his eldest son Alimardan Khan was the successor. He first took the body of his father from Kandahar to Mashhad and according to the will of his father buried him under the
foot of the Imam and then received the title of Babaei and Kerman rule from Shah Abbas. He was known as the second dad (Baba Sani). Alimardan Khan had a sister, who was the wife of Mirza Talib Khan the minister of Shah Abbas. He was deposed in 1620 A.D and at the time of Shah Safi in 1631 A.D was returned to the Ministry. During this period, Shah Safi suspected his brother-in-law, wife's brother of Talib Khan, his minister, who was Alimardan Khan. Maybe he had a dream of a conspiracy. He was invited to the court of Shah Safi, but Alimardan Khan found about Safi Khan nemesis, and in addition for many years he had not paid Kerman and Kandahar taxes to the king. Then he turned the Kandahar deal down and in the year 1638 A.D, offered Kandahar to the Mogul Indian king, Shah Jahan and moved to India. Alimardan Khan had immense wealth, and when he came to the court of India, he did not accept his designated annuities, Tavernier says: "Alimardan Khan was the son of the last ruler in Kandahar who inherited his endless wealth. When Alimardan moved to the court of the Great Mogul king, all his vessels were of gold! And he had amassed so much gold in funds that did not accept annuities of the Indian king. He built a beautiful palace in Jahan Abad. One day when the Indian king with his princesses went to see him, Alimardan`s wife opened several funds that were all full of gold and the princess said: "If my husband does not accept annuities, it is because he has enough wealth for himself and his family".

In return, Shah Jahan the emperor of India, appointed Alimardan Khan as governor of Kashmir, Kabul and Lahore, and then gave him the title of Amir Alomara. Alimardan Khan died in 1657 AD, eight years after Shah Abbas II and forty thousand Iranian soldiers retook Kandahar from the Indians, and was buried in Lahore. Ali Mardan Khan built many buildings in India and Pakistan and his tomb is famous in Lahore.
Shah Abbas II (1642 - 1666 A.D)

Shah Abbas II was crowned at the age of nine. Because of his young age, he had no experience of governance, so practically all the country affairs was in the hands of his prime minister Sarotaghi and later after him, it was given to Khalifeh Soltan and Mohammad Beig.

Shah Abbas II used to enjoy the company of scientists and scientific debates were always happening in his court. He could be called the true son of Shah Abbas the Great, because during his time, culture and economic flourished again. Shah Abbas II put great effort in to the development of Isfahan monuments and in his time he built the Saadat garden (Happiness garden) next to Zayandehrud River and the Chehel Sotoun palace and garden (the palace of forty columns). Shah Abbas II was an art enthusiast and many beautiful works were created by artists and painters during his reign.

The country enjoyed relative peace, except for the recapture of Kandahar and retake of Kandahar by Shah's troops added importance to his character. In 1649 A.D, he achieved victory in Kandahar. Pirnia, in the book of history of Iran in wrote: "In the year 1647 A.D, Shah Abbas appointed Morteza Qoli Khan Qajar as Iran's army commander and commissioned him to retake Kandahar. In the following year, for pilgrimage purpose he moved from Isfahan to Mashhad and joined Morteza Qoli`s Khan troops and surrounded Kandahar.

Shah Jahan's troops were finally unable to resist and the Shah of Iran in 1059 occupied Kandahar. Shah Jahan sent Aurangzeb to recapture the city and he came to Kabul, but neither the Son nor the Father could beat the Iranian troops and Kandahar continued to remain under the occupation of Iran until Afghan intrigue and Shah Abbas troops strongly kept the city and every time defeated the Mogul army despite the attacks in the years 1650, 1651and 1653 A.D which came to the city led by of Shah Jahan."6 (Image 17)
Shah Soleyman (1666 - 1694 A.D)

Shah Soleyman, the eldest son of Shah Abbas II was crowned with the name of Shah Safi II. In the early years of the reign of Shah Safi II the country was deeply in turmoil. Tribes of the East of the Caspian Sea rebelled and began killing people and occupied part of the country. After this turmoil, the king also fell ill and his condition was worsening day by day. Physicians of the king and his ministers, to make the disclaimer, claimed that the astrologers made a mistake in their calculations for the good time for the king’s coronation. Eventually they had the coronation ceremony. At this time the king with a new name, Shah Soleyman, was crowned again. He ordered to mint coins again and to build a new royal seal. Incidentally, after that his condition improved and with greater will ran the country and the situation in the country began to settle down. Generally Shah Soleyman was not a competent king, but because of Sheikh Ali Khan Zanganeh as his chancellor the situation in the country was not distracted and in fact Sheikh Ali Khan was in charge of the administration of the country.

At this time many mosques, palaces, bridges, streets and gardens were built in Isfahan, so that European travellers used to call it half the world and admire its beauty. Chardin who was a credible observer, says that in 1666 A.D, Isfahan had 162 mosques, 48 schools, 182 Caravanserais and 273 bathhouses. Hasht Behesht Garden and palace were constructed during his reign.

Shah Sultan Hossein (1694 - 1722 A.D)

Sultan Hussein Shah was the last king of the Safavid dynasty who ruled for thirty years. He was crowned in 1694 A.D, his reign ended with the rise of Afghans led by Mahmoud Hotaki in 1722 A.D and the long lasting Safavid dynasty collapsed.
Appointing Shahnawaz Khan Gorji as Kandahar ruler was the first mistake of Shah Sultan Hussein. This Evil ruler was dubbed as Gorgin Khan who created the Afghan riots and caused the extinction of the Safavid dynasty. Corruption in government agencies, appointing mobs in government positions, plundering of the rulers of cities, huge lavish lifestyle of Kings, heavy taxes, fall of foreign trade and so on, were the direct reasons for the collapse of Safavid rule during Shah Sultan Hussein’s time.

One of the other important monuments of this period was Farah Abad palace in Soffeh hillside in Isfahan which was a simple but a huge building. Shah Sultan Hossein Safavi ordered all rulers and dignitaries to pick a piece of land each and build a garden or a palace in it. The King along with his guests used to go to Farahabad at some part of the year. The mentioned monument was occupied by Afghans during the Siege of Isfahan and was quickly was destroyed today nothing has been left of it.8

Shah Tahmasp II (1722 - 1731 A.D)

In fact, Shah Tahmasp II was the nominal tenth king of the Safavid dynasty in Iran. He was son and successor of Shah Sultan Hussein. After the occupation of Afghan rebels and death of Shah Sultan Hussein, for some time, incompletely he ruled parts of Iran.

Afghan kings were defeated by Nader Qoli Khan in the war and Isfahan was occupied by Nader. Two weeks after seizing Isfahan, Shah Tahmasp II entered the capital of his ancestors, minted coins in his name and read sermon and Nader Qoli Khan crowned him with his hands. Following the defeat of the Ottomans and the signing of peace agreements, public discontent increased and finally Nader overthrew him and Shah Abbas III was the king and Nader became his regent.
Chapter 5

Persian Gardens

Shah Abbas III (1731 - 1736 A.D)

Shah Abbas III was the eleventh king of the Safavid dynasty and a successor to Tahmasp II. He became king when he was only six months old. During his reign, Nader Qoli Khan (Nadir Shah) took over the government. Very young Shah Abbas III and his father Tahmasp Mirza, were killed by Rezagholi on the orders of Nader. Finally, in 1735 A.D, Nader Shah formed the nobility council and was crowned at the Plains of Moghan.

After the reign of Nader Shah Afshar, founder of the Afshari dynasty, Safavid dynasty seemed to have completely vanished but the Safavid Shah Soleyman II in 1173 A.D, with the original name of Mirza Seyyed Mohammad Marashi Safavi, was king of Iran for less than three months.

Mirza Seyyed Mohammad, in the reign of Nader Shah was the custodian of the shrine of Imam Reza; therefore he was called Mirza Seyyed Mohammad Motevalli. In succession crisis of Nader Shah, was in charge of the repair and protection of Qom and eventually became obedient of Shahrukh Shah and moved to Mashhad. It is noteworthy that although Shahrukh Shah was the grandson of King Nader, but was considered to be the son of Shah Soltan Hussein Safavi's daughter. Shahrukh Shah was afraid of him and intending to kill him twice, but both times failed. This led to sit-in of Mirza Seyyed Mohammad in his house. Finally, in 1759 A.D a group of generals led by Amir Alam Khan Khozeimeh, arrested Shahrukh and he was taken from his home to the Citadel and the coronation ceremonies began.

He in his very short period of kingdom could regain Herat from Ahmad Shah Durrani. Shah Soleyman II gave three years tax to people. This caused discontent and revolt of number generals against Shah Soleyman II. Commanders arrested and blinded him. Less than four months after the ouster of Shah Soleyman II in Mashhad, the Triple Alliance of commanders was
formed (Alimardan Khan Bakhtiar, Abulfath Khan Bakhtiar and Karim Khan Zand) and elected another grandchild of former Safavid king, Shah Ismail III to take on the throne. Shah Ismail III Safavi seemed to be king for 24 years since 1749 to 1773 A.D, and with his death in 1773 A.D his false kingdom also finished. (Table 1)

5.1 (a2) Afsharid dynasty (1736–1796 A.D)

Nader Shah (1702 – 1714 and1735 - 1747 A.D)

Founder of Afsharian dynasty (Map 2) was Nader Shah Afshar from Afshar tribe and Turkish. Nader Shah Afshar was born in the year 1698 AD, in Gharakhhlou clan of Afshar tribe in Daregaz at North Khorasan. This tribe migrated by Shah Ismail Safavi from Azerbaijan to Khorasan and settled in the north of that land, in Abivard region, Dargaz and Bakharz up to Merv to be a barrier against Uzbekks and Turkmen strikes.

Nader was a mighty Horseback ride at the age of ten, and was capable of shooting, and hunting. He was captured before the age of eighteen in one of the Khorezm Uzbekks raids. After a short time escaped from captivity and returned to Khorasan and served Abivard ruler, Baba Ali Beig as a Shooter. He participated in the war with quarterstaff Turkmen that led to failure of Turkmen.

By marrying the daughter of Baba Ali Beig, Nader got closer to him and as a result, dominate Kalat fort in Khorasan in 1721 A.D. He was so powerful that he won the position of Baba Ali Beig.

At this moment Mahmud Afghan planned rebel against the central government and conquered Isfahan through the desert. With fall and murder of Shah Sultan Hussein, his son Tahmasp II Safavi who had fled to Qazvin from Isfahan, declared himself as king of Iran in 1722 A.D. After the invasion of Mahmud Afghan, a man named Malek Mahmud Sistani claimed reign
in Sistan, Quhistan and Sabzevar. Khorasan tribal leaders including Nader obeyed Malek Mahmud. Eventually minted coin in name of Malek Mahmud; But Nader and Tahmasp Beig Jaläyer, the ruler of Ab e Garm region, turned away from obeying Malek Mahmud and became rebellious and retook Kalat from Mahmud forces. After strengthening his position in Merv and among Chamish Gazik Kurds with the help of the king's forces Nader managed to seize Mashhad.

After defeating Afghans in Mehmandoust, Dare Khar and Moorchekhort, by the order of Shah Tahmasp, Nader became commander of Khorasan, Kerman and Mazandaran states. Nader after surfing in south-west Iran removed Ottomans from Kermanshah, Nahavand and Malayer.

In the absence of Nader, Tahmasp II seized the opportunity for self-expression and to retake the occupied West Iran moved to Tabriz, But was defeated by the Ottoman forces in Yerevan. Nader used Tahmasp II failure against him for sensationalism and incitement of people.

Finally to deal with the Ottomans, Nader moved from Khorasan and stopped at Qom. Shah, because of his fear stayed back in Isfahan and did not accompany Nader. Nader due to complaints of his people changed his path and made his way to Isfahan. In the year 1732 A.D, he dethroned Shah Tahmasp from power and appointed his new born son as his successor as Abbas III and himself as regent, became the real ruler of Iran. Then Nader suppressed rebelled Georgia king and Dagestan and Lezki insurgents and put officials on his behalf at all those points, and then in the year 1735 A.D, in the Moghan desert, became the king of Iran under five conditions.

One of the main act of Nader after coming to power and the suppression of the Baḵtīāris was conquering Kandahar because Moguls of India continuously were provoking on the territory of Iran. since the conquest of Isfahan, Nader sent many ambassadors to Delhi and from Muhammad Shah and other kings of the Mogul dynasty in India, requested for renewal of old
ties and prevent the entry of Afghans to the territory of India, but each time the answers were unfavourable and even in the last time, in 1737 A.D, Mohammed Shah did not allow Nader Ambassador to return and for nearly a year he was waiting in vain in Delhi.

After the conquest of Ghazni and Kabul, Nader moved to Jalal Abad and after conquest of Indian roads in the plains of Punjab, occupied Peshawar. After passing through the Sindh and conquest of Lahore, wrote a letter to Muhammad Shah and after reminding him the same ancestor roots of Afshar and Babur and flock of his ambassadors detain, and made his trip to India to punish bad outspoken who forced the King into this kind of action.

That's when he found Muhammad Shah with an equipped army by elephants and cannon has moved from Delhi and located on the banks of Yamuna River in Karnal, twenty miles away from north Delhi.

Muhammad Shah's affairs were in the hands of three men during this time, first was the ruler of the Deccan, Nizam ul-Mulk Bahadur Subedar that due to Nqary that was happened between him and the king, he did not called his armies and was secretly related to Nader, Second, Kham Douran Samsam Al-dowleh Amir Al-omara and commander in chief of Mohammad Shah army and third, Qamar-ud-Din Khan Etemad al-doleh, the country's prime minister. The three were not fine with another and internally were trying to defeat each other's work.

In 1739 A.D in plain of Karnal, Nader easily defeated numerous troops of Mohammad Shah with the power of his skilled gunmen. Khan Doran and his brother were both killed. Indian dead number is written to be 20 thousand and Nader military to be 42 deaths and 200 injured and this was mostly because Indian fought with bows and arrows and Iranians with a gun.
Due to Delhi’s people riots group of Nader soldiers were killed, then he ordered the killing of Delhi people and as a result, nearly twenty thousand people were killed and an important part of the city burned. After intercession of Muhammad Shah and Nizam al-Mulk and Qamar-ud-Din Khan, finally he stopped killing the people and forgave other people.

After a few days of the incident, took one of the descendants of Aurangzeb to marry Nasrullah Mirza, and Mohammad Shah decreed to mint coins in the name of Nader in the entire country and all the rulers and nobility each offered a presentative gift of jewellery and cash to Nader. They also willingly obeyed and Nader asset was increased over 15 crore. Among these presentations, Peacock Throne and the famous diamond of the Mountain of Light (Kohinoor) can be mentioned.

At this time Nader crowned Muhammad Shah with his own hands and Muhammad Shah also ceded states of west Sindh, means Ghazni, Kabul and part of Punjab to Nader. From this time until the end of his life, Nader fought with the Ottomans and destroyed many riots that had taken place in different parts of Iran but finally was killed by a group of Ghezelbash in 1747 A.D.

Apart from Dastgerd Birth House and his own tomb in Mashhad and Nader Abad in Kandahar, Nader monuments include, his repair work of Imam Reza shrine in Mashhad and the garden and the hall he built in Qazvin.

**Adel Shah (1747 - 1748)**

Ali Quli Khan known as Adel Shah was son of Ibrahim Khan Zahiro Doleh and nephew of Nadir Shah, who was involved in many campaigns of Nader. His courage and militancy made him Nader’s focus of attention. At the end of Nader reign, Ali Quli Khan was tasked to suppress
the Sistan rebels but on the way to Sistan he became lawless and rebelled against Nader. Sometime later, the news of Nader's death was confirmed.

After the news of the assassination of Nadir, Adel Shah first captured his Kalat and his enormous treasures. Then killed all of his children, including Crown Prince Reza Gholi Mirza and the only one who survived was Shahrukh Mirza, the eldest son of Reza Gholi Mirza. Then Adel Shah sat on the throne in Mashhad in the same year and titled himself as Ali Shah or Adel Shah and in order to satisfy people started giving and donating immeasurable amount of Nader's treasures.

Eleven months reign of Adel Shah faced with two important events, one is Mohammad Hassan Khan Qajar rebel and the other uprising Adel Shah's smaller brother, Ibrahim Khan whom the governance of central, western and southern Iran was entrusted to him. Adel Shah, who was unable to suppress the rebellion of his brother fled to Tehran with a number of his companions but supporters of Ibrahim Khan arrested him in Tehran and handed to his brother and Ibrahim Khan just like Nader, blinded Adel Shah and took the throne.

**Ibrahim Shah** (1747 – 1748 A.D)

Ibrahim Shah was involved in a battle with the Turks and had a leading role in suppressing Nader during the riots of the late period of his reign. In the short reign of Adel Shah, from the brother, he was the governor of Central, South and Western Iran. Adel Shah's five-month struggle with Mohammad Hassan Khan Qajar gave Ibrahim Shah enough time to get prepared for rebellion against brother. Ibrahim Shah during the revolt against Adel Shah was able to defeat him and take over the power.

At this time, Ibrahim Shah's major concern was Shahrukh Mirza in Khorasan, because nobles of Khorasan were in support of Shahrukh Mirza against Ibrahim Shah. So he was
desperate to come to the throne in Mashhad and in 1748 AD in Tabriz sat on the throne. Ebrahim Shah sent an army from Tabriz to destroy Shahrukh in Khorasan but in the middle of the way, army of Ibrahim Shah, who were tired of war and bloodshed, left him and finally Ibrahim Shah was captured by Shahrukh Mirza troops and like his brother was blinded by Shahrukh.

**Shahrukh Shah (1748 – 1795 A.D)**

Shahrukh Shah was the fourth and last king of the Afshar dynasty. Nader respected him since childhood, because he had a distinct lineage and from the mother side was a descendant of Sultan Hossein Safavi. Although after Adel Shah, Ibrahim Shah wanted to succeed him in Khorasan but nobles of Mashhad supported Shahrukh to sit on the throne in 1748 A.D.

Since Shahrukh was a young and inexperienced king, he was like a plaything in the hands of Khorasan nobles. Shortly after accession of Shahrukh as king in Mashhad, Mir Seyyed Mohammad Maghbooli Astan Quds claimed to be king and with the name of the second Solomon sat on the throne, but after forty days, Mashhad leaders ousted him from the throne and Shahrukh once again sat on the throne. Since Shahrukh was blinded by the Iranian commanders did not have the ability to run the country, so appointed Fereydoun Khan Gorji as his regent. Fereydoun Khan was on the post till Shahrukh's sons, Nasrullah Mirza and Nader Mirza grown up, and served the country until the death of Shahrukh in 1795 A.D.

**Nader Mirza (1795 – 1803 A.D)**

After the death of Shahrukh Shah his son Nader Mirza took his place. Finally, in 1803 A.D, the last kin of Afsharieh dynasty Nader Mirza was killed by Fatali Khan Qajar and this dynasty was completely extinct. (Table 2)
5.1 (a3) Zandiyeh dynasty (1751–1794 A.D)

Karim Khan Zand (1751 - 1779 A.D)

Zand dynasty (Map 4) is the name of Iranian dynasty of Lor ancestry and ruled Iran between collapses of Afsharian up to Qajar rise for the length of forty-six years. This dynasty headed by Karim Khan Zand of Zand tribe came to power from year 1751 A.D.

Karim Khan Zand Ilkhan of Zand tribe, was one of Generals of Nadir Shah's army, after the death of Nader and collapse of his regime, took parts of central, northern, western and southern Iran under his rule. He was resourceful. In terms of dealing with the public, he is known to be the best ruler after the Arab invasion of Iran.

After the death of Nader, Karim Khan gathered an army, and later made coalition with the Abolfath Khan Bakhtiari and Alimardan Khan Bakhtiari, the two Lor Bakhtiari Khans, and in the year 1751 A.D, elected a person who was related to Safavi dynasty from his mother side, and named him Shah Ismail III as the king. In this coalition, Ali Mardan Khan Bakhtiari was Vakil Al-Dawla (regent) and Abolfath Khan Bakhtiari was ruler of Isfahan and Karim Khan Zand was generalissimo. But after some time, Alimardan Khan Bakhtiari killed Abolfath Kahn Bakhtiari and rebelled against Karim Khan but eventually victory was with Karim Khan Zand.

Karim Khan in 1751 A.D by defeating Alimardan Khan Bakhtiari, for a short period of time became Shah Ismail III but in the same year was defeated by Muhammad Hassan Khan Qajar and Shah Ismail took refuge to Mohammad Hassan Khan and resided in Ashraf city and Mohammad Hassan Khan became regent. Whilst he lost much of Iran, in 1757 A.D, was trapped in Shiraz in siege of Mohammad Khan, but did not fall. A year later, page turned and Mohammad Hassan Khan was defeated and killed and Shah Ismail III returned back to him again.
and Karim Khan was regent again. After the death of Shah Ismail III in 1773 A.D, Karim Khan refused to convey Kingdom to Heydar Mirza (son of Shah Ismail III) and he sat in power.

Karim Khan when he came to power called himself Vakiloroaya and avoided the title of king. He temporarily chose Malayer as his headquarter and capital and after that when could dominate the entire country, picked Shiraz as his capital and tried hard for its development.

In 1775 A.D, Karim Khan Zand separated Basra from the Ottoman Empire and pinned it Iranian territory, thereby made Iran's influence over the Arvand River, Bahrain and South Islands of Persian Gulf indisputable.

Karim Khan after sixteen years of continuous struggle defeated all his opponents including Mohammad Hassan Khan Qajar and Azad Khan Afghan and took control on the central and northern part and the southern and western Iran. He never welcomed British and he always said: they want to make Iran as second India.

Great Britain East India Company was a public shareholding company that Queen Elizabeth I granted royal licenses to it in order to gain trade concessions in India in 1600. Royal licenses effectively led the new East India Company to have monopoly on all trades in India for 21 years and proceeded in such a way to play the role of government and military supporter until its decline in 1858 A.D.

Karim Khan was sick with TB disease and since his age was nearly eighty, day by day was getting weaker until the year 1779 A.D, when after thirty eight years of rule passed away.

After the death of Karim Khan Zand, his successors started continued fighting, therefore provided a good opportunity Agha Mohammad Khan Qajar to begin Qajar dynasty.
Abol Fath Khan (1779 A.D)

Karim Khan's eldest son, Abol Fath Khan came to power in 1779 A.D and Zaki Khan Zand (mother's brother of Karim Khan) was elected to rule, then Zaki Khan appointed Abol Fath Khan's younger brother, Mohammad Ali Khan to be his partner to rule the country. So Zaki Khan with suspicion to him, he was excluded from the kingdom. In this short period the real power was in the hands of Zaki Khan.

Ali Murad Khan (1779 A.D) first time

Ali Murad Khan was Zaki Khan's nephew. Ali Murad Khan Zand who was obeying Abolfath Khan with the news of Zaki Khan's death and dismissal of Abolfath Khan, declared himself Shah (king) in Isfahan. Sadiq Khan to banish the military leaders who were around Ali Murad Khan, started persecution of their family members, this action against Isfahan resident military leaders turned them against Sadiq Khan and continued for two years.

Mohammad Ali Khan Zand (1779 A.D)

Abolfath Khan's younger brother Mohammad Ali Khan at first was Abolfath Khan Partner in 1779 AD, and then with the dismissal of his brother, he was the sole ruler. In this short period the real power was in the hands of Zaki Khan.

Sadiq Khan Zand (1779 – 1781 A.D)

Sadiq Khan, brother of Karim Khan, after the unsuccessful siege of Shiraz went to Kerman and occupied it. After Zaki Khan's assassination moved to Shiraz and for a short time accepted reign of Abolfath Khan but shortly afterwards ousted him and took the power. Finally, he was defeated and killed by Ali Murad Khan and according to some narrative committed suicide.
Ali Murad Khan Zand (1781-1784 A.D) second time

Since he was ruling in Isfahan could push many competitors away, and get to Shiraz the capital of Zand dynasty. He moved his capital to Isfahan and put Sayed Murad Khan as governor of Shiraz.

Jafar Khan Zand (1784-1789 A.D)

Jafar Khan was Sadiq Khan's son and was somehow Ali Murad Khan brother from mother side and that's why, unlike his father and brothers, was not killed by Ali Murad Khan. After the death of Ali Morad Khan, defeated Bagher Khan Khorasgani, the assigned former ruler of Alimorad Khan in Isfahan, dominated Isfahan and took charge of the reign. At the time Isfahan changed in hands of the Zand and Qajar for several times, and he chose Shiraz as his capital again. After four years of rule was killed by his opponents, including Sayed Murad Khan.

Sayed Murad Khan (1787-1789 A.D)

Sayed Murad Khan Zand was one of the heads of Zand who after the assassination of Jafar Khan reigned in Shiraz for less than four months.

Lotf Ali Khan Zand (1789 – 1794 A.D)

Lotf Ali Khan is son of Jafar Khan and the last ruler of the Zand. First in Shiraz and then in Kerman fought with Agha Mohammad Khan Qajar in Khar and Tabas regions and occupied Bam Citadel and even for some time chose Kerman as the capital of Zand. To fight and defeat him, Agha Mohammad Khan Qajar brought his army to Kerman and besieged it for four months. Finally Lotfali Khan failed due to betrayal of his army who were tired of a long siege. He was blinded and tortured then transferred to Tehran and killed. (Table 3)
5.1 (a4) Qajar dynasty (1794 till 1896 A.D Naser al-Din Shah Qajar’s rule)

Qajar dynasty (Map 5) goes back to one of the Turks Oguz tribe called Qajar tribe and was originally Mongolians who came with Tatar conquerors from Mongolia to Islamic countries, including Iran. They first settled around Armenia. Because of the major contribution of Qajar tribe to the Safavid court, they became powerful.

In fact, the first consolidation of Iran in its present form occurred during the Qajar and modern Iran country formally established, this means that, at that time, the provincial governments by war or peaceful solutions vanished in various regions of Iran and was replaced by a federal system in compliance with the central government. Qajar era coincided with the colonial period and modern empires cosmopolitanism. In this period Iran was involved in many wars and years of resistance against the Russians and Britain, and unlike countries in the region were never colonized but lost parts of their territory in these wars.

**Agha Mohammad Khan Qajar** (1794 until 1797 A.D)

Agha Mohammad Khan is founder of the Qajar dynasty and chose Tehran as his capital. Agha Mohammad Khan fled from Shiraz after the death of Karim Khan and after many wars after defeating Lotf Ali Khan, the last king of the Zand dynasty, destroyed Zand dynasty and became king. Agha Mohammad Khan managed to unite the two tribes of Ashaqhe Bash and Yokhari Bash and strengthen his military force. During his battles with the neighbours, took back Georgian from Russia and attached it to Iran.

**Fath Ali Shah** (1797 -1834 A.D)

Fath Ali Shah is the second king of Qajar dynasty who ruled over Iran for 36 years and eight months from 1796 A.D. After the death of Agha Mohammad Khan, since he had no children, his nephew, Fath Ali Shah became king. The original name of Fath Ali Shah was Khan
Baba Khan Jahanbani and at the time of the coronation, chose his grandfather’s name as Fath Ali Qajar for himself.

During his time, battles of Iran and Russia and detachment of Caucasus from Iran took place. In past centuries, India was attacked through Punjab and Afghanistan and in recent centuries Nader Shah and Ahmad Shah Durrani had stormed the country. In 1799 A.D, Lord Wellesley English ruler fought with Mysore ruler Tipu Sultan and in this Battle Mysore ruler was killed and Mysore fell into the hands of the British.

In the book of the history of political relations of Britain-Iran is written: "Indian Rajahs, who were tired of British offensive, requested Zaman Shah, the King of Afghanistan to attack India and they were even willing to pay the cost of his army as well." Therefore, Zaman Shah, king of Afghanistan, invaded India, in order to expand the boundaries. The British feared by onrush of Zaman Shah and decided to seek help from Iran. Zaman Shah's brothers to seek assistance from Fath Ali Shah, fled to Iran against Zaman Shah. Zaman Shah sent an ambassador to chancellor of Iran, Haji Ibrahim Khan Kalantar and demanded the inclusion of Khorasan to Afghanistan. This request kindled the anger of the Iranian king.

Instead Britain's sent their representative, Mehdi Ali Khan known as Bahadur Jang, seek for of help from the Shah of Iran. This person was an Iranian origin and one of the most famous figures of India. English historian, Robert Grant Watson, wrote a book during the time he was Secretary of the British embassy in Tehran that is called "History of Iran in the Qajar period" in which he notes: "Shortly after Fath Ali Khan return to Tehran, a person named Mehdi Ali Khan was ordered from Bombay ruler to come to Iran's court. The main purpose of his mission was to try to convince the King of Iran to attack Afghans because at this time the British were in a panic of Zaman Shah's attack." Mehdi Ali Khan pretended that British is not afraid of Shah Zaman
attack to India and can easily defeat him. In order to keep the Iran king happy, Mehdi Ali Khan had a credentials paper by the government of Mumbai to claim and give any obligation that the king wants.

Shah gave Iranian troops to Mahmud Shah for the invasion of Afghanistan. Zaman Shah reached to the gates of India. At the same time, received the alarm of Mahmud Shah's invasion of Iranian troops to Afghanistan and immediately returned to his country. But Kandahar had fallen into the hands of Mahmud Shah. A quarrel ensued between the two brothers. Zaman Shah was defeated, captured and blinded and his minister Wafadar Khan was killed by Mahmud Khan.

**Mohammad Shah (1834 – 1848 A.D)**

After the death of Fath Ali Shah, his grandson Muhammad Mirza, Abbas Mirza's son, became king. He was the third king of the Qajar dynasty and during his reign, rule of Sulaimaniya which is now located in Iraq, was given to the Ottoman state. Mohammad Shah Qajar had struggled for years with gout and died at the age of 42 and the country was plagued by insurgency until his son, Nasereddin Shah, took the power.

**Nasereddin Shah (1848 – 1896 A.D)**

Nasereddin Shah Son of Mohammad Shah Qajar was the fourth king of the Qajar dynasty and was known as Pivot of the Universe, Soltan-e Sahebgharan and the martyr king. He had the longest reign among Qajar kings in the Qajar Dynasty.

Nasereddin Shah married at the age of fourteen and two years later, on his request became the ruler of Azerbaijan. In the meantime, the crown prince met with serious problems of governance.

When Mohammad Shah died, the country was plagued by insurgency and only Azerbaijan was considered to be quiet in Iran. At this time the Crown Prince Nasir Mirza, who was sixteen years old at the time was in Tabriz and kingdom claimants had emerged from every
direction. At this time, Naseredin Mirza with support Mirza Taghi Khan Amir Nezam (Amir Kabir) came to Tehran and before reaching the city named Mirza Taghi Khan as Atabak and made him his prime minister. He was crowned in 1848 AD in Tehran. Amir Kabir, who was the generalissimo (commander) of Iran, started organizing of the army and to train the army recruited teachers from abroad and developed weapons industry. He did a great deal on Tehran's development.

Amir Kabir actions were in favour of the Iranian populace at the expense of princes, courtiers and nobles, and sparked anger of these classes, that's why they took action against him, so that his relationship with the king gradually shattered and the king was suspicions to his prime minister. Due to fear of Amir Kabir, Nasereddin Shah sent him to Fin Garden in Kashan and not long after it, issued a decree to kill him.

In the year 1861 A.D, Nasereddin Shah chose his fourth Crown Prince, Mozaffar Eddin Mirza. On the eve of the fiftieth year of his coronation ceremony, in 1895 AD, was assassinated by Mirza Reza Kermani, a follower of Sayyid Jamal al-Asadabadi, in the shrine of Shah Abdul Azim in Shahr-e Rey. (Table 4)

5.1(b) History of Persian Gardens

It is known that, due to nature and structure types of gardens have not lasted against the destructive effects of the passage of time. They have been very vulnerable compared with other structures and it is not surprising that none of the samples of early middle period until middle period have not remained.

The author believes that, history books and travelogues should be used as one of the main sources of data in description of the shape and characteristics of Persian garden, in which
travellers and writers have tried to describe and explain about gardens and this information can clarify and represent the actual shape and main features of garden.

According to author of "Foundations of traditional design in Iran", Persian Garden background returns to the early Bronze Age (3500 B.C) when people used to believe in the Garden of Eden or paradise. Persian Gardens during different periods of its life, like a mirror, reflect the ideas and beliefs of the people of that era and this has created a deep link between garden and the garden designers and builders and their beliefs and views. Relationship between garden and its makers can be found in the ancient Iranian creed, because farming and garden construction have been highly regarded and praised. As in Vandidad, Zoroaster says to Ahura Mazda; the creator of the physical world and the only one, who is the fourth person who brought the earth into the end? Ahura Mazda says in response: anyone who plants maximum greenery, and many trees and the one who gives water to dry land and dries the wet lands (swamp) and brings it under cultivation.

In Zoroastrianism much attention has been paid to natural elements and they were considered sacred and has been trying to preserve them. Damaging or polluting them was considered as obscene acts. In part of teachings of Zoroaster, regarding nature it's written: "I believe in a religion in which water, plants and the good nature are appreciated."

Persian Gardens contain more of spiritual needs and less of scalable needs. Since ancient times, the garden was an essential part of Iranian life and architecture and contributed into the presence and symbolizes large fire temples. The mountain base, which is covered with vegetation, the garden surrounds the temple and the royal palace from the times of the Sumerians. Of course, in such a dry climate, Garden had everything from comfort and beauty to offer, but when the struggle for survival was more important than personal enjoyment, it was a
sideshow. Since everything was considered to be from God, Providence, so prayer to the gods was necessary. It was believed that the surest way to attract their attention is the magic of empathy: Creating an atmosphere even more similar to what is needed and encouraging the gods to imitate it - On a much wider scale - for example, create a garden next to a temple or palace, may encourage the mighty to encourage the human quest of land development.¹³

Iranians have long, deep and abiding bond with nature and the Persian Garden that has many deep roots in Persian culture reflects this relationship and bond.¹⁴

In that time, people used to enclose their homes by planting trees and plants. This environment used to display an example of a courtyard in small-scale and example of a garden in large dimension. Greek historians three thousand years ago, in their writings point out to houses in Iran, which were surrounded by gardens and the garden surrounding the house is said to be Paradise.¹⁵

Gardening or building gardens is an ancient art in Iran which includes its very own traditions as a material and spiritual representation. Persian Gardens were developed in opposition to the harsh and arid landscape of the Iranian plateau. Their ethereal and delicate qualities accentuated their intrinsic contrast to the hostile environment.

In the past, a large part of Iran was covered by desert and currently, more than half of the country is desert and semi-desert. A series of basins and plateaus are separated by the Albourz and the Zagros Mountains. Since ancient times, gardens have grown in the region because of Qanāt system which is an ingenious engineering system of underground aqueducts. Qanāt is an underground channel with a series of vertical access shafts, bringing the water from the melted snow to the plains, for irrigation. With archaeological evidence, the qanāt technology had been
developed by the Persian people about the early first millennium B.C., and spread from there slowly to other parts of the world.

Usually in the middle of the Persian Gardens there existed a pool and a summer house or building.

In many ways, narrows channels delivered water throughout the garden, feeding fountains and pools, cooling the atmosphere and affording delicate and constant music in the air.

Garden with complete architectural structure represents the close connection between cultural and natural fields and is sign of adapting and aligning human needs and nature. The Persian Garden represents the potential of the environment and nature and how to use it. The creator of the garden with his reliance on empirical knowledge, have created a space that led to the survival and dynamics of the natural environment.

The Persian Garden as a type of Iranian outward-oriented architecture, in logic and principles of shaping space, is closely related to introspective architectural. The Persian Garden is not merely an agriculture phenomenon but rather involved in traditional Iranian architecture around the entire house and yards and even is in coordination with traditional urban planning.16

Iran is a country with very long history in construction and creation of gardens. Archaeological investigation returns this history at least to the Achaemenid period and Pasargadae. According to history and archaeological evidence, garden making and construction was booming at the time of Cyrus the Great. At the time of Cyrus the Great, the palaces were built in the middle of the garden. In addition, during his period culverts and ponds were made of stone. Pasargadae royal garden was constructed during his reign. According to David Stronach, this garden was built on the first Chahar-bagh pattern and most persistent initiatives of the
Achaemenid period in the gardens field. It is noteworthy that Cyrus the Great is the first person who created the tree-planting ceremony and ordered to plant trees in orderly rows...

Pasargadae Persian Garden is one of the parts of Pasargadae and experts suspect that, this garden is the root of garden architecture in Iran. Pasargadae was the first dynastic capital of the Achaemenid; it has garden and set of buildings which is known as a symbol of mix art of various architectural elements from the ancient civilization.

In the course of the establishment of a memorial capital that represented the Achaemenid power, Cyrus, with great ambition included a garden in his building program. The royal gardens of Assyria and Babylon have always been a separate part or complementary pieces for the Palace, but the Palaces of Cyrus with long porches and open spaces around them, were used as additive parts of a detailed plan, in which, the garden itself becomes a royal residence.

"Lysandra (a Greek ruler), praises and admires the beauty of trees, their distances from each offer thoroughness and their straight rows, angles and aromatic fragrances, while walking with Cyrus." In this case, it could be said that the geometry of the garden and its spatial structure in Persian Garden has been adapted from the Cyrus garden.

Analysis based on historical and archaeological documents suggests that, all buildings of Pasargadae were constructed in a regular structure space and a large garden is surrounded by all elements. Stronach claimed that, this garden had an original design of Chahar-bagh which is the main element of the Persian Garden. (Plan 1)

Works and evidences found from excavation in Persepolis excavation show that probably the garden was in front of the gallery and then in the Sassanian period this style of garden making in front of palaces and temples have been formed and even continued in the Islamic
period and in general, it can be said that the original template of all of these gardens is the Pasargadae garden.

Since the Arab conquest of Iran, which started the Islamic period in this land, the construction of the garden is considered to be the representation of paradise in public view. One of the reasons for such a mind-set could have been a dry Iranian plateau, as the Quran describes heaven as a lush garden with enormous trees and crystal-clear springs and...

In addition, the community’s beliefs in each period will have a significant impact on landscape architecture of that particular period and Iran is not an exception and garden construction and landscape in different periods have experienced specific transformations and religious beliefs have had an impact on it.

Some gardens are in the form of the Chahar-bagh and water passes through four paths. Scientists have considered Pasargadae garden to be the root architecture of this type of garden. Cyrus the Great personally ordered how the Pasargadae garden should be built and how the trees should be planted. In the Sassanid era gardens were formed in front of palaces and temples and this theme has continued into the Islamic period.

The oldest pictorial document which portrayed the discipline of the Persian Garden dates back to the Sassanid era. In the Taq-e Bostan relief, in Khosrow Parviz Hunting scene, the design of his hunting garden is shown. In fact, this relief largely reveals the geometry of the garden and its function.

This garden shows the close connection between cultural and natural aspects and exhibits adaptation and alignment of human needs and nature.

The beginning of orderly arrangement of Persian Gardens goes back to the Achaemenid period. In the Pasargadae Royal Garden (sixth century B.C), existence of arranged geometry at
the Royal Garden (Private) and in large-scale gardens surrounding the palaces, has become a model that evolved later in the Sassanid era and after Islam.

Elam and the Assyrian kings also had huge animal parks and gardens. But most of the Achaemenid king’s gardens and parks became popular and then the Seleucid rulers even the Romans imitated them. These gardens were magnificent gardens just like the gardens of the palace and tomb of Cyrus the Great. Of this kind, gardens must have been in work programs of Darius in Takhte Jamshid (Persepolis). In the southern part of the palace of Darius, and in general in the southern part of the Takhte Jamshid, in the way of the Treasury or Apadana, we can visualize landscaped gardens filled with flowers and trees. These gardens definitely were form part of a vast complex of the palace and harem of Xerxes. Just by studying such gardens we can justify the free and large space around the buildings. There were gardens in many parts of Iran which were land not only for entertainment of rulers but also to cultivate fruit trees and grapevines.

There are many signs of these gardens in Elamite tablets of Takhte Jamshid. Court area Number Four, which was located south of Takhte Jamshid, enjoyed a special richness in terms of gardens built by the order of the king. ...court administrators were responsible for the fruit orchards. According to Xenophon, the King always, personally with his presence or by the employees who himself appointed, used to keep fruit orchards work under surveillance. Watering the garden was very important. These gardens were built on riversides and water was flowing in several branches in the garden. For example, in the garden of Cyrus the Great in Kalyan in Asia Minor, Mander River was flowing. Also in the Pasargadae gardens signs of artificial streams were observed. In general, Iranians were masters in construction of streams, especially subterranean streams. Even today, the majority of farms and orchard’s irrigation is done with the
help of the subterranean. With this invention, Iranians could even irrigate very dry lands with water from the depths of the earth, sometimes even from a depth of 100 meters and more to subterranean canals.... The Ferdows was included in the royal palace garden and large animal parks that was hunting ground.

In fact, the Achaemenid period is to be remembered as the peak of Persian Gardens in ancient times, although today, no samples of these Gardens are available. In the context of the past and travelogues, the archaeological site of Pasargadae which was the first capital of the Achaemenid Empire, is mentioned to be as a series of palaces and gardens and even cited to be the earliest example of Chahar-bagh.

Pirnia in the book of ancient Iran, quoted by Xenophon, has pointed to the use of the garden in the Achaemenid period and states that Xenophon says: “wherever the king goes and wherever he stays, he always looks out for gardens full of beautiful things, which mother earth, gives. These gardens are known as Pardis. If there is no climatic issue, the Shah would spend majority of his time in these gardens”. Artaxerxes II, in an inscription at Susa, stated this sentence: "Artaxerxes King says: by the grace Ahura Mazda, I built this living palace and garden. Ahura Mazda and Masreh (Mehr) guard over me from all evil and preserve what I have built".

In the Sassanid era (224 to 633 A.D) garden making faced an enormous expansion. The elevated position of nature in Zoroaster thoughts has led to consideration of landscape and natural environment along with the human arrangement in the garden. Garden palaces of this period such as Takht-e Soleiman and the palace of Firuz Abad in Bisotun were designed on natural substrates such as lakes and fountains.
In the era of the Sassanid Empire, gardens were very large and parks that were carefully designed and cared for an area of nearly twenty five square kilometres. One of these was Khosrow Parviz garden that took seven years to build and the treasures of the king was spent on it, but was a bold and beautiful reform in the environment.\(^2^2\)

Of the most distinctive feature of gardens of this period, is the diversity of geometrics. In these gardens, the Axial, Central and Quartet arrangements can be achieved. With the establishment of Islamic civilization in the Umayyad period in Samarra and Andalusia, Gardens were built that were copied from the Sassanid gardens.

The oldest writings and images of the Persian Gardens come from travellers who reached Iran from the west that include Muhammad Ibn Battuta, Muslim traveller and scholar of the fourteenth century, Ruy Gonzalez de Clavijo Spanish writer of the fifteenth century and Engelbert Kaempfer of the seventeenth century. It is noteworthy that Kaempfer made careful drawings and converted them into detailed engravings after his return to Germany. These writers show Chahar-bagh type of Persian Gardens with the following features: an enclosed wall, rectangular pools, and an internal network of canals, garden pavilions and lush planting.

By the victories that Khosrow Parviz gained, he targeted the West especially the Zagros with special attention; He built gardens in the hills of West Zagros for Shirin, among them a garden in front of the Shirin’s palace in the city of Qasr-e Shirin, as well as a garden in Hooshakoori (Hoosh Khaneh) and Taq-e Bostan near Kermanshah. Hooshakoori garden includes a pond with water routes and beautiful pavilions. Evidences indicate that the gardens have had Chahar-bagh structure. It seems that this situation has continued till Sassanid Bisotun and its effects remained till mid-nineteenth century that Cast and Flanden presented a report and plan from that, which itself is a complete Chahar-bagh.\(^2^3\)
During the Islamic era, Palaces were surrounded by a large garden and architecturally was considered to be part of it. In such a way that large gardens would symmetrically cover all sides of the main building. At the intersection points Pavilions were built. Palaces were placed at the intersection of two paths, water channels cross through it and so the vast landscape was created in the framework of streams of water. The area was divided into rectangular pieces and small streams would pass through them. All types of trees were planted and trees and their benefits were organized precisely and in harmony.\textsuperscript{24}

According to historical sources from the Islamic period, many gardens were built in Iran that has been destroyed. It is noteworthy that the oldest garden map belongs to the Ilkhani era and is recorded in the name of Rashid al-Din Hamadani Fazlullah. One of the monuments of this period which was part of the gardens is Ghooshe Khaneh minarets which is currently located at the northern end of the Joubareh neighbourhood in Isfahan and was built in the reign of Shah Abbas I. This building was located in a large garden that had a beautiful palace and in this garden, hunting birds such as hawks and falcons were kept and since it was the first home near the city, the official welcoming ceremony of the King's guests was performed in this place. Author of Merat Albldan Naseri, about Ghosh Khaneh garden and a mosque that was located in front of the entrance, which he called as the Mosque of Omar (Masjid Omar), says: "outside the Toghchi gate of Isfahan, there is a street known as Chahar-bagh with trees planted in it. There is a pond in the middle of the street and on one side of street in front of the pond is a garden entrance known as Ghoosh Khaneh garden that from long back till now, whenever the royal rulers are proud or awarded for something, keep that thing as credit in the beautiful Ghoosh Khaneh garden with the usual formalities and ceremonies. A great mansion is built in the middle of the garden. front side of the mentioned pond, faces an old mosque, while most parts of the
building still remains, one of the great buildings and important mosques known as the Mosque of Omar and from the evidence is clear it refers to Abdol al-Aziz's Omar, the Umayyad caliph. And while coming out of Toghchi gate, at the beginning of this street which is known as Chahar-bagh, two stone lions have been installed on the left and right sides of the gate."

Many researchers and scholars believe the most magnificent gardens are built during the Safavid era. In this period, Gardens were City-wide and as an art form in the city's physical structure and influencing the entire city structure.

The Garden has a special place in tourist’s description from Iran in different historical periods, especially the Safavid era. Of these, more compliments are devoted to the gardens of the city of Isfahan. One of these gardens is Hezar Jarib garden (garden of thousands of acres) that only a hint of it remained till date. Hezar Jarib Garden which is also known as Abbas Abad garden was built by Shah Abbas I of the Safavid era that was located in South Isfahan, at the foot of Sofeh mountain and at the end of the Chahar-bagh street and is currently placed in the vast land in the middle of Shiraz to Dastgerd road. The garden was named because of its large area.

During the Shah Abbas I, a rocky stream was built for the garden that was used to irrigate the garden. Today only the western wall of the garden which is a mud wall has remained and is called Shah Abbasi wall and similar to that are the walls of old cold stores which is still to be seen in some places. In addition, two pigeon towers at either end of the southern fence of Hezar Jarib Garden are still remaining. It seems that Hezar Jarib garden and palace have been considered as a royal resort outside the city.

Italian traveller Pietro Della Valle, who visited Isfahan during the reign of Shah Abbas I, was the first European traveller who spoke about Hezar Jarib Garden. He describes the garden: "After this river, the street continues with same walls, trees, houses and gardens and pools but
the only difference is that the surrounding houses and gardens do not belong to the king but rather belong to different people who obeyed the orders of the king and preserved the beauty of the street. The street leads to a big garden called Hezar Jarib Garden and today this street is called Chahar-bagh because there have been four gardens in this area that has made the current situation.

The gardens are placed one above the other, and there is nothing but fruit trees which are so short that pedestrians can pick the fruit by hand and in addition a specific area belongs to any specific tree, For example, a square for fig tree and another square for the peach tree and so on, belong to each tree.

The garden belongs to the king, but people with complete freedom can use it and there are plenty of fruits enough for the whole city, there are many corridors through the length and breadth of the garden that Cedar trees have been planted around it, and these passages are so long that its end cannot be seen, a stream passes through the last garden which is the longest one, and then it is limited by walls. "26

Thomas Herbert, the English adventurer who was staff member of Sir Dodmore Cotton came to Isfahan through Bandar Abbas, Lar and Shiraz in the year 1628 AD that coincided with the last years of the reign of Shah Abbas I and described the city and Hezar Jarib garden which he called as Shah Abbas's paradise: "The gardens of this city are so magnificent and beautiful that have no matching example in any other Asian cities. From a little distance left to Isfahan, the gardens appear like a huge grove, so great, fragrant and green, that it is not an exaggeration if call it as the second paradise. After crossing the Isfahan Square, from the Chahar-bagh you walk into a street with the length of two miles (nearly 3219 m) with width of Holborn Street in London where most of it on both sides are the walls of the garden. This street leads to Hezar
Jarib street which is a grove, full of fruit trees, surrounded by a wall with length of three mile (4828 m) and three huge and magnificent gates have been built in to this wall, In the middle of the garden, there is a large polygonal pool that has twelve equal parts and the width of each side is five feet and fountain from all sides spray water into this beautiful pool. But what mostly was interesting in my opinion was watching the city view from the top of the porch in Hezar Jarib garden, due to the flatness of the ground. From here a large part of Isfahan was seducing before our eyes. It was not possible to see such exquisite scenery (except in Mazar-e Rostam that is located on a hill and two miles (nearly 2319 m) away from there). The garden is full of all kinds of trees: trees with medication use, fruit or shady trees, all these trees are so green and so fragrant and pleasant that this place could be called as the sample of the world's best place or Shah Abbas's Paradise. "

The famous French traveller, Knight Jean Chardin, lived in Iran during the reign of Shah Abbas II and King Solomon, from 1664 to 1677 A.D, and resided in Isfahan for many years. His description of this garden is: "The garden consists of twelve flat storeys that each is built six or seven feet on top of another, and is linked together by less steep small gravels and stairs around streams. The garden has fifteen streets that twelve of them are along the width and connected together and a large water stream flows in each of the four streets that pass along the garden and under a brick roof passes three length wise streets of the garden, so that they are not interrupted. These three streets are connected from one side to the other side of the garden, the middle street has a rocky stream with a depth of eight finger and three feet width which is embedded by fountains in every ten paces and spray water into the air, at waterfalls at the bottom of each floor which has a gentle slope, there are pools with ten feet diameter with numerous fountains in the middle and sides. These pools are in the shape of circles, square and polygons.
The third floor pool is twelve-sided polygon with perimeter of 300 feet. Nearby the pond on both sides there is a tall pavilion with drawings of blue and gold colour, and the pavilion is located in the middle of the sixth floor and cuts the street, the building has three floors and is large enough to occupy two hundred people at a time. There is a mansion at the beginning and another similar mansion in the end of the Garden. During the spring and flowers season, especially when there is no water shortage, the garden has amazing and refreshing landscape especially around the pool and water channels where many flowers have been planted and countless fountains exist. Tuneful birds in cages hung between the trees and aroma and fragrance of the flowers spread everywhere.27

The famous German traveller, Engelbert Kaempfer was in Isfahan during the reign of King Soleyman and has published his observations as a travelogue titled "In the court of the Shah of Iran". About Hezar Jarib Garden and the Safavid Shah Soleyman`s attraction towards this garden, wrote: "Appellation of Hezar Jarib garden (thousand acres) is in terms of surface that it occupies. The King loves to go to this garden and that is why I am briefly describing it. There is a slight slope terrain in the garden and can say it is almost square with dimension of more than one thousand three hundred feet in width and length. With skewed wall that is drawn from the middle of the garden, it is divided into two gardens. And at first it was meant for people of the harem, means during the time king and his retinue are in front, his harem people can stay in the rear garden but the current king found the distance too close therefore built a place to stay in a remote corner of the front garden for them. The entire garden is divided into squares by all the paths and streets with the distance of eighty feet from each other, Ground is sandy and dry but with three streams that is derived from Zayandehrud river, becomes lush and green. One of them is called Chehsheh and is separated from the river bed within three hours of the upper part
while two other streams called Bist o Panjeh and Ab Nil which flow towards Jolfa. These streams irrigate throughout the garden and then turn to pools where trees and gardens have grown significantly. In a part of the garden herbs and vegetables and on the other part fruit trees have been planted. For example, pomegranate, apricot, peach, plum, barberry, etc. and in other parts we face the most diverse ornamental plants such as: Iranian and Chinese roses and three different types of jasmine, Cristal Pavonis Brenii, Musk willow that has been unknown to our botanists and olive trees, and Sycamore trees which have been planted around a few of the streets of the Garden especially those located in longitudinal direction of the garden. Unlike these streets, other streets are without any decoration, but rather pine has been planted on Parallel Street to the garden wall. Middle tree-lined street just continues the sequence of Chahar-bagh and has two rows of tall plane trees on both sides and is considered to be the main decoration element of Hezar Jarib garden. In the middle, there is a stream two feet in depth and is built by rectangular stones. This stream starts from the most remote mansion of the rear garden and continues to Palace Atrium and has an amazing amount of water that sometimes slowly and sometimes seething from the pipes, sometimes appears to remain motionless in pools and sometimes falls down from marble stairs. The water flow disappears at the front entrance but appears again on the other side of the Palace and continues to play in Chahar-bagh.

Other remarkable points of Hezar Jarib garden is existence of two large octagonal pools that are built with polished stones and are located in the middle of two halves of garden. The surface of the pool can be swept with a boat and enjoyed views of its powerful fountains inside as well as small fountain on poolside. There are stone steps on both sides of the waterfalls, to facilitate climbing.
The Grand Avenue that is located in the middle of the garden with sycamore trees have been planted on both sides is crossed with three buildings. One of them is located at the entrance to the garden and at the same time stating that Chahar-bagh has come to an end, the second building at the intersection of the tree-lined street and the central wall between the two parts of the garden that is located right in the centre of Hezar Jarib garden. The third building has been built at the end of this tree-lined street, all of these are almost elevated, rectangular and built with many bricks in accordance with the rules of Iranian architecture. A women specific mansion, built in the context of public dormitories or rooms next to each other like a row house, blocks this rectangular field right in the middle. Soon after that a roadway begins with columns and bars with some ponds and fountains on the way.

In addition the architect has built four penthouses in four corners of the garden. They are built in the form of castles towers of mud brick. Its roof is crenated with multiple holes for pigeons. Thousands of pigeonholes can be seen inside; the purpose of making this dovecot is only to use pigeon droppings as fertilizer for vegetables and vineyards. No one hurt or hunts the pigeons, but most of these towers for pigeons are built to earn reputation. Because this dovecot is higher than other buildings and attracts people's eye from far away."

Italian traveller Gemelli Careri, who was in Isfahan at time of the Shah Soleyman`s death in 1693 A.D and the coronation of the Shah Sultan Hussein Safavid, after describing the Shah Abbasi Chahar-bagh, speaks about the Hezar Jarib garden:"Uphill started here and is divided into two parts: One of the two ways, along which many small houses with beautiful facade can be seen reaches to the lush garden of the king, different types of trees have been planted in the garden, from here we passed through the Hezar Jarib garden. The garden is three miles long and a mile wide, its excellent depicting entrance (Drawing 1) is decorated with gold and lapis lazuli
in two rows of European-style porch and four towers are built on its four corners which has pigeonholes on top. Water channel passes from the middle of the garden with floors and walls of polished stones and many branches are taken from this stream throughout the garden with numerous beautiful waterfalls and ponds that reflect the plane tree image and have created a poetic landscape. In a corner of the garden next to the pool two beautiful small mansions built in the Moroccan style where the king goes for recreation in summer and warm season. Also, numerous porches have been designed for recreation of the royal family. A building has been built for the royal harem at the end of the garden with a pool in front of it and a small boat floating on the water surface. Many sub-streams for irrigation of garden plants and trees and spraying the streets are drawn on each side. In another corner of the garden animals such as leopards and lions and other predators are kept."

Mirza Hussain Khan, son of Muhammad Ibrahim Khan the Cashier of Isfahan, in his book "Geography of Isfahan" that was written in the year 1877 A.D during the reign of Qajar Nasseredin Shah, writes about Hezar Jarib gardens and palaces: "the famous Hezar Jarib garden (Thousand-acre garden) is located on the Sofeh mountain, the garden has a large creek for water that is separated from the river and goes into the garden and does not come out from it. Today inside the buildings are destroyed and ornamental trees are gone, but the walls are still standing and the garden context is simple. In these gardens pergolas, towers and palaces, fountains and streams and pools have existed and now only the foundation of some of them can be seen. Its buildings are gone and its old maps and plans had been recorded in foreign countries."

Mohammad Mehdi Arbab, author of "Isfahan as defined as Half the world" about gardens and palace of Hezar Jarib garden and Mohammad Shah’s attention to restore the garden, wrote: "Chahar-bagh is leading to the Great bridge of Shah Abbas known as the Thirty-three springs.
There is a big street in front of it, a small waterfall is created from a height that pours water into the pool and an excellent gate has been built facing the east of the mansion and front of the pond. On the gate of Chahar-bagh Olia (Greater Chahar-bagh) that was famous as Bagh-e Zereshk (Barberry garden) and was a very beautiful place and this Chahar-bagh was planned by Shah Abbas I and was completed by others and is famous as Chahar-bagh Bala. And this Chahar-bagh is longer than the first one, but its width is less and was not built as well and by order of the king, it is surrounded by gardens and portals and leads to Abbas Abad garden near the Sofeh mountain and it is placed on the foothill and among the public lands, the garden is known as Hezar Jarib (thousands of acres). Its area is approximately a thousand acres and consists of ten pieces and each toward the south is taller than the northern part and each has a building and few small waterfalls, water brought to it from the river. It was a unique garden that some of the people of Europe had come to Isfahan to see it during that time. It is written that today, there is no such Garden in Asia and its situation has been described but no one knows the truth. Creek flows from the west to the east and is called as white stream. Afghans destroyed and spoilt Isfahan and this water also stopped due to damage to its basin and the garden started decaying and till the end of the Zandieh no traces of it remained and was so until 1839 A.D when the late King Mohammed Shah Ghazi came to Isfahan…

The ambitious king, after returning from there, ordered Engineers to go and visit it and estimate its cost, immediately ordered the governor of Isfahan Manouchehr Khan Motamed al-Dowleh to send material and workers to rebuild the basin and bring the water back to the garden. Following the king's order all the staff went to the garden and completed the work in the same year and brought water back to the garden and recreated the white stream again almost as big as a branch of the Farin river that was flowing at the school of Mullah Abdullah and it flowed
through the same malformed channels and the waterfalls were created again and made a street in
the middle of the garden with fruit trees and flowers and shortly became a beautiful garden and
place of recreation and leisure, and it was in the same condition for thirty years with no rise and
fall, but twenty years before this (mean in 1871 A.D), its adjacent people blocked the water
passage and again became like it was before."

Jean Chardin, the French traveller travelled to Iran in 1664-65 A.D and then from 1673 to
1677 A.D stayed in the capital of Iran, the city of Isfahan. He says in the description of Isfahan:
"The city from all sides looks like a forest, where a number of domes with small but very tall
towers can be seen which are connected to the domes and for Mohammedans (Muslims) is like
the bell (minarets)."

Eskandar Beik Turkoman, Secretary of Shah Abbas the Great and author of the history of
the beautiful world of Abbasi, says about the plan of Chahar-bagh of Isfahan that in the northern
limit was Jahan Nama building and its southern limit was the Hezar Jarib gardens and palaces,
writes: in the year 1597 A.D, the king decided to occupy the building as the headquarters of the
royal government and ordered to design excellent buildings, and it was built with honest
intention and worthy determination. Then he used to spent the winters in Naghshe Jahan with
pleasure and joy. Most of his time was spent on travel and hunting followed by heavenly night
events and drinks and joy and built excellent buildings in the Naghshe Jahan during the spring,
architects and engineers worked hard to finish it, and out of the gates of the city one is located in
Naghshe Jahan garden and is known as government gate and laid a street from there to the river
with Chahar-bagh on both sides of the street and designed a doorway for each garden And from
the river to the foot of the south mountain (Sofeh Mountain) which is the end of Chahar-bagh
street, the land around it is given to the Lords of the Cairo government and each one designed a
garden with an appropriate garden gate, sunshade and porch and upper chamber with nice landscape and decorated them with splendour and perfection of beauty with gold and azure paintings and at the end of the street, a large and vast, high and low, nine-story garden was designed especially for the king and was called as Abbas Abad garden.32

Jean-Baptiste Tavernier, Western tourist in the year 1633 A.D travelled to Iran. In respect to Isfahan and its comparison with Paris says: "Isfahan and its suburbs is never less than Paris ... Every family has its own home and almost every home has a garden … entering from any side to Isfahan, first we see the towers of mosques (minarets) and then we see the trees around the house, so that Isfahan is far more like a forest than similar to a city.”

Sir Thomas Herbert called Safavid period gardens as heaven and says: "Gardens that of the glory and elegance, no city in Asia can compete with...so beautiful, green and refreshing that they can be called paradise.”33

French architect Pascal Cast, who came to Iran in 1840 for designing and engineering of the monuments of the city, in his book "Iran's new buildings" in his description of Isfahan writes: "A passenger, who is near to Isfahan, from each side, immediately realizes that the vast and beautiful city is in front of him. If it is summer, the gardens outside and inside the city are so green and lush that cover the buildings which are usually not tall.”

Kobinz describes Isfahan as: "Isfahan had many gardens filled with mass of trees that are overlooking the dome of many buildings."

Pierre Loti in his logbook "to Isfahan" described the city to Eden as having many green gardens and trees and said ".... this is the forest and the city."

Gardens began during the Safavid era in Qazvin, the second capital of the dynasty. After the city was chosen as the capital of the Safavid dynasty, it was organized as a Garden City, that
of course today from those royal garden nothing is left except a few buildings. At the time of Shah Abbas, also known as Shah Abbas the Great, the capital was changed from Qazvin to Isfahan. In Isfahan urban spaces, streets, squares and gardens, geometric structure of the Persian Gardens of the city was formed.

The evolution of the garden design in the Safavid period, was linked to the Timurid period as a chain and due to Iran's vast cultural links with Europe in Qajar era, signs of European pattern of garden design influenced the Iranian garden, which, during the Pahlavi era, by increasing communication between Iran and other European countries, European gardens and parks or a mixture of them, became quite common.

It seems spiritual and mystical parameters have an important role on the formation of the Persian Garden. The Persian Garden stimulates all human senses. Pavilion is designed in the garden to take advantage of the beautiful scenery, and usually Pavilion will be located in a place where it is visible and has the best perspective. Sound of birds with the sound of water, which its path is increased by stepping it down, satisfies the sense of hearing. Breeze that blows in the garden and by passing through the garden space becomes cool and pleasant, satisfies the sense of touch and this garden which is the place of nice smell and fragrance, plays with the human nose and fresh and colourful fruits of the garden stimulate the sense of taste.

According to Dr. Iraj Afshar: "two main garden users are: Love affair and poetical contest. No doubt the Persian Garden reflects the archetype of the eternal ideal paradise, but the garden is a paradise on earth. I've seen many Persian Gardens and tried to touch their sacred dimension, but the more I hesitate, more I am away from Heaven. The mystical dimension is in the hearts of the garden viewer. It is true that depressed people are happy with a stroll in the
garden but the hedonistic aspects of Persian Garden are far more powerful than its spiritual influence. Persian Garden is full of movement and mobility and daily life."

According to Iranian subjective impression of paradise, these walls, in addition to deprivation and security, are an element that prevents the Hellish to enter into the Garden of Eden. According to Zoroastrian belief, wall must be seven layers to prevent demons entering it. To some researchers, the edges of the Persian carpets are also a symbol of the walls around the gardens.

The Persian Garden has two objective (physical) and subjective dimensions at the time. Physical dimension shows shape and form; Therefore garden is an enclosed place with gentle slope to flow the water, It also has two intersecting perpendicular axis, belvedere or the pool at the axles, entrance gate and sub-belvederes. In fact mental or spiritual shape is the direct impact of space or place on the viewer's sensing organs. Two forms of objective and subjective may affect each other based on cultural, social and historical factors and act in the same direction or in other words reach to unity, at this point space will have unknown sensory concepts and inspiring modes named as "sense of place". The main physical elements of the Persian Garden are four elements of: space, body, plant and water. Among these elements, space is like a container and encompasses other elements. Space is tasked to create a humane environment in an architectural form. Persian Garden’s body is rectangular and surrounded by a wall and is designed by squaring and geometric shapes through dividing the streams and water circulation. In fact gardens are signs of human endeavour to discipline the place.

5.2 The Persian Garden and its characteristics

In fact, the Persian Garden is a cultural, historical and physical phenomena in Iran and is usually an enclosed area, where plants, water and buildings under a specific architectural system
are combined together, and create a favourable, safe and comfortable environment for humans. The Persian Garden should be considered as a wise relationship between man and nature-god. Understanding the mysteries and secrets of this relationship is possible through a systematic outlook and identifying Iranian pure culture. Therefore the confluence of garden and environment has never been in isolation from culture and the two together make sense in the context of environment. Therefore the Persian Garden with respect to its theoretical and practical applications, aims to meet human needs from the concept of sustainability in all aspects of the physical and metaphysical.\(^{37}\)

The style of the Persian Gardens is in both formal and informal gardens. The type of formal gardens found in front of palaces, is geometric in their layout. Cyrus’ garden, the Chahar-bagh, consisted of four squares within a square - a quadripartite ground-plan. There are various formal gardens in Iran; the gardens of the Taj Mahal in India are also an example of a formal garden. An example of informal gardens is the family baghs found on the outskirts of major Iranian cities.

Persian Garden pattern has very important characteristics which can be found and seen in the realm and sphere of influence of Persian culture, from East to India and from the West to Spain. In general, the main characteristics of the Persian Garden can be seen in the following:

- Constructing a garden on sloping land
- Being enclosed with a wall all around
- Dividing the garden into four sections
- Using straight lines in garden design
- Existence of the building in the centre or the highest point of garden
- Use of a permanent stream of water
• Water flowing in such a way to create the sound of water (water slope)
• Use of the cut and polished stones in the furrow to show up water wave
• Existence of a pool or pools for water supply and beauty of the landscape in front of mansions
• Use of lots of shady trees and narrow passages
• Allocating part of the garden to plant fruit trees
• Use of a variety of ornamental and medicinal flowers and the use of roses was more than any other types.

Squares or rectangles are used in Persian Garden design and the presence of original, straight and stretched perspective in the longitudinal axis of the garden In front of the palace, planting tall trees on both sides plays a key role in the creation of perspective which makes the garden seem longer. This is the same feature that been inspired the gardens in Italy and subsequently the French formal gardens.

From the perspective of architectural analysis, there are three basic elements in the Persian Garden:

1. Fence
2. Mansion
3. Chahar-bagh plan which later became the third factor

Other components of the Persian Garden is Belvedere or palace that mostly is an extrovert building to provide the best vision and view for the viewer and provides pleasure of tranquillity of the beautiful sights for spectators.

Usually in the middle of Persian Gardens, a pool or a summer house or a building existed. Some garden have Chahar-bagh plan and always have two perpendicular axis and this divisions
are primarily done by streams of water and include north to south axis and East to West axis that normally takes place in one-third of the garden plan.

Garden art like architecture is subjected to natural factors and conditions of the environment is such fertile soils and water environment such as fertile soils and water. Garden finds a special significance due to climatic differences in various regions of Iran, especially in tropical areas. Persian Gardens are consisting of three main elements of water, plants and architectural space. The most important thing to enliven the garden is to bring water from distant way into the garden which creators of the garden by digging subterranean (qanat\(^38\)) have solved it (Drawing 2). Water as one of the four elements of creation, has a special place in ancient Iranian culture.\(^39\) Xenophon in his book, describes the Pardis in Western satrap city of Iran which is the same garden in Achaemenid period that was called Pardis. This show the relationship between the garden and the city during the Achaemenid time and it seems due to the same reason, the Greeks used to recognize the Achaemenid as the world's largest garden builders.\(^40\)

According to many scholars in Islamic cosmology number four could be interpreted in the following meanings:

1. The natural elements (cold, hot, dry and wet)
2. The four basic elements (water, air, earth and fire)
3. The four main directions (North, South, West and East)
4. The four elements (metal, plants, animals and humans)

Gardens were organized in precise Cretes and plow and was entirely symmetrical, since its design was already developed in Iran at Achaemenid during the period (300-500 B.C), with the Pardis of the Sassanid (600-200 A.D) garden took a magnificent plan with various designs and Pavilion at the confluence of four streets. The park plan of the Sassanid Chahar-bagh was
cruciferous that ruler’s palace was located in the centre. The same pattern can be observed in the Achaemenid pottery which is a symbol of the four elements of the universe.\textsuperscript{41}

The Persian Gardens in terms of its main function are classified into five types:

1. **The fruit garden**: The fruit garden is the simplest type of garden in terms of design and the most useful type of garden in economic terms. Some of the fruit gardens were made without any building, while in some other, one or more buildings in small or medium size, for accommodation of the gardener or the owner of the garden and his family have been considered. Also in some cases there were one or more orchards next to a residential garden or residence of the garden.

2. **The residential garden**: Many rich and upper class people, used to build their residential buildings in a garden in order to create favourable conditions for their residence. The size and location of these gardens was proportional to the wealth and power of its owner on the one hand, and on the other hand, it was subjected to environmental characteristics of each city. Often these gardens were built around or outside the urban fabric.

In terms of residential space characteristics, Residential Garden can be divided into two groups: First, gardens with small residential space for the garden or in other words, the residential building were situated in a garden. The second type is small gardens that were located at the back or side of a residential unit. Generally, the best part of the house was designed in such a way that to have a view of the garden at least from one side. These small residential gardens were located within the city boundary.

3. **Residential-governmental garden**: In small towns, where administrative and military institutions and organizations were limited, often ruler or some of the city’s most important figures used to live in the garden which in addition to its residential building, a
building was considered for governing works. This part used to be called as the exterior mansion, or even in some cases, Court House. It was built in such a way that commute of people, would not disrupt the family life in the garden. These gardens were usually small and were in or near the city.

As we choose to enter into this earthly paradise, the structure of the entrance gate welcomes us. In fact the entrance gate is considered as outer building and is the entering focus point and sometimes is a building where the guards and a gardener stay. In many Residential – governmental gardens, the entrance mansion was used as a Court building so that the referring people need not enter the domestic arena of the garden and its privacy and sometimes, there have been a field for certain administrative and ceremonial ceremonies in front of the entrance. And in this case, a colonnaded porch is built in front of the entrance building that was facing the field. Often there was a lattice wall that prevents direct view into the garden in front of the entrance building and showcases the garden through shadows and light in a fantastic way.  

In many types of Residential and Residential - governmental gardens, one or more mansion was considered for permanent residence and It is often called the inner because it was designed and built in such a way that, socially and physically was defined and had identified privacy, so that if a feast was held in the palace of residential - governmental garden and strangers were permitted inside, the privacy and the realm of privacy was preserved and thus people's lives continued without intemperance.

For ultimate privacy and distinguishing privacy of the inner part from other parts of the garden often the inner was constructed and designed on one side of the garden in such a way to be distinguished and protected from other sectors. In this case, often one or more central open space, enclosed or semi-enclosed, was considered for the inner.
4. **Governmental garden**: Governmental garden in terms of having green spaces can be considered as a complete garden. This type of gardens is located mostly in capitals and in the country's major cities which was both the residence of rulers and the military heads as well as the court house. The Residential spaces, court and service houses were designed and constructed in such a way those activities related to each of them do not interfere in other activities.

In most cases, in addition to the Court House, spaces and other government buildings, there were other spaces such as square, a place to deploy troops and so on, in the garden. Thus it can be stated that governmental gardens were often part of a governmental package.

A palace is constructed in these gardens to present pleasure of peace and quiet and the beautiful sights to human. Belvedere Mansion is often an extroverted building which is trying to provide the best view and perspective for its residents, hence, cross-platform design, square or octagonal plan and also eight heavens are to be used. Most palaces have the same physical characteristics in all four fronts but sometimes, one front have more points in terms of climate and the aesthetics which is selected as the main facade and a court would be designed in there. In terms of location in the garden palace has several modes, sometimes can be built in the middle of the garden and get same value in the four sides and sometimes placed in one side of the garden and its main view will be along the long axis of the garden. And sometimes the palace is placed along the longitudinal axis with one-third ratio and the inner buildings are located in a quiet side and the main view of the garden would be in the opposite direction of the inner. Generally position of palace at any direction, its porch and openings provides the best scenery of the garden for the observer and scale and form and its materials and decoration is in such a way as if they came from the garden and mixed with garden space.⁴³
It should be noted that in many residential gardens, governmental garden or Residential – governmental garden, a building was built in the entering space which in most cases, was a place for accommodation of guards, gardeners and other staff of the garden. Only in a few of the garden, the entrance to the building was converted into a huge mansion to occupy the main residents of the garden.

In many residential - government gardens of the building, which was located at the entrance was used as Court and government buildings, because the rulers and bureaucrats could handle administrative affairs in the same building, which from one side was inside the garden and from the other side was on a road or field. And therefore clients did not need to enter the domestic part of garden and thus privacy of indoor arenas was well maintained and administrative affairs were separated from the realm of the living.

In some residential - government gardens which were located in the capital or major city, in front of the court building that was placed at the entrance building or entrance space, a governmental and the ceremonial field was considered to hold parades and march or religious and ceremonial gatherings. In this case, often in front of the court building facing the field, columned or non-columned portico was built on the upper floor so that during the ceremony in the square could be used by the country and the military heads. Alighapoo in Isfahan is such building.

5. **Tomb garden**: tomb garden is a type of a garden that often all or part of its area is dedicated to the tomb. Based on archaeological evidence, making use of the garden to decorate tombs and creating beautiful environment full of peace around a tomb, has long roots in Iran and one of the oldest samples can be found in the Pasargadae. Based on archaeological evidence, Achaemenid architects in this place, in addition to the
construction of gardens next to palaces and existing settlements, where its remnants were found in Stronach excavations. They also had set out to create a green and large garden around the tomb of Cyrus the Great. In fact this garden was founded in the first millennium BC; which can be introduced as one of the world's oldest tomb garden. Another example is Mazar Garmeh garden that dates back to Ilkhanan Mogul period. Building of Mazar Garmeh garden has a domed chamber which contains a series of rooms and other architectural elements and placed in the garden but today the garden and its extensions are gone.

Tombs built during the Safavid era and afterwards, after funerary architecture of the medieval period, had downward trend with it. Non-religious tombs were gradually given to saints. Actual location of such tombs was often extensive and includes ancillary buildings, neighbouring yard and extensive garden.\(^{44}\)

According to the plan of Darius only three buildings had to be on the Persepolis Terrace, the Apadana, the Palace and the Treasury, as fourth we may assume an entrance-gate. Presumably, they were surrounded by gardens as evidenced by water-canals which are still to be traced on the Terrace. Already in Pasargadae it could be seen how important gardens were for the Achaemenid.\(^{45}\)

One of the oldest documents in the post-Islamic era is related to burial of Sultan Mahmud Ghaznavi in the garden which was called victory gardens in Ghazni. It seems the Victory garden was a government and ceremonial garden that was used for some formalities of government as well as leisure. According to some sources, tomb of Seljuk Sultan Sanjar in Merv was also in a garden in the Chahar-bagh design.
According to the evidences, from the Ilkhanids Era onwards, tomb and tomb gardens were considered more. It seems most of the tombs - gardens that exist in Iran were initially in the form of a garden and in some case were used for one tomb but then transformed to tomb garden.

In contrast, during India's Mogul period, there is no impressive tomb garden in Iran that are designed and built from scratch for this purpose.

In many large gardens, in addition to the portico and inner mansion as the physical spaces of the Persian Garden, proportional to the size, type and function of the garden and also the number and social status of the users, one or more service space such as stables, warehouses, tea room, bath and water reservoirs were built. Size, location, the adjacency to other spaces and other physical properties of these spaces did not follow a fixed or clearly defined pattern, but in each case it was influenced by the main characteristics of the garden. In some large gardens, residential spaces were constructed for staff and crew in the garden. These spaces were never in the main axis and mostly placed along the side walls. Such as Fin Garden in Kashan which used to have two baths, one for the crew and the other for to the ruler.

The author believes that, garden placement and its geographic features is one of the most important factors in appearance of the garden. Persian Gardens in terms of placement and geographical characteristics are classified into five groups:

1. **Garden in low and smooth slope**

Many of the Iranian gardens especially in the central and southern parts of the country have been designed and built on plain and relatively flat areas with little slope. Most of these gardens were built in the desert and places without forests and green spaces to provide a limited suitable place to live and refreshments. In design of these gardens, the natural slope of the land have been used to run the water in the streams, that's why land
form of these gardens were usually geometric and ordered. Fin Garden in Kashan, Chehel Sotoun garden in Behshahr, Tajabad garden in Natanz and Eram in Shiraz are the examples of gardens located in plains with ordered geometric shape.

2. **Garden on the hill**

In some cases, there was a natural suitable position for the garden in such a way that the possibility of exploitation of a hill or steep slopes for construction of part of the buildings and garden spaces was created. At this time the garden was designed and organized to gain the maximum benefit from elevated areas and slopes. In these gardens, other elements and spaces that provide the right perspective are built at the bottom of the hill and on the flat surface. Slope is also used as green space.

3. **Garden located in a large lagoon(pond)**

In such gardens, a large pond was built in a part of the garden using artificial or natural elements to create exquisite and pleasant scenery. In this type of garden, a palace building was built on a platform in the middle of the pond. Due to water shortage in most parts of Iran, very few of these gardens are built in the country. Abbas Abad garden in Behshahr is an example of this type of garden.

4. **Garden outside the house space**

In the design of large houses and high class urban dweller, the Garden was designed and built which was combined with dwelling space in a variety of ways. Garden in simple form and composed of a green space was placed on one side of the house and their connection was created with an entrance space. In the combination of built spaces, the house was combined with garden space to maximize the use of landscape and other
spatial qualities of a garden. In these gardens, a semi-extroverted and semi-enclosed space was created to have a permanent view of the garden.

5. Garden by the Riverside

Many of the ancient cities of Iran were formed or developed on a side or both sides of a river. Sometimes in these cities, a garden was built along the river side and to use the best view of the river, the Belvedere Mansion was constructed by the river.

When a man looks at some high spot, optical illusion occurs caused by the difference in the angle of the upper and lower horizontal line which makes that point appear closer. That is why the palace looks pretty close from the entrance gate in the garden and urges the viewer to move towards this seemingly short distance and vice versa. When someone from the palace looks at the garden (Most often from a high point or the upper floors of the palace), the mentioned distance looks longer and gives more breadth to the garden. Furthermore, in the Persian Garden, importance is given to the main view. In these gardens, open and stretched space is considered in front of the building which would be located right at the main perspective. Tall trees will not be planted in this space. The planted plants were usually not too tall in order to not block the open view, yet always beautiful.

The most basic and simplest geometry of the garden is to create axis in the middle and along the length of the garden. Normally shading trees were planted on both sides of this axis. Geometry of the garden is composed of rectangular divisions and the most important of these divisions is arrangement of four parts based on the axle geometry and symmetry.

Arrangement of the Persian Garden has been formed from Water Arrangement, Plant Arrangement and Architectural Arrangement. This arrangement and discipline is also visible in
Persian carpets and these elements of this Arrangement (water, plants and architecture) are present in Iranian painting and a perfect image of the Persian Garden can be found in them.

Walls of the Persian Garden fall in a rectangular area, meaning that Persian Garden is designed based on rectangular shape. This shape is usually used in the form of a perfect square or rectangle. In general, the presence of geometric shapes and in particular square forms in which the distance between garden components is simple and clearly shown, is an important feature of the Persian Garden. Nature organizing pattern in the Persian Garden is a four-part pattern which is formed from two cross streams at its centre and follows all geometric systems, planting, water and the body of the garden. The most important pattern of this type is the Chahar-bagh pattern.

The Persian Garden spatial plan is as simple as possible and forms simple and clear and without any confusion. Geometry and mathematical principles should be applied and geometrical basis forms the groundwork of the garden composition. There is a hierarchy of spatial planning in Persian Garden that gradually guides a person from outside to inside. In the first encounter, a wall can be seen surrounding the garden. In the ancient Persian, garden was called "Pardis" which means "walled garden". This wall defines the garden space and gives it a sense of place and keeps the outside bustling world away from inside ordered world and will not allow it to be influenced. Garden is a fixed point in a changing world....As we enter to garden, a vast geometric structure can be seen in the composition of the garden. Geometric shapes and in particular square form, that is simple and bright, shows that the distance between garden elements is of utmost importance in the Persian Garden. At the planting time, the first step was to keep the exact distance of planting place from each side and this way some squares were formed and only the rows of trees were visible by looking from each side. Another important principle was openness of the main perspectives in a rectangular form. In this space, tall trees were not planted to not
block the main view. One point perspective plays a decisive role in ensuring visibility and proper view in the Persian Garden. In the overall composition of the Persian Garden, perpendicular and parallel axis to the sides of the outer wall divides the garden and with this spatial system, base of other geometric systems including irrigation and tree planting system forms up (Plan 2). Usually two main perpendicular axis divide the garden into four parts and four gardens (Chahar-bagh) are formed that has a long history. Some scholars know four parts of the Persian Garden as a symbol of the four world's elements (water, wind, earth and fire) and in their opinion, as the world is divided into four parts and these four elements are the origin of the world, so the garden also, with its four divisions, has becomes small symbol of the world. Some others believe, when the Persian Garden is a collection of four main axis, four main water stream, four main rows of shady trees and four main paths, the term four gardens is graceful and worthy. The main axis stretches across the garden in the middle, and joins the entrance, palace etc. and shapes a perspective that represents the garden much longer. Streams, pools, flower beds and paths are formed within the geometry of the garden. Paths in the Persian Garden comply with straight and narrow axis and as if it is a straight path that leads us to the heart of paradise.46

According to ancient literature, the archaeological site of Pasargadae, the first capital of the Achaemenid Empire has the first of Iranian Chahar-bagh in it and by having features of the Persian Garden, is a confirmation of its profound effect on gardens of later periods. Engineering system in this garden, and stone water creek, shows the power of ancient Iranian architecture and garden construction.47

Chahar-bagh or four-part pattern of the Persian Garden follows a centrality system that the most significant component of this central discipline can be seen in the gardens of the Safavid period.
Persian Gardens are usually rectangular with a wall all around it. The Garden may cast a shadow on dry and desert mountains around it outside of its tall wall. If the garden is within the city, these walls act as a shield against noise and bustle of the external.

Iranians from old times had special interest to build gardens and flower beds in the yard and around the buildings. They used to build gardens and flower beds around the buildings which were called "Pe Ar Diseh" which means around the fort or "Diss". Diss means building and the person who constructs Diss is Disa. Iranian rulers of the Iranian Empire outside and inside of Iran, all were obliged to make such gardens. For example, one of these "Pe Ar Diseh" or Pardis was in Persepolis and Xerxes had recalled it while enumerating his built structures. 48

Symmetry is one of the principles of Traditional Iranian Architecture, so that this symmetry can be seen in all buildings in various forms.

Persian Garden is not an exception and follows the same principle in its construction. Belvedere or mansion is commonly referred to as the main building of the Persian Garden which is located on symmetry axis of the garden or in the main axis in the centre or above it. The peak of this symmetry can be found in the main axis of the garden where even the flowers and trees are symmetrically planted. The plan of the palace (Belvedere) is extroverted and has multiple windows on the porch toward the garden. Sometimes, the palace of garden, such as the palace of Eram garden has its own private courtyard at the back. Many of these gardens have a building built at the entrance that said to be the entrance building. Sometimes the building has two floors and has a direct view over the main palace. Entrance to the mansion in Shahzdeh Mahan Garden is one of these samples. Placement of the entrance and the palace in the Persian Garden is done in several ways. Sometimes the main building is in the middle of the garden and is seen from four sides and secondary and entrance buildings are built around it. Or the main building or the
palace was at one side and secondary buildings around it with two crossover ways and the main view was along the longitudinal axis of the garden. Sometimes the palace is located along the longitudinal axis on the ratio of one-third and the inner building was placed on the private part of garden and the main perspective has been in the opposite direction of the inner building, just like Delgosha garden. There is also a Persian Garden with an enclosed courtyard behind the main building which has its face forward but there is only a cozy courtyard at the back of the building like the Mazar garden in Kashan and Eram garden in Shiraz. Next to these gardens, there has been gardens which in addition to the main garden, also had an outside garden that was more general and more public and only after passing through that, could entree the main garden, such as Bagh Behesht Aeen (Garden of Eden) which was in front of Dolat Abad Garden in Yazd (Details will be provided in subsequent sections of this chapter). Jahan Nama garden in Shiraz also had an outer garden which now has become a factory but still the main part of it remains. Some gardens also have a prison or clamps or forecourt and Shahzdeh Mahan Garden is one of those examples.

According to Henry Corbin, Chahar-bagh of Eden has always existed in the Iranian1s unconscious. According to Corbin, garden is a model of the first place in the extreme of the physical world and the world of the soul. In other words, a garden is a world in-between that can be called imaginal world. Based on Corbin’s thoughts, the Persian Gardens are such as the buildings reflecting the Divine Earth Picture. Garden is a determined space that frames the overall picture of the Universe within itself. There is also a pool of Kosar and many other flowing streams in Paradise which would be referred. For this reason, water is a vital element in the Persian Garden and due to low rainfall in most parts of Iran, procurement and retaining water is considered very important.
Bahram Shirdel (Iranian architect born on 1951 A.D) says: "The Iranians who were in paradise mind-set and perhaps never had a clear picture in mind, made an abstract perception of their paradise. Garden is a paradise built by spatial structure based on ancient Chalipa (cross) pattern. In this pattern central space is sacred and since in Iran water in the most sacred element of nature, this centre is defined by the presence of water. Water reflects a virtual image of the surrounding environment in itself and the presence of water in a garden center represents its virtual dimension."  

Iranian life is dependent on water, in fact water is the main cause of life, and hence it is a symbol of life and hope. Water in this vast land makes miracles, not only because of its scarcity but also, because the soil is extremely fertile and when water reaches to it, soil comes to life. For the prevention of drought and flood, as well as the use of water resources was afterthought with imagination and innovation. If evaporation causes high consumption of surface water, subterranean were built at a depth of thirty meters and a length of 80 to 160 km to keep and retain water for irrigation.

Water for gardens can be supplied from different sources of river water, spring water and subterranean water. For example, Hezar Jarib Garden in Isfahan was watered by Zayandehrud River and Fin Garden in Kashan was watered with spring water of Sulaymaniyah and water of Dowlat Abad Garden in Yazd was supplied through the aqueduct with a length of approximately sixty kilometres.

Subterranean (aqueduct) were the most important water suppliers for gardens, and sometimes used to carry the water from remote locations to the desired place. In fact, the Persian Garden is linked with the history of the aqueduct. The first Persian Gardens were formed next to
aqueduct’s output paths. Examples of such gardens can be found in Tabas, Yazd, Gonabad, and Birjand and most of the desert regions.

Water flows through regular creek and streams and after passing through the mainstream flows into sub-streams. Actually this method is a method of irrigation in the garden design and is to create landscape by water. Pools used to have fountains too. A polished stone was used on fountain’s floor or wherever water collapse down to create a better water wave effect. Usually there is a square or rectangular-shaped pool or a big pond in front of the main palace of a garden. Sometimes these pools are regular polygon-shaped, with six to twelve edges.

Water which is considered as a sacred element is one of the most original and most vital elements in any garden formation but in the Persian Garden, this element is used in an artistic way. It is not only used for watering and feeding plants but also has a conceptual function and was used to create beauty. Presence and movement of water in a Persian Garden has a special system in accordance with the structure of the garden so that the dimensions of the space have been designed with that in mind. This life giving element which is also a symbol of purity and freshness, was used as cooling and to reflect the beauty of nature and to create pleasing sound in the forms of pools, ponds, streams, waterfalls, fountains and jets and was allowing the viewer to experience a sense of relaxation and pleasure and his thirst and fear of dehydration to be answered. (Plan 3)

Water is without doubt the most important element in the Iranian garden. Water is the most sacred element of nature in Iran and many religions have considered it as the source of life. And this belief the God created the goddess of water named "Anahita" in Iran. The culmination of heaven image in Islam is "a beautiful garden next to a flowing river" and that's why, water in a dry and thirsty land of Iran has always been revered. Iranians were getting water so hard and
artistically displayed it in their gardens. Geometric grid of the Persian Garden circulates the water within the garden and represents it to the viewers in the forms of streams, waterfalls, whirlpool and fountains. Fountains spray water with high pressure and cools ambient air in the garden. Sometimes a water tank was built at a high altitude for fountains to use the pressure produced by height difference for spraying water and circulating water in fountains. Fountains were sometimes in the form of sculpture or were designed as a symbolic element which was forming part of the water organizing system.

Due to water shortage in Iran, Iranian gardeners were trying to present more water volume and many times sent water into the heart of the earth and again showcased it in the course of streams and ponds and fountains and meanwhile applied some techniques such as the use of stone wave in small waterfalls, water stepping and also a very broad and shallow waterfront that reflects the surrounding image. With the help of polished etched rock on stream bed and especially on slopes such as humps and beautiful lilies, movement, sound and moisturizing environment can be increased and even affect the appearance of water and makes the water seem wavy.

Water in Persian Gardens creates a beautiful landscape and also adds freshness and vitality to space. It is obvious that if the water needs to be clean and stay clean, it must constantly be flowing. In the midst of the Persian Garden space, a waterfront has always existed to flow the water to all four sides. In this way the garden is divided into four sections in the form of the irrigation systems and streams meandering from these four sections.\(^{51}\)

A Persian Garden is garden architecture, water architecture and mixing of water and building. Flowing water in addition to the presentational feature, also has a functional features to reach to the roots of the trees, plants, plots and reduction of heat and dust refinement. The main
factor that has given life to the Persian Gardens is flowing water which is runs in low-gradient streams and creates pleasant weather and good scenery in the garden. What is important about the Persian Garden especially in desert areas is how to manage and lead the water.

Some gardens are glaring at the expanse of desert cities in Iran which are precious heritage from our ancestors. In these gardens, the amount of water and management method of dividing it, are all based on hydraulic engineering that has been done in the traditional way.52

Water, plants and architectural space are three main elements of the Persian Garden. Water, as life originating, has a crucial role in the formation of a Persian Garden and is mixed with three conceptual, functional and aesthetic aspects and somehow has influenced the other two elements of plant and architecture. Limited water resources in our country (Iran), have exacerbated water display and this interest in irrigation facilities in the Persian Garden can be seen from pond and fountains up to stream structure and irrigation lines, And less people in the world, unlike the Persians, spend such elegance and artistic beauty in the engineering of water supply facilities and its significant example is Sadri garden in Taft, which in terms of pond and fountain system is unique in its kind.53

Existence of the Persian Garden has always been relied on a drainpipe (qanat or aqueduct) or a spring that permanently flows through the garden. In most cases, a facility created to provide water is hundreds of times longer than the length of the garden. Such as the aqueduct that brings water from the mother well to the garden and water enters the garden and after full irrigation, the excess water flows outside the garden for other uses. Since Iran is a dry land, with all efforts to supply water by canal and aqueduct, still the amount of water does not exceed more than a certain level. Water shortages have increased Iranian desire to watch it and as a result, Iranian garden designers have always tried various initiatives to keep the water more in the
garden and with its flow and move, display it more and longer. To do this, fountains, pools, ponds, streams, waterfalls, whirlpool and water jets with different designs and sizes have been used and as a result a variety of sounds and water display with more volume has been achieved.\textsuperscript{54}

In Persian Garden all elements are used for a particular purpose. The plants are no exception. The role of plants in the Persian Garden is to create shadow, profitability and decorations.... Due to the fact that the garden is in direct contact with regional climate, the certain types of plants were affected by climate and as a result, the vegetation in the area is subjected to weather conditions.\textsuperscript{55} Plants in the Persian Garden are planted with the aim of creating shade, harvest and decoration and in the main axis of the garden were more of cypress and plane trees because these trees are beautiful in spring and autumn and of course cypress tree in Persian culture represents immortality and because of its beauty and proportions is popular among Iranian people. Planting cedar, poplar and ash array trees were also common on clay ground and around the pool are covered with elm, maple and willow. Fruit trees were planted in plots of both sides of the garden streets, and vine was placed along the walls on scaffolding. Short plants also planted among the plots not to cover the perspective of the garden. Lily and jasmine and rose bushes that are the most popular flowers in Iranian gardens are completing the beautiful scenery of the Persian Garden and next to them decorative flowers such as violets and lilies and hyacinths are planted more on the gardens in front of the building and the main axis, and creates thousands of colours in the garden.\textsuperscript{56}

Tree motifs on top of a hill can be seen in the seals of Susa (Elamite or Sumerian civilization, according to the latest archaeological theories) that Ernest Herzfeld found it of the subsoil and interpreted.\textsuperscript{57}
The tree is so sacred that cutting it in Gilgamesh is punishable by death. On the pre-Islamic Iranian mythology, cedar is the most sacred tree. Zoroaster with his own hands planted two cedar trees that today are three thousand years. Achaemenid kings were proud to plant cedar trees with their own hands. Plane tree is very sacred for Islamic mystics ... And basically green colour is the colour of plant growth and re-birth of nature and is a sacred colour for Muslims.\textsuperscript{58}

Various plant designs can be seen on the bas-reliefs of Persepolis which shows the place and importance of the natural elements during the Achaemenid era.

In the Persian Garden, planting the trees was done for a specific purpose and target and it was never by accident or unreasonable. Since usefulness is one of the main characteristics of the Persian Garden, most of the garden plants are fruit trees and then shady tree. Therefore decorative plants in the garden are much less in evidence. In fact, plants can be divided in three groups of trees, shrubs and flowers. Place of flowers in a Persian Garden in under the tree. In particular, flowers have been planted that has some benefits and some of them also have medicinal properties. The order of plants in the Persian Garden is shady fruit-bearing trees such as walnuts are planted in a row on the side of the creek. Non-fruit bearing shady trees are planted on the vicinity of the path of the wall and fruit trees, based on a variety of growth which varies in different climates, and among the plots, elm, maple, Judas and Myrtus trees are planted around the pool in Persian Garden. Willows have been planted where the water is more but not planted next to the pool and pond because it cracks the edge of the dock. Deciduous and evergreen trees were planted along major thoroughfares and water streams.\textsuperscript{59}

In the book of Ershad Al-Zerae of the Safavid period which is about agriculture, plants and trees, the shady trees at that time have been named as: musk, willow, sycamore, Turkmenistan poplar, Samarkand juniper, Kondeh Dal, judas and several other species.
The Persian Garden is not only a safe and comfortable place it is also a place for quiet contemplation with philosophical discussions. A place to explore, this is where one can refresh a tired soul and find solace and new landscape. Chardin had noted that Iranians are peaceful in their garden and not only they deeply breathe but greedily inhaled the scent of flowers. But sometimes the garden was used for happy occasion and captivating evening, means dancing and singing in the soft light of lanterns and torches.\textsuperscript{60}

In the Safavid era style of garden construction was like previous periods with little changes. The Persian Gardens with latticed walls were common during this period. Large gardens were built in this period which was coordinated with texture and network of the city. In the Safavid period, gardens were built not only in the capital but everywhere in Iran. Many gardens were built in Isfahan so that foreign tourists used to use the garden term to describe this city.

**Chahar-bagh**

As previously mentioned, according to archaeological findings the first garden in Chahar-bagh form in Iran was the Pasargadae garden which was built by Cyrus the Great. In Chahar-bagh, passing of stream of water in the garden and in four directions was cruciform. Commonly in the middle of this garden there is a pool and a summer house or a building.

Chahar-bagh is a rectangular garden divided into four parts by paths or waterways. Thus many experts, assume Persian Gardens are: Rectangle with two axis and a mansion is built at their confluence: "Usually wherever we find such a panel, we call it a Persian Garden and when we are present in the Persian Garden, more than anything we see and understand this discipline and order."\textsuperscript{61}
From the other perspective, "Persian Garden consists of a number of lines and the main axis that divides the garden into four parts so that the Belvedere (mansion) is in the midst of it and then each section is divided into smaller parts. This approach is rooted in a very distant past culture. Dividing the space into four sections on the occasion of four sacred elements was common: water, fire, earth and wind."

In the Persian Garden Chahar-bagh, attention to each of the four elements (water, wind, earth and fire) has very old roots. The first of four sacred elements is the soil that has strong and undeniable presence in any garden. With the presence garden in warm and dry lands, the life and freshness of the soil can be seen. Element of water, is a life-giving element to soil and plants and has a prominent presence in the Persian Garden. This life-giving element, in addition to irrigation, is a symbol of beauty in the Persian Garden and in the form of a waterfront and fountains is displayed in the pond. Wind and fire (sunlight) are two elements that will be present without human intervention and will complete the Persian Garden. However, some believe that in the Persian ancient garden there was a place for making fire. However the existence of plants and trees out of the four elements in considered to be rituals of the garden. Plants in Iranian culture represent renewal and new life.

According to the plan given by David Stronach, the digger of Pasargad ancient complex, the basis of Persian Chahar-bagh is seen in the Royal garden of Pasargadae. The oldest evidence discovered which has the root of many theorists in the Persian Garden geometry and pattern of Chahar-bagh, is the earthenware bowl found in Samarra. On this earthenware bowl which is believed to belong to the 2000 years BC, intersecting streams are drawn which show four-pieces of a garden and there is a tree and a bird in every piece.
During the setting up of a memorial that represents the Achaemenid power, Cyrus also included a garden in his construction program. The royal gardens of Assyria and Babylon have always been a separate part or complementary for the Palace, but we see that in the Palace of Cyrus, long porches and open spaces around them are used as complementary parts of a detailed plan in which, somehow, the garden itself has become the royal residence.64

"Lysander (Greek Commander) had praised and admired the beautiful view of trees, thoroughness of their intervals and straight rows, angles and different aromatic smells circulating in the air, while walking with Cyrus."65

Within the scope of the Cyrus's new scheme, there are a number of stone culverts which not only reflects formal garden, but unitedly helps the composition of the various parts of the palace...In the centre of the garden plan, which itself is important due to geometric features, an interesting example of an inner garden can be found which is a rectangular area 300m to 250m, and according to trees and shrubs that have been drawn in symmetrical rows in the hypothetical map, it can be assumed that this garden is divided by straight water channels... Cyrus obvious desire to communicate between "religion of the country" and his magnificent garden is clearly reflected in the stone parts that are built for placement of throne and King's stool on "elongated Ivan" at palace...

Archaeological records are many and undeniable. It can rightly be claimed that, in addition to the view of flowers and plants close to the palace, Cyrus has tended to use the central perspective of his large garden as far as possible.

I must confess that I was wrong in 1978, and just biased on what I knew about the remains of the stone water channels, ignored the possibility of long and central perspective and
guessed the inner core should be consisting of two "identical rectangles" that are divided by cross channels.

It is known that the central stretch of 3, 5, 6 water channels are completely disappeared as a result of plow in later periods or have never existed. There is also another possibility that stone conduit was forming the longitudinal axis and was connecting culvert 3 to culvert 6 from the front of the throne.

At the same time we can see a long path that faced us with a pattern of four sections of the rectangular area which perfectly match the total size of the garden. In conclusion I must say that now we can see one of the most fundamental factors in Iranian contemporary garden design which is Chahar-bagh in the plan of Cyrus` s main garden in Pasargadae.  

Maria Eva Subtelny a contemporary Orientalist also referring to the four parts of the Pasargadae garden, writes: "In the veranda bar (Pasargadae garden) overlooking the garden, there was a bed that was probably facing the longitudinal axis of the garden. It seems that the geometry of the inner garden is an expression of incorporating the four parts."

The Garden was organized in accurate plots and it was all symmetrical because its design was already developed in Iran during the Achaemenid period (300- 500 B.C). The Sassanid Pardis (600-200 A.D) Garden took a magnificent shape to it which had circular designs and palaces were located on the confluence of four streets. Park plan and Sassanid Chahar-bagh were cruciform in which the ruler's palace was located in the centre. The same pattern can be observed in the Achaemenid pottery which is the symbol of the four elements of the universe.

The spatial plan of the Persian Garden is simple and clear and takes shape without any ambiguity. Geometry and mathematical principles are to be applied and geometric infrastructure forms the basis of garden composition. There is a hierarchy of spatial planning in the Persian
Chapter 5  Persian Gardens

Garden that gradually leads a visitor from outside to inside. A wall can be seen in the first sight that has enclosed the garden. Garden was called "Pardis" in the ancient Persian which means "walled garden". This wall defines the garden space and gives it a sense of place and separates the bustling outside world of the disciplined inside world. Garden is a fixed point in a changing world....As we enter, a vast geometric structure can be seen in the composition of the garden. In Persian Garden geometric shapes and in particular square form that clearly shows the distance between the elements of garden, is very important. At the planting time, the first step was to keep the exact distance of planting place from each side and this way some squares were formed and only the rows of trees were visible by looking from each side. Another important principle was openness of the main perspectives in a rectangular form. In this space, tall trees were not planted so as not to block the main view. One point perspective plays a decisive role in ensuring visibility and proper view in the Persian Garden. In the overall composition of the Persian Garden, perpendicular and parallel axes to the sides of the outer wall divides the garden and with this spatial system, base of other geometric systems including irrigation and tree planting system forms up. Usually two main perpendicular axes divide the garden into four parts and four gardens (Chahar-bagh) are formed that has a long history. Some scholars know four parts of the Persian Garden as a symbol of the four world's elements (water, wind, earth and fire) and in their opinion, as the world is divided into four parts and these four elements are the origin of the world, so the garden also with its four divisions, has become a small symbol of the world. Some others believe, when the Persian Garden is a collection of four main axis, four main water streams, four main rows of shady trees and four main paths, the term four gardens is graceful and worthy. The main axis stretches across the garden in the middle, and joins the entrance, palace etc. and shapes a perspective that represents the garden as much longer. Streams, pools, flower
beds and paths are formed within the geometry of the garden. Paths in the Persian Garden comply with straight and narrow axes and as if it is a straight path that leads us to the heart of paradise.69

It is known that, by certain monuments and beautiful gardens, Isfahan had a global reputation during the Safavid. Chahar-bagh and Naghshe Jahan square were two key features of original design of Shah Abbas for Isfahan. The first one was a major street and its name was taken from the four vineyards. Chahar-bagh, begins from a point near Chehel Sotoun Palace and goes about one and a half kilometres to the south, passed through the Allahverdi Khan Bridge over Zayandehrud River and goes two more kilometres to the south until it reaches the vast space called Hezar Jarib garden (thousand-acre garden) that was a recreational garden and was the royal residence of many figures of the court. Although this recreational Garden was the private property, it was open to the public. Thus, the total length of Chahar-bagh was about 4 km and its width in the northern part was 48 meters, Hezar Jarib garden which was located at the end of the Chahar-bagh Street was straticulate and had the two central elements of the Iranian garden as shadow and water.70 (Drawing 3)

The English adventurer, Sir Thomas Herbert writes: "This is called the Garden of thousands of acres (Hezar Jarib). From north to south it is thousand feet and its width is seven hundred feet. The gardens have fruit and various pleasant trees that are irrigated with stream which has been drilled and driven through the mountains till here. Beginning of the creek, lead and brass pipes are fitted and water is driven forward that has created diverse and beautiful landscapes.

There is an open alley from the beginning to the end of the garden which is divided into nine platforms, each one step higher than the other. The space between the platforms is flat and
scenic. A beautiful reservoir or pond located in the garden, in the form of regular dodecagon with many water fountains. Next to the entrance, there is a small building for entertainment, where its bottom chambers are decorated with white marble ponds full of clear water.

Top rooms are decorated with pictures of different sports such as Falconer game, fishing, shooting, wrestling etc. Other used places are decorated with beautiful colours of gold and azure. But the most pleasant item is the perspective that this house offers to its viewers, because you would be overlooking the city by sitting at such height and excellent view of large parts of the city appears before us that cannot be found anywhere else.”

Famous gardens of Chahar-bagh were: Takht garden, Kaj garden, Baba Amir garden, Topkhane garden, Nastaran garden, Bolbol garden, Fath Abad garden, Goldasteh garden, Kavoos Khaneh garden and Pahlevanpur garden.

It seems in the planning of Chahar-bagh, the overall concept has been a garden not a street. In the year 1597 A.D, Shah Abbas Safavi planned to build walkways. As a result, he ordered to construct a long and wide, tree planted streets from Dawazeh Dowlat to Sofeh Mountain (Gate of Shiraz). Since the walkway was like a wide and beautiful street and contained four gardens, it was called as Chahar-bagh (four gardens). In fact Chahar-bagh is mostly built to be a garden, not a street, because this style of Streetscaping was not needed for traffic movement at that time, and its composition was more for sightseeing and recreation than to carry the traffic of the citizens of that time. Evidence and historical sources indicate that, the Safavid royal family and courtiers were mostly using Chahar-bagh for leisure and recreation. (Drawing 4, 5)

The second key feature of Shah Abbas, was the massive Naghshe Jahan square with the length and width of approximately 507 and 158 meters, was located in the East Garden of the
northern end of Chahar-bagh, with a small angle towards it. The King occasionally, especially during Nowruz (New Year), used to sit in greeting in the gardens next to the square. (Image 18)

Broad gardens connecting the Naghshe Jahan square to Chahar-bagh street and Chehel Sotoun palace was located in the West side of these gardens. One of the important features of Shah Abbas's city planning was that his plan does not imply demolishing the old town, and the new city simply starts where the old Isfahan ends. "The new plan was implemented on the open land (garden of the king and public lands) and away from the limitations and difficulties of the old town."72 (Plan 4)

Mirfendereski (architect and Museum designer) with reference to the historical roots of the concept of Chahar-bagh, believes the Persian Garden to be Chahar-bagh and says: "In the garden system, two main perpendicular axis divide the garden into four main parts. Being divided by four has a long history and shows its outstanding form all eternity - Water comes out from the Garden of Eden and goes to the four corners of the globe - It is also believed that the word Chahar-bagh comes when the four main axis, four main water streams, four rows of main shady trees and four main roads divide a place into four sections."73

Water in the Persian Garden creates a beautiful landscape and also adds freshness and vitality to the space. It is obvious that the water must be constantly flowing in order to stay clean and clear. There is always a pool or waterfront to flow the water into four directions. Thus in the form of the irrigation system, garden is divided into four sections and all the streams originate from these four sections.74

About Chahar-bagh in the eighth chapter of the book, Ershad Al-Zera'a has written: "... three meters will be left all around the garden from the wall and then 1 meter stream would be
built and next to that, Samarghandi Poplar would be planted towards the wall, which is beautiful and creates a nice landscape."75

Koch in the definition of Chahar-bagh writes: "A Chahar-bagh generally refers to an enclosed Persian Garden that ideally, not necessarily is divided into four parts by intersecting routes."76

The four sections of the garden have a different meaning in pre-Islamic and then up to the Safavid period and after that; "In fact Chahar-bagh plan has a symbolic value to the extent of the universe: According to ancient narratives that goes back to the pre-Islamic period, at first the world was divided into four parts that each of which was separated by a river from the other. Arabs also interpret the Persian Garden as a place that was promised to the believers in the Holy Quran: an enclosed space that the four rivers of milk, honey, wine and clear water passes through it and has sweet and tasty fruits on trees."77

"... Rivers that flow in this garden are as the four rivers that irrigate the righteous place, turn by turn, with wine, honey, water and milk."78

As mentioned before, Isfahan is one of the most important cities of Iran where Iranian gardens can be seen abundantly. By moving from Chehel Sotoun towards the west, we reach the northern end of Chahar-bagh. At the time of the Safavid, both sides of the street up to the river which was almost one and a half kilometres, were covered with gardens, in the East, the Bolbol garden, Toot garden and Darvishan garden and in the West, vineyard of Takht garden and Hashtgusheh garden. Latticed walls of marginal gardens of Chahar-bagh, gave a view of the living landscape of the street to the people in the garden, and to the people that were in the streets was providing views of the inside of the garden. As Wilber says; such special features, "Certainly, was an outcry against the traditional country house that was putting bare walls
against the outside world with major characteristics of the enclosed yard. There was residence of the court and harem inside the gardens and also some mansions that time to time were given to foreign ambassadors and other figures. Some of these buildings were built in the time of Shah Abbas I. And others such as the famous Hasht Behesht, Later Chahar-bagh like Naqsh-e Jahan square became a central meeting place for business and society. Four parallel rows of plane trees had been planted throughout the Chahar-bagh, in the north and south of the river which was over four kilometres.\textsuperscript{79}

### 5.3 Selected Persian Gardens for study

Persian Gardens with architectural structure represents the close relationship between the natural and cultural context and signs of adapting and aligning the needs of man and nature. The Persian Garden over time represents a potential for environment and nature and how to use it. In fact, the Creator, by relying on His empirical knowledge has created space which has led to the survival and dynamics of natural environment.

The Garden in Iran, just like Iranian architecture, has been created in such a way that complies with the ecosystem and climate and orientated in the best way with respect to the north and south. Mostly there is no garden with West - East axis or sun shines at midday, summer on the main link that complies with garden axis. Earth's natural slope also is used for best view and perspective.

There is a huge difference between Iranian gardens and gardens in European countries that have mild climate throughout the year. In Iran, a cool shady and full of trees coreas is needed whereas people of Europe do not feel such a need. In fact, in some cases; they refuse to plant lots of trees in their garden and cultivate flowers to enjoy the sun and more light.
In addition, the constant flow of water in Persian Gardens causes temperature differences within the surrounding environment. Main axis of the garden with tall trees, like rectangular corridors, guides the cooling flow towards the main palace and the Belvedere/palace usually is at the highest and most central point of the garden with the best view of the landscape.

The Persian Garden is gradually formed and evolved along with the progress of civilization and culture of this land. The order and discipline of the Persian Garden has been achieved along with the formation and evolution of civilization and culture in a long time. It can be said that, this discipline has been created based on accurate vision and allegorical originated from beliefs and religions of the people of this land, throughout their history and culture.

Here is the explanation and description of the number of Persian Gardens that clearly represent the shape and main characteristics of Persian garden.

5.3 (a) Pasargadae

Pasargadae was a city in ancient Persia and the capital of the Achaemenid Empire under Cyrus the Great who had issued its construction (559–530 B.C). It was also the location of his tomb.

The archaeological site covers 1.6 square kilometres and includes a structure commonly believed to be the mausoleum of Cyrus, the fortress of Toll-e Takht sitting on top of a nearby hill, and the remains of two royal palaces and gardens. Pasargadae Persian Gardens provide the earliest known example of the Persian Chahar-bagh, or fourfold garden design.\(^{80}\)

The Persian Garden has certainly survived into the post-Islamic era. It can be seen in Pasargadae garden. The Persian Gardens at Pasargadae were built in accordance with mathematically based geometric designs. There were 900 meters of channels constructed of carved limestone; these transported water throughout the garden. This was essentially a
sophisticated irrigation system featuring stone water-channels and open ditches that were
designed to channel water into small basins at every 15 meters in the garden.

The garden itself was planted with a variety of fruit and Cyprus trees, flowers such as
roses, lilies, Jasmínas and exotic gras. Arrian has described the gardens as “a grove of all
kinds of trees…with steams…” and encompassed by a large area of “…green grass”81

Cyrus’ gardens have exerted a profound legacy outside the borders of Iran, and especially
in Europe. The Greeks adopted the Persian garden after Alexander’s conquests of Persia and
most likely during the ensuing Seleucid era. The Persian term Paradise entered the Roman
lexicon which facilitated its transmission to other European languages.

The Royal Garden in the World Heritage area of Pasargadae was a collection of palaces
and pavilions with stone and mud streams, with few traces left of them. The entire garden is
approximately 8 hectares and set of living Palaces, levee, palace gates with two Belvedere, one
in the east and the other in the south of the garden, with the famous bridge known as King
Bridge. According to historical documents, the tomb and palaces of Cyrus was placed within the
large garden and the lush plain that has been watered by numerous water passages that were
originated from Polvar River. This beautiful lush garden is called Pasargadae garden or royal or
imperial garden. One of the special features of the Pasargadae is the existence of the Royal
Garden and the effect of Chahar-bagh. At the time of construction of the garden, Cyrus the Great
had personally ordered how to create the Pasargadae garden and even how the trees were
supposed to be planted.

In the course of the establishment of a memorial capital that represented the Achaemenid
power, Cyrus, with great ambition included a garden in his building program. The royal gardens
of Assyria and Babylon have always been a separate part or complementary pieces for the
Palace, but the Palaces of Cyrus with long porches and open spaces around them, were used as additive parts of a detailed plan, in which, the garden itself becomes a royal residence.\textsuperscript{82}

Stronach found the logic and discipline that had prevailed in this series but could not find a relationship between scattered buildings in the field. He only confined to draw a garden in the Chahar-bagh pattern in front of the Cyrus’s Royal Palace (Plan 5, 6). He writes in his report: "Arrangement and placement of these three key buildings can be anything, except random and accidental, and from the close links between the gardens, pavilions and palaces in one area, it may be possible to think of an existence of an artful master plan which is carefully perceived."\textsuperscript{83}

Stone water channels remaining in this place are the definite sign of a garden in Pasargadae. In the provided contingency plan of the spatial structure and landscape features of Passargade, Cyrus' tomb on one side and Tal Takht mansion is located on the other side of the garden is located. Private garden and pavilion are located in the middle of the garden and the axis exactly matches with the existing buildings. In terms of establishment of the geometry, all buildings are presented in full compliance with the provided order except the Islamic period buildings.

In Pasargadae, the Persian Garden can be seen with all its original architectural features and elements. Paying attention to the different elements using them as concepts in architectural structures, Garden geometric pattern along with pavilion and stone water ways of Pasargadae garden (Image 19, 20, 21), distribution and proper sharing of water within the gardens and palaces and combination of architectural structures and elements with nature are among the features that have made this garden as a model in Persian Garden construction. In other words, the Pasargadae Garden (Image 22) and its set of palaces are masterpieces of creativity and art credibility of Iranian artists as the first example is Chahar-bagh which can be seen later
beautifully and artistically followed in the architecture of the Safavid period in Iran and the period of the Moguls in India.

5.3 (b) Chehel Sotoun Garden Isfahan

Garden of Chehel Sotoun Palace is one of the most beautiful and most luxurious palaces of the Safavid reign in Isfahan which is about 67 thousand square meters and its construction started by Shah Abbas I of the Safavid period and in the reign of Shah Abbas II, the building was completed. (Image 23, 24)

Shah Abbas I built a Belvedere within the garden. This Belvedere formed the initial core of the palace which was covering the main hall of the Palace of forty columns and booths on the four corners and many changes took place in the centre of the existing buildings, and the Hall of Mirrors, Hall of twenty columns, two large rooms in North and South Hall of Mirrors, Side porches of the Kingdom Hall and a large pond in front of the Hall, with all paintings decorations and mirror work and tiling of the walls and ceiling, have all been added to it.

In the year 1647 A.D, Shah Abbas II, probably based original building, built the Chehel Sotoun monument. This building was badly damaged in a fire in 1705 A.D during the reign of Shah Sultan Hussein but a year later renovated and a Hall was also added to it. In fact, Chehel Sotoun Palace also, like some of the other palaces of the Safavid period had been extended during this period of reconstruction. Ceiling decoration of the hall has been renovated and is one of the showpieces of Isfahan art during Shah Sultan Hussein’s reign and one of the best masterpieces of the Safavid period of framing and fillet work.

Murals and frescoes of the palace have significant differences in the main theme and style which indicates that, renovations and decorations have been done during different periods of the Safavid era.
In fact, the name of Chehel Sotoun can be considered as a kind of visual play, since facade with the number of columns is reflected in the water. According to an interpretation, Chehel Sotoun (forty columns) is taken from the total number of twenty columns of the hall, added to their reflection in the long dock, but probably this beautiful interpretation is incorrect. Because, forty in Persian is like one hundred in English, just to show plurality.84

This palace in its original shape had a rectangular hall and its roof was covered with three adjacent domes. Side rooms were opening to the back of the hall and the outer domes, while the central dome had a porch in front and had the same space at the back. Such an idea is as old as the Sasanian Firozabad. However, the vast side porches that open to any of the adjacent domes are the most unexpected part. This Porch exhibits the idea of accessibility from sides and therefore makes the building more concentrated. In the next step, a vast open space with a central pond is placed next to this space directly in front of the entrance porch that acts like an ancient porch. Finally, a portico or hall of twenty columns which has a sloping roof is added to the former developed building: There was another pool at its centre with fountains. The nature of the building was changed with each of these additional elements.85

Chehel Sotoun garden has an almost square plan with dimensions of 275 × 225 meter and its length is in the east - west direction. Nearly square dimensions, in comparison with other gardens of Safavid period and compared with Naghshejahan square (Elongated rectangles with a ratio of one to three) and Chahar-bagh axis shows the detailed map of this garden in Dolat Khaneh (Government House) complex. (Image 25)

The original layout arrangement of the garden is based on three main East - West axis that this axis is in the same direction with Naghshe Jahan square and eastern buildings of Government House. The most important axis is the one that passes through the centre of the
garden and palace is placed on the western one third of this axis. North and South are subsidiaries axis. The main entrance of the garden is from the east side, along the central axis and through a covered corridor that leads to Alighapoo and Dolat Khaneh gate from the Naghshejahan square.

From the features of this garden and its collection, the following can be noted: the magnificent ceiling paintings of twenty pillars hall and ceiling mirror work of mirror hall and entry mirror work of the hall of accession of Shah Abbas II, massive columns of Halls of twenty columns and Hall of Mirrors made of tree trunks, Stone lions around the central pool in the Hall and depicting marble carvings, excellent gold decorations of Kingdom Hall and the rooms on either sides of the Hall of Mirrors and big paintings of Kingdom Hall and so on.

Big Paintings in Kingdom Hall are about the Safavid kings. The paintings include:

1. Paintings of Shah Abbas I, of catering of Wali Muhammad Khan, the ruler of Turkestan (Image 26)
2. Painting of Shah Ismail I in the Chaldoran war
3. Painting of Tahmasp the first, on the reception of Humayun King of the Mogul period (Image 27)
4. Painting of Shah Ismail I in the war with Sheibak Khan Uzbek (Battle of Marv)
5. Painting of Shah Abbas II in the reception of Nader Mohammad Khan, Turkestan ruler of the Ashtarkhanian dynasty
6. Painting of Nader Shah Afshar on Battle of Karnal

Authors of "Isfahan the sky garden of manifestation of the wisdom of Islamic Art in Safavid architecture" describes the fifth painting as Shah Abbas II receiving the Ambassador of
India and they believe that he was probably Tarbiat Khan, who was sent to the Safavid court in response by Shah Abbas II, to celebrate the enthronement of Aurangzeb in 1663 A.D.\textsuperscript{86}

Painting of Indian Humayun Shah on the festivities of Shah Tahmasp I, in the Chehel Sotoun palace is one of the original paintings of this Royal Palace which is very well preserved and it is a very important painting in terms of clothes and hats, chignon makeup and facial hair and jewellery and dance and feast arrangement and playing musical instruments and instruments.

In 1542 A.D., Humayun, son of Zahiruddin Babur, fled from the army of his brother Mirza Askari, who was chasing him and entered Sistan with his Shiite faithful General, Bairam Khan and Ahmad Sultan Shamloo, the ruler of that area, welcomed him and consulted Shah Tahmasp regarding the same matter, and by the order of Shah of Iran, he honourably and respectfully was sent to Khorasan and then headed to Qazvin. Humayun arrived before the King Tahmasp in Jumada Al-Awwal in the year 1544 A.D.

In the countryside of Kedar Nabi between Abhar and Soltanieh and after staying in Iran and participate in the parties that was organized in his honour and travelled to some parts of Iran such as Azerbaijan, and then with the help of Shah Tahmasp 's army returned to India and took back his lost throne.

Poets of the time, composed poems about his arrival in Iran and his meeting with Shah Tahmasp and among them are poems of Mohtasham Kashani, about arrival of Humayun the king of India long with the Prince of Rome to the court of Shah Tahmasp I in the year 1544 AD (951 A.H). In this poem also the number 951 is obtained and addressed to indicate the year 951 A.H.

There is a portrait of Shah Abbas I, with his special crown and some other miniatures in the Treasure Room of Chehel Sotoun palace which has been un-plastered in the years 1955 and 1956 A.D.
Sporadic art works of the Safavid era, like the Qotbieh mosque entrance and Zavieh entrance at Belvedere and works of the mosque in Jobareh or old cobbler and Agassi mosque, has been fixed on the walls of the western and southern side of the garden.

At first, the columns of the palace was decorated and coated with a beautiful mirror work. All the mirrors were destroyed in the reign of Zill al-Sultan Qajar and the Safavid paintings were covered with plaster.

Engelbert Kaempfer in his travelogue, with the name of Kampfer itinerary Kampfer, considered Chehel Sotoun palace as one of the most magnificent palaces and in describing it writes: "this great royal palace stands tall like a real King. The palace is partially built of brick and another part of the stone, in an area paved by rocky polished stones, has rooms, pergolas, gates, fences and numerous arches and vaults and throughout is all presentation of finest Iranian talent in architecture which is unfamiliar with our taste."87

Chehel Sotoun palace and Garden were usually used to accept and welcome the ambassadors. Roger Savory in his book "Safavid Iran" writes: "Chehel Sotoun was a building where the Shah used to officially receive the ambassadors; he would personally greet them and held official feast and banquet. In fact, both the buildings are more pavilion or Belvedere than a palace, and in the summer they were used as entertainment halls. These buildings are negligible compared to the huge palaces of the Timurid Empire in India, but Shah Abbas I did not want to frighten people by size and majesty of the buildings while would keep him away from people. His dress was simple, he had informal behaviour. He avoided too many formalities but was enjoying the blessings of life: Good food, good drink, good companions, and enjoying at the beautiful place. Ali Qapu and Chehel Sotoun reflect this taste. The massive building was only
worthy of the glory of God, and its example is the Shah mosque and the successors of Shah Abbas followed the same model.”

The author of the book Ghesas Al-Khaghani has written, on Monday, 18 April 1646 A.D, Divan Khane (forum) mansion of Chehel Sotoun palace in Delgosha Garden was completed and on the opening day of the mansion, Ghooshe Beiki Ilchi Abdolaziz Khan, governor of Bukhara came before Shah Abbas II and presented his gift, the Russian envoys presented their gifts in the same meeting and Jan Nesarkhan Ambassador to India got permission to leave for India. of what the author of Ghesas Al-Khaghani has written, it turns out that after construction of Chehel Sotoun palace, its surrounding garden also was known as Chehel Sotoun and earlier to this, it was called Jahan Nama and the Jahan Nama palace was located at the end part of the west side, in the North of Chahar-bagh Street.

Chardin in his travelogue, in addition to describing Chehel Sotoun Palace, points out to some private corridors and gardens: "In the palace of Shah, there are two other Mansions like this building, that each one is in a separate treed garden, one is almost like the mansion aforesaid and another one has two floors, the first floor consists of hall and the second floor consists of rooms, porches and a store rooms with dock and fountains in each room.

These buildings were the royal palace of the king and each of them is located in the middle of the garden or opens to a garden as formerly mentioned, walls that surround the garden are usually made of mud with a height of ten or twelve feet that lights have been installed inside them from top to bottom, there are corridors on top of the walls that only the king have been using them and could go anywhere without being seen.”

(Plan 7)
5.3 (c) Bagh-e Hasht Behesht Isfahan

One of the buildings that were built in the year 1669 A.D was Hasht Behesht Mansion which was built in the midst of eighty-five acres of gardens with an area of approximately 34.5 hectares and its palace was known as Bolbol (Nightingale) palace. Chardin has given a detailed description of the Garden and the palace and had considered it as one of the most beautiful buildings of that time in terms of numerous rooms, corridors and decorations.\(^{90}\) (Image 28, 29)

This palace was built near the Bolbol Gardens during the reign of Shah Soleiman Safavid in 1669 A.D. In fact, the vast garden, where the mansion is located, used to be a part of the Naghshe Jahan Garden. Hasht Behesht Garden (Eighth Garden of Eden) existed at the time of Shah Safi and during the successive kings, namely Shah Abbas II and Shah Soleiman, more trees were added to the garden. Palace of the garden was belonging to the Safavid Shah Suleiman and gardens also was completed and modified in his period and gardens in this period was complete and modified and it was completed in the year 1669 A.D that coincided with the third year of the reign of Shah Suleiman Safavi.

Hasht Behesht (Eight Paradise) palace and its gardens are one of the historical places in Isfahan and built during the Safavid. In fact, Hasht Behesht palace (Drawing 5) was located in the famous Bobol Garden\(^{91}\) (Image 30). In the Safavid period, the garden and its palace was located in a government house complex. In Hasht Behesht, Belvedere attracts the attention to interior and inner life. According to European travellers, the garden and its palace was built for princes of the royal harem during the reign of Safavid Shah Suleiman in the middle of the eleventh century. Hasht Behesht means entrance or vestibule to the heaven and this name was chosen to refer the beauty of this building to the superior worldly dimensions.
This palace, right from the beginning of its construction, was called Hasht Behesht, or Hasht dar-e Behesht. This Octagonal building has two floors with beautiful arches and lots of decorations, is one of the brilliant architectural examples of the Safavid period. The central part of the palace is built in the form of four galleries with a porch to the north. The roof covering these four platforms is covered with colourful and well-designed gypsum Muqarnas. This palace is not completely placed in the middle of a large garden but rather was leaning to one side, as a result, a larger part of the garden was located in one side of the Palace and had given a beautiful view to the garden and later, this composition was imitated. (Drawing 7)

The building of this garden is composed of four two-storied porch located on a marble foundation. High octagonal ceilings of the north and the south sides are fixed on very tall circular columns with the height of twenty meters. The central hall of the palace was a massive octagon covered with gilded silver decorations. The building has a small dome decorated with colourful Muqarnas. Other decorations used in the building are mirror work, tiling and glazing.

The first floor rooms, in the four corners of the mansion are having decorations of stucco and painting. The second floor of the mansion has a set of porches, rooms, arches and windows that each has special decorations. Some are built with water pond and some with wall heaters. The walls are also covered with large mirrors. Corridors and passageways have surrounded the building very beautifully and harmoniously. North Portico of the building, meaning the front facade is wider and taller and more ornate than the other porches. This very nice porch with famous Pearl dock, flat roof decorated with wooden ornaments and two long wooden columns with column heads and walls covered by Muqarnas with special shapes and proportions of the Safavids, without a doubt, is the most pleasant view of the garden in spring and summer. South porch is smaller than other porches and is located at the back of the building and views over the
smaller part of the garden in the south. The porch has a limited connection with internal space and has a circular arch with Muqarnas unlike other porches.

Decoration of palaces in the Safavid period was so magnificent and artistic that many tourists admired it. Unfortunately, today nothing is remaining from the gold plated wooden railing and frames and crystals and colourful glasses. (Image 31)

Arthur Pope in his book, Architecture of Iran, says: the Hall (Hasht Behesht Palace) is open on all sides, so that the garden almost runs through it.92

In the past, the garden area was seventy-five acres which today only a small part of it remains.

According to historical sources, the building constructed in 1669 A.D, refers to a kind of palace that was known from the 15th century A.D in Herat and Tabriz. Ottomans were using this type of building in Tiled Kiosk structure in Istanbul and the Moguls of India promoted it for the tombs of kings. From the name of the palace it could be understood that, they built it to bring the heaven down to earth.

According to some remaining works, although the palace was so richly decorated with frescoes without people's figure, it is more important in terms of space creation than the ornamental aspects, internal and external spaces are difficult to distinguish from each other, since humans always understands outside through inside and inside through outside. This interferences of volumes in each other was escalated utilizing water, using water engineering, water was fed in fountains in central ponds and waterfalls in the southern balcony and the other North side.93

The Hasht Behesht Palace was given to private property in the late Qajar era and was destroyed, so that today from all that splendour and charms inside the palace and fountains and streams of running water nothing is left to trace. Archaeologist and Iran expert, Andre Godar
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says in this context: "... Eight Paradise Palace (Hasht Behesht Palace) with the Hall that is opens in all directions and with four pavilion at its four corners, has still maintained its main and brief component of beauty and the grace of the old days."

All travellers and tourists who visited Isfahan have managed to find their way into the Palace of Hasht Behesht (Drawing 8), have called it the world's best building and referred and described it as "more pleasurable than most luxurious European palaces". (Plan 8)

5.3 (d) Bagh-e Fin Kashan Kashan

Fin garden with an area of over 23 thousand square meters is an Iranian garden built in the Safavid period. The garden includes a central courtyard that is enclosed by walls, battlements and cylindrical shaped towers. Fin Garden is irrigated with significant amount of water compared to other similar Iranian gardens. There was a spring in this place that used to irrigate the Fin Garden and in the Tazkareh Haft Eghlim which is about the expression of manners and customs of the Kashan people. There is a massive spring in Fin that comes out from a rock that none of the world travellers have seen such spring and irrigation of most of crops and gardens in Kashan are done by this water.

This garden and royal palaces of Fin were places for holding the great celebrations and location of important rites. According to some historical sources the age of the garden dates back to the reign of Buwayhid. According to these sources, an earthquake hit in the year 1573 A.D destroyed the whole garden. There is a garden debris available at several hundred meters from Fin Garden (Bagh-e no) which is known as Bagh-e- Kohneh (old garden). Bagh-e- Kohneh had reached its highest developmental peak during the Ilkhanan Mogul period. According to historical sources, the current Fin Garden Buildings have been attributed to the era of Shah Abbas the Great. It seems that this garden has been extended during the Shah Safi and Shah
Abbas II. Entrance building, Sufi palace and one of the bathrooms of the garden were built at this period. Researchers and scholars are divided over Fin garden design. (Drawing 9)

Hassan Naraghi in the book of the monuments of Kashan hand Natanz, writes: "Shah Abbas did not find the old and destroyed Fin building worthy for himself, Sulaimanieh, therefore a new Palace plan was laid out. placed the base of the flowing water fountain almost 500 meters above the old garden, means in the place of the current spurt, and fenced the new royal garden in the new land with dimensions of 157 meters east-west length by 142 meters north-south width and built four high round towers on its four corners and. . . “(Image 32)

Lockhart writes: Shah Suleiman and Shah Sultan Hussein would have stopped for rest and reflection in state mansion house of Fin garden while passing Kashan.

Construction work and garden developments was carried out during the reign of Shah Safi and Shah Abbas II and entrance building, Safavid palace and one of the bathrooms were built in this period. Shah Safi visited this building in the year 1640 A.D and from then until the end of his reign, this garden was considered his promenade. Also, on the orders of Shah Soleiman Safavid, a platform was built on the Fin springs. It seems during this period the Fin spring was renamed Suleimaniyeh springs. No attention has been paid towards the garden from the end of Safavid period to Zandieh period, coinciding with the Afghan invasion and Nadir Shah Campaigns, and the garden status went to destruction. The Garden and its buildings were repaired at the time of Karim Khan Zand and after several successive earthquakes the Karim Khani building was added to it. The garden extensions increased in the reign of Fath Ali Shah Qajar. Nasseredin Shah with Amir Kabir in 1849 A.D. on his way from Isfahan to Tehran, had stayed a week in this garden and later in the wake of suspicion and fear between the king and Amir Kabir, Amir Kabir was imprisoned in the private Nezam al-dowel of the garden and his
relation with others was prohibited. After several months, Amir Kabir was killed in a preset conspiracy in the bathroom of this royal garden. Following this incident, gardens and its buildings lost its prosperity and development. The garden and its buildings were repaired during the following periods. (Drawing 10)

Fin Garden is one of the most important examples of the Persian Gardens that is still alive and well preserved and the dynamic elements of life such as the elements of water and trees are quite evident next to the buildings and it can be said that this identifying elements have given life to this cultural and historical monument. (Image 33)

Water is one of the fundamental elements of the Fin garden design. Water has been shown in different forms of Stagnancy in the pool in front of the pavilion (Image 34) and pool of Safavid House-flowing water in streams, erupting water in fountains and boiling form in the orderly arranged holes at the bottom of the dock floor and Joosh pond and Safavid springhouse and Fath Ali Shah trap. Flowing water in streams, pools and ponds of the Garden is provided from the Suleymaniye springs. First the spring water is collected in a pool in the back garden. This pool height difference compared to the streams, made it possible to create fountains that shoots the water in to the air by gravity method.

Such abundant water flow in waterways with turquoise tiles and the presence of massive shady and green trees in a desert land where water is really scarce is in great contrast with nature which is accessible behind the walls of the Persian Garden and one of its best examples can be seen in Fin Garden.

There are pipes embedded in the depth of one meter from the ground under all the pools and streams, these water pipes are made of ceramic and known as Tanboosheh that each one is connected to the main the ponds from one side and is blocked from the other side. Water enters
from one side and since the end of the tube is blocked water shoots out from the fountains. Since the ground slopes down, they have used different tube diameters, to split water pressure. The beginning of the pipe is thicker than the end of it. This way pressure can be divided and same amount of water shoots out from the fountains.

Twelve springs supply water into the main pool which is called Hoz-e Joosh (gush pool). Since then, the water flows in waterways with turquoise coloured tiles, different from desert colour. Probably Ghiyasuddin Jamshid Kashani, the famous mathematician of the tenth century and Safavid, had designed the water system of the garden. He has used level difference in his system and took advantage of the natural slope of ground.

Cypress and sycamore trees are the most important plants of the Fin garden (Image 35). According to age, the trees could be hundred to 470 years old, it seems the shady and evergreen cypress trees have had the main physical role in garden design and plantation of few deciduous sycamores trees in the garden is just to enhance the visual quality. (Drawing 11)

In the initial design of the garden, maintaining symmetry had special importance but this symmetry is gradually reduced with the involvement of different kings. This symmetry exit can be seen in axis of movement in the garden and to buildings added after the Safavid period. So, that the Safavid palace is located at the centre of the garden. Small bathroom and entrance buildings are other buildings of the Safavid period. Qajar palace with beautiful ceiling and wall paintings is also located at the end of the garden and outside the axis of the symmetry. (Plan 9, 10)

5.3 (e) Bagh-e- Dolatabad Yazd

Dolatabad garden in one of the oldest gardens of Yazd which, was at end of the Afshar period and it was built by Mohammad Taqi Khan Bafghi also known as (Khan Bozorg), the
founder of the Khavanin in Yazd in 1747 A.D (Image 36). At that time the garden was located outside the city while today it is located inside with the spreading of the boundary of the city of Yazd. Khan Bozorg’s rule coincided with Shahrukh Mirza and Karim Khan Zand period.95

The construction of aqueducts and the Dolatabad garden was among the most important works of Mohammad Taqi Khan in this period, which was built in the dry desert and was prosperous and beautiful at the time but unfortunately, declined later and although it was repaired again but never came back to the days of the Khan Bozorg. He first built an aqueduct from a distance of about 65 km and brought water from Mehriz to Yazd to its current location of Dolatabad Garden and then built his rule and government sets (Darolhokumeh). The aqueduct originated from the highlands of Mehriz and then after irrigating a piece of Mehriz land operates a few water mills, it reaches to the Yazd and irrigates the Dolatabad garden and leaves the garden to irrigate the surrounding farms. In addition, there was a water well in the garden to be used for water supply in emergencies.

The garden has an area of 70 thousand square meters include buildings, ponds and a lot of waterfront, various trees such as pomegranates and grapes and many flowers planted in the space between them. There used to be streets around this garden filled with many trees and were famous as streets thousands trees. (Image 37)

Dolatabad Garden consists of two rectangular section perpendicular to each other or generally formed from two parts of inside and outside (forecourt) and from the functional point of view, it is a residential-governmental garden but overall includes the following sections; entrance to the garden, summer buildings, the main palace or vestibule, Behesht Aeen (inner garden), harem khaneh, water storage and stables.
The outer part of the garden was used for government owned formalities and the inner garden was considered as the private sector and residence complex. In the residential-governmental gardens, the inner areas were quite distinct from other domains and even a concierge or a doorman was set to monitor it.

Vestibule is located at the end of the main axis of the garden and is attached to the south wall and in fact is the main palace of garden and is famous for its wind tower. Building is similar to the shape of an octagon and is an important part of garden where the flow of air and water has been combined in the most beautiful form. By the combination of wind and water which is flowing within the indoor pools (Image 38, 39), cool air from below the windward, moves to the king’s chamber and forums. This windward with a height of 33.8 meters is the highest known brick windward in Iran. The roof of the vestibule has beautiful Karbandi96 done by master Haji Ali Akbar Akhund.

The larger rectangular symmetry axis is the main axis of the inner garden or is connection axis of the entrance building to the vestibule that has a large waterfront of the garden with dimensions of 194 by 12 meters lies on this axis. It seems that the garden architect, by planting trees on both sides of the main axis, apart from bringing the main building into focus, caused an unlimited visibility from each side of the building towards the garden and emphasized the visual connection between the two buildings. Existence of original perspective in straight and stretched form in the longitudinal axis of the garden opposite the palace and planting tall trees on both sides has an integral role in creating a perspective that makes the garden look longer.

The symmetry axis of the smaller rectangle which is the Behesht Aeen garden is perpendicular on the main axis of the garden. Rectangular Garden of Behesht Aeen is
perpendicular to the axis of symmetry of the rectangle by a large pool and is divided into two
Square parts which in fact these Squares are the main plots of Behesht Aeen garden.

Symmetry is one of the principles of Traditional Iranian Architecture, so that the
symmetry can be seen in various forms in all buildings. Persian Garden is not an exception and
this principle has been used in its construction and design.

Pavilion (palace) as the main building of the Persian Garden is placed on the axis of
symmetry. The peak of this symmetry can be found in the main axis of garden, where even the
flowers and trees are symmetrically planted. The interesting point in geometry of Dolatabad
Garden is mismatch of inner garden axis on the outside axis of the garden, so that along the
longitudinal axis of the inner garden, is tilted compared to the symmetry centre of outside garden
that this issue could be due to the time of formation of two gardens which according to historical
sources both gardens were built within a short time of each other. (Image 40)

Playing with water in this garden, like other Iranian gardens is very interesting, so that
the water from under the windward goes to integrated dock made of marble and then after the
spill over from there, it is poured into an octagonal pool of the middle of building and from there
moves to the rectangular pools of side rooms and then by marble stepping (bump), create waves
in water to increase appearing volume of water. From every three bumps water enters to a pool
and from there runs through the streams on either side of plots and goes to the entrance building.
Here Again, there was a whirlpool in a spiral shape to play with water, and then water goes to the
Behesht Aeen garden. There was a Dodecagon pool at this section and a pool which used to be
called lake as well as rectangular pool with many fountains (Image 41). In general, it can be
said, maximum water use was possible with this design. (Plan 11)
5.3 (f) Bagh-e- Shahzadeh Mahan

The Shahzadeh garden (Prince Garden) or Shazdeh garden is one of the 19th century A.D gardens of Iran, which is about two kilometres away from the city of Mahan and is located near the Kerman, in the valley of Tigran and in the Joopar mountain range. (Image 42)

At first the garden was built on the orders of Mohammad Hassan Khan Sardar Iravanian, the ruler of Kerman in 1859 A.D and later its building was built by Abdul Hamid Mirza Naser al-dowle ruler of Kerman during the eleven years of his reign (1881 to 1891 A.D). And with his death the building was left unfinished, but despite the unfinished building of the garden, we still continue to witness the greatness and structural coherence of the garden. It should be noted that the area being located on the route of the Kerman to Bam and in the path of the Great Silk Road and existence of Tigran subterranean are all the factors that made this place suitable for construction of an aristocratic garden.

Existence of lofty mountains of Joopar has provided a special interesting view for the garden. In this open field, garden is enclosed with relatively high walls and with a great mass of trees glaring in the Desert. Entrance to the garden from this expanse open space and the pristine desert is made possible through a Chahar-bagh.

This garden is one of those Chahar-bagh examples that have two eastern and western sides and its pavilion (Image 43) is built in two stories with a very beautiful entrance building (Image 44). Entrance Building is built in linear form in two floors, the upper floor has several rooms. The entrance gate creates a common space between this pre-space, Chahar-bagh and inside the garden. Inside the building, view to the spaces on both sides of the main axis of the garden is possible and outer space has fluidly merged with the garden.
This garden is fenced within a rectangular shape with a length of 416.8 meters and a width of 122.30 m with an area of more than five hectares. (Image 45) This garden is also benefited by the techniques of natural slope in its construction and Shazdeh Mahan garden is built on a slope of almost 4.6% facing mountaintop Joopar (South of Garden).

Tigran subterranean is a vital source for Shazdeh garden that originated from the Joopar mountains. This flow enters from the highest surface of the garden and creates the irrigation system of the garden. This system has two principal functions in the Shazdeh garden; first is watering garden plants and second is operation of the existant qualities that water can make in the garden.

The initial status review shows that stepping movement of water in central axis continues till out of the garden that has been renovated. Creek water enters in the longitudinal direction into the garden and is distributed in such a way that in addition to irrigation of plots and paths, in the form of broad stream creates waterfalls and water drops with the steep terrain, on the main axis and garden and constitutes the main element of water system quality in the garden.

Shazdeh Garden is located in a way that makes maximum use of local exquisite scenery. On arrival, especially on the upper floor of the entrance of the house, other than the outer garden views and landscapes, Chahar-bagh landscape and mountain views in the opposite direction also can be seen. These major sights such as seeing movement of water, ponds and waterfalls, each in turn highlights the axis perpendicular to the main axis and combined with plant system, provide exquisite internal scenery.

General garden division is detectable in the form of a longitudinal axis and two centres (main building area on upper section and entrance at the bottom). Minor axis as horizontal and perpendicular to the main axis in the margin levels have created plots which are eight in numbers.
on each side. In this situation, shady trees throw shadow only on footpaths of minor axis, the boundary between two plots and linking the central walkways with a walkway near the fence and plots of fruit trees, by necessity remain under sunlight. At either end of the main axis that is in front of the first platform where the main building is located, and garden entrance, front of entrance of the mansion, two pools are designed, that the large surface area of water, sound, water jet and fountains adds to the palatability of the garden. (Image 46)

In view of the garden, in front of the entrance, twelve levels appear one after the other and the level difference between each level on the waterfalls line could be walked by fixed steps. The level difference changes from about one meter and fifty centimetres up to a meter respectively and gradually waterfalls height in upper levels becomes less. Although it is unlikely to have landscape and perspective arrangements in the geometrical system of the Persian Garden, but by relying on the reality of Shazdeh Garden, waterfalls sizes exacerbates hierarchical view of farther - smaller and based on this illusion adds to the depth of the garden and creates a relatively calm atmosphere. There are twelve terraces consisting of platforms central axis and fruit trees side plots throughout the garden. The highest terrace is in front of the upper chamber to provide a better and more open view towards entrance of the house and northeast landscape and flat plots of fruit trees. This view, especially in the season when the trees are full of blooms and yet there is no fruit on trees, shapes an open green surface. (Image 47)

The selection and arrangement of plants in the Shahzadeh Mahan garden had a decisive role in the identity of the Garden that constitutes its plant system. Selection of a desirable plant in shading or appropriate colouring in different seasons reinforces this system.

In this garden, there are mainly two rows of flower beds on both sides of the creek and waterfalls are located in walkways on all terraces in the central axis. The long row of garden
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flowers are placed on the border between upper chamber gallery and the twelfth terrace which is stretched towards the two upper control towers along the central stream. In the eastern wall, at East Side of the upper chamber, there is the bathroom building and the building for permanent guards of the Garden (Zaeem Bashi). At the front wall, only rooms, probably temporary, shaped the western entrance of the garden. In addition, it may belong to the unfinished parts of the garden. (Plan 12, 13)

5.3 (g) Bagh-e Abbas Abad Behshahr

Abbas Abad garden series are located at nine km from the city of Behshahr, in Mazandaran province on the slopes of the Alborz Mountains and in the midst of rainforests and is one of the most important and largest historic gardens in Iran. This complex with an area of five hectares includes Abbas Abad dam, reservoir and dam lakes, flower gardens, palaces, baths, water mill and two brick towers. This complex was built by the order of Shah Abbas Safavi in the years 1611 and 1612 A.D in a place that was previously known as Kharguran, and now is considered as one of the most important non-desert gardens in Iran. (Image 48)

H. L. Rabino talks about a region called Abbas Abad located two kilometres away from Ashraf where the palace of Shah Abbas was located next to an artificial lake. Herbert visited the palace immediately after completion of its construction, and pointed out that the Palace for its exquisite landscapes and sculptures and paintings and a grove full of all kinds of playground equipment for recreation and leisure is much above a summer palace and is more excellent than any other palaces of Shah Abbas.97

Abbas Abad artificial lake has an area of over ten hectares with the mansion in its centre which at the time of filling the lake, the middle mansion with a height of over 18 meters goes under water and only its roof and some shrubs are visible.
This building is a brick building in four arched form that once its upper surface was built by clay roof and wooden materials. Four arches are built on 8 pillars all around with a pillar in the centre. (Image 49)

Historic Abbas Abad garden of Behshahr is one of the most unique Persian Gardens that was built on a natural hill and in a stepwise fashion, so that engineers of Safavid period by cutting hills and creating stairs and platform and built a terraced and stepped garden and built the mansion in the upper part of the hill.

In addition to the mentioned construction, in the central terrace, a large pool has been built in the centre and smaller docks around it. Water was brought from a far distance to the main central pool with the help of the slope and also clay pipes and appeared in fountains, and the rest was filling the side docks by the clay pipes. Gardens and garden architecture in Abbas Abad Behshahr was quite symmetrical that has doubled its beauty. By this method, water music and tonality is been given an important role, that brings peace to the people staying in the garden. Gol Bagh area or water distribution stations to the garden, is located at a distance of 600 meters from the garden which has been placed on a slope that the slope was cut and almost a flat surface was created. Springs of Ghoori and Sarcheshmeh were two important sources of water and water was directed to the upper part based on the difference level in slope surface and also using clay pipes called Tanboosheh which was protected by a brick wall. Gol Bagh area is about 3,500 square meters and based on the architectural remains of the tower, Gol Bagh area in the Safavid period used to be very important for water supply, and was always protected by guards. Probably based on the difference between the height of two springs compared to four arched and also the water pipes, water fills the central in the form of fountains and then water overflow is divided by
waterways into smaller ponds and then the surplus is poured from four arches into the pool. (Image 50)

To a distance of approximately 5.1 kilometres north of Garden and on top of the mountain overlooking the Behshahr plain and the Miankaleh bay, the remains of architectural works from the Safavid period have been identified. The initial identified plan has dimensions of 50 × 40 m and its main materials are stone and brick. Access to it is possible through a paved road that goes there from the garden. Due to the identified location of building block on top of the mountain and also obtaining glazed tiles used to cover the roof with blue glaze, turquoise blue, green and brown and also lack of access to the remains of palace architectural parts in archaeological excavations on the main campus of Abbas Abad garden, It can be stated that the discovered site is the probable location of the Safavid king's palace in Abbas Abad.

On the west side of the garden attached to it and in the lower level, there is a historical Bath building with an area of 160 square meters (Image 51). Based on investigations, the bathroom building had a dome-shaped roof and has been decorated with tiles. Bathroom building is formed of Sar Bineh (changing room), middle space, fireplace, hot room, hot water and warm airflow channel. Water supply system is very important Abbas Abad Bath (Image 52). Each dock in changing room and hot room space has both hot and cold water supply systems. water from the eastern part of the Bath building through clay pipes which are inside the masonry walls of the bathroom, after crossing the north side of the bathroom wall, goes to the west side and fills the hot water tank, and after being warmed was filling other existing docks through clay pipes. the cold water supply system is also like the hot water system, so that, cold water through clay pipes, after crossing the eastern side of the bathroom by filling the upstream pond (outside of the
bath building), through clay pipes fills the docks in the Sarbineh (cloakroom) and Garmkhaneh (hothouse).

In the historic Abbas Abad site, two brick tower with a diameter of 7 meters and a height of 14 meters were built during the Safavid era and are placed on water supply axis. Due to this, it can be said that the tower is not only for security purpose and due to the height difference Gol Bagh area compared to the garden, and towers were built as water pressure breaker.

Water mill is built between two rivers and with a distance of approximately 5.1 kilometres from south of the garden. In this mill, water is directed through closed channels towards a brick open channel with the length of 100 meters, then, moves toward the grinding wheel with an almost perfect slope and rotates the blades and the grinding wheel of the water mill. (Plan 14)

5.3 (h) Bagh-e Pahlavanpur

Bagh-e Pahlavanpur in Mehriz is a Persian garden consisted of one pavilion (Image 53) and a frontispiece as well as other elements that on the whole follow the principles of Persian gardens. The garden has kept its authenticity due to the preservation of its constituent elements in the course of time and all restoration implementations have been done according to traditional forms and original design.

Among major architectural elements of the garden are: the summer residency, a beautiful vestibule, its mill and its service spaces. From a design authenticity point of view, although these elements have been transformed slightly in the course of time but the main parameters of authenticity have been maintained in these spaces so that each space can introduce itself as an authentic space. (Image 54)
One of the most important characteristic of the Persian gardens is their trees. Regarding this aspect of authenticity, trees of Bagh-e Pahlavanpur are divided into two groups: the first are old plane trees and the second are trees which must be replaces periodically such as pomegranate trees as one of the original species of the geographical region of Yazd province.

Planting fructiferous trees can be considered as yet another significant dimension of garden authenticity in Yazd region. Another characteristic of Persian Gardens is their being fenced which is also seen in Bagh-e Pahlavanpur which has a mud brick wall together with remains of a tower left from its distant past. (Image 55)

Bagh-e Pahlavanpur also has authenticity regarding the type of materials used namely materials used in the garden during different periods have the same characteristics as its original materials with only minor occasional differences. Materials production in Bagh-e Pahlavanpur also follows traditional and original production processes. For example, Kahgel production process here is exactly similar to former production processes so as not to generate any incongruity.

Workmanship and Technology Regarding techniques used in the garden, the complex enjoys authenticity. In addition, these techniques are readily recognizable in Bagh-e Pahlavanpur namely Karbandi coating in winter residency and in entrance vestibule of the garden.

As for the technology used in the building, the construction technology of Bagh-e Pahlavanpur wind catchers are regarded as one of the original aspects of the garden. The idea was to install a sort of cooling system behind the portico of summer residency which is still operating after hundreds of years, despite frequent restorations.

Water flow system of the garden is another aspect of the technology used in it. As said before in design authenticity earlier, it has still kept its original characteristics and one of its
outstanding functions is to exploit waterpower in order to rotate mills installed in the upper and lower sections of the garden. (Plan 15)

5.3 (i) Bagh-e Akbariyeh

Bagh-e Akbarieh is a historic Persian garden in Birjand city in Iran (Image 56). Construction of this complex started by the beginning of Qajar period and continued till the end of this dynasty. This complex consists of numbers of monuments which the oldest one is Heshmat- al- Molk, two -storey building monument in eastern side of complex. Ground floor has two long corridors which connect three important parts of complex together include: main garden, southern garden and stable. (Image 57)

Central monument used as ceremonial center and guest accommodation. That was core part of the garden and has elaborated decoration. Rows of tall and old pine tree on both sides of the track gave elegance, freshness and beauty to the garden.

Southern garden is smaller than northern one and surrounded by service sector, central monument and western wall of stable. One of the main feathers of this complex is a large and square pond. This pond has a central platform.

Some of the most important reasons which caused this garden be registered on the UNESCO World Heritage List, are:

1. Garden is in Sloping ground.
2. Use of straight lines in garden design
3. Monument is in highest peak of garden.
4. The complex has one main and several Subsidiary streams.
5. Close connection with nature.
6. There is no empty space between monument and garden.
7. Planting fruit trees, medical herbs and ornamental flowers
Some of the most important tree species in Akbariyeh garden are: pine, pomegranate and berry.

The majority of trees in the complex is original and dates back to the time of the construction of Bagh-e Akbarieh. The complex has tall, sturdy pine trees on both sides of the main axis of the garden, highlighting the axis as well as the building to which it ends. Thus, principles of the Persian Garden landscaping have been fully followed in the complex. At a height lower than the upper green foliage of pine trees, a row of box trees is seen which have been planted in order to cover the bare trunks of pine trees and to contribute to the visual balance in the main axis of the garden. Pine and box trees are ever green plants, so they are intended to keep the garden green and vivacious throughout the year. Skyline of the garden seems higher than usual because of its tall trees symbolizing the glory of the Persian Garden. In fact, it can be said that visually the genuine design of the Persian garden has not been changed in Bagh-e Akbariyeh and it has kept its initial cardinal principles. (Image 58)

Regarding plant species, it must be noted that gradually because of the aging of some species they have been substituted by similar species in accordance with original, indigenous Persian principles of gardening. Concerning its initial design and plan, the garden has not changed much. The only change has taken place as a result of recent garden expansion in which new parts have been added to it. But this has not harmed the general design of the garden because it has kept its initial authenticity plan as a Persian Garden.

Garden expansion has occurred in such a way that architectural structures added also follow the original principles of the garden concerning plan and design. In fact, by defining the original building as the garden axis and by respecting rules governing its design the added parts
have been built. As a result, the general composition of the complex has kept its authenticity.

(Image 59)

The waterworks of the garden as well as other dependent hydraulic systems have been preserved as much as possible. In fact, urbanization and related changes resulting from it such as the transformation of traditional methods of water supplying made the traditional methods temporarily obsolete but in recent years increased attention paid to traditional methods and their superiority revived the old system. As a result, Qanats were dredged, revived and reused.

Architectures dependent on water elements were also preserved completely due to their importance, the only exception being the basin fronting the ceremonies building because it is an example not quite matching the whole complex.

Due to the governmental function of Akbariyeh building, Presence of governmental-military structures inside it seems necessary. For this reason, setting up high walls as the surrounding fence of the garden as well as allocating some spaces for guards is justifiable.

Additionally, there existed a kind of hierarchical access to the main building via various sections and corridors which were protected by guards aiming at more security. At present, the perimeter wall of the garden has been preserved as thick piers with its design authenticity still remaining. (Plan 16)

5.3 (j) Bagh-e Eram

Eram Garden is a historic Persian garden in Shiraz, Iran which located at the northern shore of the Khoshk River in the Fars province.

The garden and its pavilion were built during the middle of thirteenth century by the Ilkhanate or a paramount chief of the Qashqai tribes of Pars (Image 60). The original layout of the garden however, with its quadripartite Persian garden structure was most likely laid in eleventh century by the Seljuqs, and was then referred to as the Bagh-e Shah (the king's garden)
and was much less complicated or ornamental. Cornelius de Bruyn, a traveller from the Netherlands, wrote a description of the gardens in the eighteenth century.\textsuperscript{98}

The structure has been modified, restored or stylistically changed by various participants. It was one of the properties of noble Shiraz Qavami Family. The building faces south along the long axis. It was designed by a local architect, Haji Mohammad Hassan. The structure housed 32 rooms on two stories, decorated by tiles with poems from the poet Hafez written on them. The structure underwent renovation during the Zand and Qajar dynasties. (Image 61)

In 1965, Sir Denis Wright, a British ambassador in Iran, was invited by the Chancellor of Shiraz University, Asadollah Alam, to a party in Eram Garden for Princess Alexandra of the Oglivy.\textsuperscript{99} Eram Garden and building are World Heritage Site, and protected by Iran's Cultural Heritage Organization.

Bagh-e Eram of Shiraz has been built in a vast rectangular shaped terrain. The main building as well as the andarooni (Private section) is located at its western section. Total area of Bagh-e Eram is approximately 110,380 square meters.

Measures similar to other Persian Gardens have been taken in this garden concerning its vegetation. Due to the location of Bagh-e Eram in a hot and arid terrain, it has been attempted to decrease the intense heat by planting dense and shadow casting trees including cedars, pines, etc. Also medical trees and flowers were planted which had the additional medical effects aside their aesthetic effects expansion, a rose garden was built at its western and north-western side with an approximate number of three hundred varieties.\textsuperscript{100}

A large spring called Jooshak is seen here in a pit from which the water gushes out and runs on the ground in a stream. Stream water joins the water of several manmade subterranean canals called Qanat and after covering a distance of about twelve kilometers reaches a big water
shed and forms a river called: Nahr-e Aazam (the great stream) which is divided into multiple brooks for irrigating nearby gardens as well as supplying the water of Shiraz. One of the brooks separating Nahr-e Aazam above Maghsam-e Aala (upper divider) is known as Dinkan brook. Bagh-e Eram of Shiraz was irrigated by Miri brook which makes up one fifth of Nahr-e Aazam water. Water allotment for Bagh-e Eram was a total of fifty hours for a period of two weeks. Eighteen hours of which was allocated exclusively to Bagh-e Eram but because it was not sufficient for its thorough irrigation, the thirty two hours deficit had to be purchased. But presently due to widespread developing projects underway at its west side, water supplying from the stream has been cut off which has resulted in digging two deep wells sized four and six inches in the garden. (Image 61)

One of the most characteristic trees of the garden is a kind of cedar known as Sarv-e naz which are tall and beautiful trees. Sarv-e naz of Bagh-e Eram is one of the tallest trees of its kind in Shiraz with a height of about 35 meters which has also been mentioned in several travel diaries including the one written by Tavernie. Today, Bagh-e Eram is also known for the variety of its flowers. (Plan 17)

5.3 (k) Bagh-e Jahan Nama

Bagh-e Jahan Nama is the oldest garden in Shiraz, with about 40000 square meter area, irrigating from Rokni, a well-known river.

The Garden was rebuilt by the order of Karim Khan-e Zand in 1771 A.D. Inside the garden there is an octagonal manor like the pavilion of Bagh-e Nazar (Image 63). There are four alcoves with two-storey rooms in every four corner of it. Inside the manor, there is an octagonal pool built form integrated marble with a stone fountain inside it. The painted ornaments inside
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the manor are very magnificent and valuable. The garden was a place to host governmental guests in Qajar era.

Bagh-e Jahan Nama was located near one of city gates and due to the passing of a main Qanat of Shiraz through it served as a pleasure garden for kings and their honoured guests.

Garden gates are opposite each other and in the middle of the main axis of the garden; there stands a large square shaped basin. In later periods of time, other axes were added to all four sides of the mid-garden building. Its pavilion is octagonal and in an elevated spot. Inside it is a basin and a jet as well as traces of paintings and from outside its sun dried brick façade is seen. Respecting the tradition of Persian Garden making, cedar trees have been planted alongside main axes, in addition sour orange and pomegranate trees comprise part of Bagh-e Jahan Nama vegetation. (Image 64)

Bagh-e Jahan Nama is considered as another garden representing systems and principles of Persian Gardens with a design suitable for Shiraz weather but unfortunately in recent years all of its trees save those planted alongside the main axis have been destroyed. (Image 65)

Bagh-e Eram trees can be classified into two groups of fructiferous and non-fructiferous ones. Among its non-fructiferous trees are: pine, cedar, maple, judas-tree, weeping willow, Siaband, mountain ash, pussy willow, eucalyptus and white poplar. Among its fructiferous trees are pomegranate, medlar, sour orange, persimmon, walnut, apricot, almond, apple, quince and pear (Image 66). One of the most characteristic trees of the garden is a kind of cedar known as Sarv-e naz which are tall and beautiful trees. (Plan 18)
5.3 (f1) Other gardens of Persia

5.3 (d) Chehel Sotoun Garden of Behshahr (Bagh-e Chehel Sotoun)

Garden which is known as Baghshah or Ashraf al-Bilad (Ashraf al Moluk, mother of Shah Abbas) is one of the monuments of the Safavid era and is located at the northern slopes of the Borzoo Mountain. In construction of this garden, the slope of the land has been used just like Fin Garden in Kashan, Mahan Garden in Kerman, Eram garden in Shiraz, Tajabad garden in Natanz and has made the surrounding forests and mountains even more beautiful. Chehel Sotoun garden is stepped with an area of 8 hectares and its construction date goes back to the year 1612 A.D. (Image 67)

The architectural style of the garden is derived from the beautiful architectural designs of Mazandaran in northern Iran and the Caspian Sea coast that has columned veranda in the middle with flat covers and roof tiles. Today, there is no trace of the Chehel Sotoun main building which was built in the Safavid era, and the existing building was built on the foundation of the main building in the Pahlavi period.

The garden has two main streets that the longitudinal axis of the garden is toward north with views to the north and the sea and there is a large pool at their intersection point, the water in the southern part, after crossing from four ponds, passes under the building and in front of the northern facade, flows down from a small waterfall into large rectangular pool in front of the mansion's north-south axis. In fact, the water path in the Chehel Sotoun garden matches with the main axis of the garden. All around the pool had holes to put the candles, at the time of Shah Abbas I and during the formalities, they were lightened up and for the same reason it was called light pool and due to the slope of the land, small stepping waterfalls are there in place of water falling from one level to another in the main axis. (Image 68)
Vegetation cover of garden consists of cypress, bergamot, orange, lemon, persimmon, sycamore, chestnut, mulberry and pomegranate trees and diverse flowers such as roses. Tall and large cedars in the garden return to the Safavid period that have been planted linearly along the main axis of the garden and represent the story of its glory in the past. (Image 69)

Safavid royal gardens and palaces of the city are not limited to only these two gardens which are among those which were preserved from the incidents of harm in the city. The reason for high attention to the Behshahr city from the Safavid rulers was the city's position in relation to the influx of Uzbeks and Sagsar tribes. Shah Abbas I paid special attention to this spot in order to maintain power and control over his territory. Italian Peter Della Valle, who came to Iran for political and economic negotiations at the time of Shah Abbas I, appeared before him during his stay in the Behshahr Chehel Sotoun Palace, and also the Shirley brothers (Robert and Anthony), the famous English representatives met Shah Abbas in Behshahr in 1621 A.D. It seems that Behshahr gardens and mansions were lodging the Safavid kings in spring and autumn.

There was private and harem gardens around this garden, other gardens and the garden shrine which were located at its west. The Private Garden was a two-story building for the residence of King. Harem garden was also a very large building that was built in the middle of a large garden and had a large pool with marble benches built in its corners. These two buildings were connected by a north-south axis of the water. (Image 70)

This water axis from the south flows to Saheb Al-Zaman garden. A huge entrance building was built at the southern side of the garden which had a loggia. In certain cases, the king used to go to the porch and meet guests and courtiers at the bottom sitting on stone benches. Saheb Al Zaman garden was used for ceremonies and rituals of the royal court and for saving Royal property or displaying them. Remnants of the garden indicate that the garden was built in
different levels. In the east of Chehel Sotoun garden there are other three gardens with the names of Zeitoon garden (Olive Garden), Shomal garden (North garden) and Tapeh garden (Hill garden) stone walls of Tapeh garden (Hill garden) still remains.103

In Della Valle's itinerary: "the city is open to all sides, there is nothing else in it except the Imperial Palace, which is still not completed and its gardens and a street full of stores and shops and a few houses that are disorderly built in the midst of trees and the vast lands surrounding it. There are many sweet and clear springs in this place and there are so many trees here that houses are lost between them and I was sceptical when writing my diary that should I write Ashraf city is in the woods or a forest residing people."

He has also written about Divan Khaneh Mansion features: "This garden is called the king's garden or Divan Khaneh, consists of a square that is located at the end of the plains and at the foot of wooded hills behind the palace. The king ordered to build many houses on top of this hill which belongs to the garden. Divan Khaneh is located in the middle of the garden and its length is thrice its width. The front of the building is wide open but there are walls at the back and sides that are covered by multiple windows. The mansion is elevated two steps from the ground and the open part of the building faces the north means back to the entrance gate. There is a long and paved street in front of the building with a stream flowing in the middle of it and from the pool that is built in front of the Divan Khaneh water constantly flow into the stream."

Melgunov Russian scientist about Divan Khaneh building in his book the Mazandaran Itinerary writes: "Shah Abbasi Mansion which was known by the name Divan Khaneh became vacant and dilapidated in 1743 A.D. There is a pool in front of the mansion with a width of 50 feet, a length of 60 feet, and a depth of one and a half cubits, and there are stone channels on
both sides till the gate with holes to put candles around it. The holes were created in the internal wall of the main channels that may hold about a thousand candles in them."

Jacques De Morgan Frenchman who had come to carry out scientific research in Mazandaran, about Divan Khaneh wrote: "a large garden filled with centuries-old cedars and adorned flower beds can be found in the middle of the royal garden. There are streams flowing throughout the garden rooting from mountain that falls down numerous waterfalls, and fills a pond or a large rectangle pool. Previously the pool has been replaced with a disgusting taste in front of a more habitable building than the ruins of an ancient palace." (Image 71)

Rabino, English scholar and vice consul of the country at the time of Mohammad Ali Shah, travelled to Mazandaran and in his logbook that Mazandaran and is Astarabad wrote some valuable information about Ashraf: "Ashrafis is facing destruction now but owes its greatness to Shah Abbas Safavi. In fact, the weakness of the Safavid dynasty began the decline of the city. It was formerly known as Kharguran and was owned by an old woman. Shah Abbas bought it from her and established the new town in 1612 A.D."

Donald Wilbur member of the Archaeological Institute of the United States of America, in the book of Iranian garden and its palaces, about the Divan Khaneh building writes: "there was a hall over the main entrance which was called Naghareh Khaneh, because it was common in Isfahan and other major cities in Iran to announce the sunrise and sunset by drums and timpani. The building (Divan Khaneh) was burnt at the time of Nader Shah and by order of Nader Shah it was replaced by another building known as Chehel Sotoun, behind the mansion, there was a pool in about 30 to 40 square meters area and very deep."104 (Plan 19)
5.3 (f) Safavid Gardens of Qazvin

The City of Qazvin was of great importance as being located on the Silk Road and for its geographical and political conditions of the time, so it could win be the capital of the Safavi dynasty for some time. Selecting the city as the capital took place in 1555 A.D but certainly its foundation started at the time of Shah Tahmasp I in 1544 A.D, moving the capital from Tabriz to Qazvin caused a lot of buildings and magnificent mansions to be built in the city, including series of gardens which consists of several buildings, and the gardens.

Safavid Garden compressed of the Saadat Abad Garden, Qazvin Cultural Garden, Dolat Khaneh Safavid or Arg of Tahmasebi which relates to Safavid - Qajar era. Now, the area of the series of the Safavid gardens is determined to be more than 6 hectares which starts from Alighapoo Entrance in the north and Sepah Street of Qazvin and connects to the Qazvin Chehel Sotoun palace.

After settling in Qazvin, as the new capital, Shah Tahmasp ordered to build a garden and then build the mansion. According to orders of the Shah, the Iranian leading architects gathered and designed the garden which was named Safavi Garden. A Mansion called Chehel Sotoun palace or pavilion was built in it at the request of King.

Chehel Sotoun palace or pavilion was built on the orders of Shah Tahmasp and is one of the most important buildings of the complex which has great importance among the monuments of Qazvin. The palace is located within the garden with tall trees and green space which is now known as Sabze Meydan and is a recreation and leisure place for Qazvin people. (Images 72, 73)

Author of Kholase al Tavarikh (Ghazi Ahmad Qomi) points out to the capital change and construction of the gardens of Qazvin and writes:” In this year, the king decided to build a garden in Qazvin, so that in the month of Dhu al-Hijjah, bought lands from Mirza Ashraf Jahan
known as Zangiabadi land and called all the engineers and architects and ordered to design a square garden with the name of Saadat Abad and to build a great mansion in the middle of the garden with porch, pools and halls, and a very tall entrance gate (Image 74) and decorate it with coloured tiles and make a pigeon tower above it, and divide the garden surface with square passages and triangle or hexagon grass divisions and a flow to a big stream through the middle of the street and plant plane and poplars trees beside it and adorn triangles and squares around it with jasmine and Judas flowers and other fruit-bearing trees.” But transferring the capital to Qazvin decision was taken in the year 962 and it was when Shah Tahmasp was returning from Persia and the Ottoman wars and had brought back security to the West.

Before transferring the capital to Qazvin, by the order of the Safavid Shah Tahmasp, building a new town with the name of Jafar Abad began in the north of the old city of Qazvin. In this nascent city, construction of the Dolat Khaneh buildings was planned. Many buildings and palaces were built in the city of Qazvin in the same period with focus on the royal palaces, houses of rulers and lords and beautiful gardens in the north of the city. As discussed above, construction of the complex was founded by Shah Tahmasp and Shah Abbas I expanded it. The royal Palace had seven entrances and one of them was named Alighapoo and only this entrance is remains.

Alighapoo entrance gate is from the period of Shah Abbas and portico had seven arches and a beautiful porch with decorations and a dome that was constructed on the porch. On both sides of the porch, there are stairs going up to the rooms of the guards and Timpani performers. The entrance is lower than the present street level and has a low slope toward the garden which leads one into the garden.
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Most of the decoration at the entrance especially paintings have been destroyed and today the only remaining part is tile and mosaic work at the entrance which has been refurbished. In this section there is an inscription written in Thuluth script by Alireza Abbasi, the painter and calligrapher of the time and its theme is of holiness and reverence of kings and wishes to destroy their enemies. In the upper part of the inscription, in the middle of the entrance, there is a lattice and large mosaic tile window.

At that time, a Square was built in the South and West of the Royal Palace, known as Saadat Abad Square, and Peter Della Valle says about it: "bit smaller than the Great Square of Isfahan, but nothing less as the beauty and just like Isfahan Square, its length is three times as its width and with this length and width it is built for polo games because stone columns are fixed on both sides, with a certain distance. Two palaces were built on both sides of the field to be used during the polo game. "Chardin was writing length of the field as 700 and its width as 250 feet.

In this regard Shah Tahmasp asked Abdi Beig Shirazi, Poet of the time, to write a poem in description of the palace and gardens and decorations and to make it eternal. Abdi Beig also wrote the "Janan Adan", and from that collection in fluent and unadorned language, wrote the Masnavi of "Roze Alsefat" in describing the palaces and gardens of eastern and western Iran and Saadat Abad royal garden and poems of Masnavi "Roze Alazhar" devoted to description of streets, gardens and royal buildings, which includes a clear and illustrative descriptions of gardens and garden arrangement and design during the Safavid period. Certainly, Saadat Abad is one of the main gardens of the time.

According to data presented in another work of Abdi Beig with the name of "Takmaleh Al-Akhbar", Shah Tahmasp in the years 1557 - 1558 A.D from the old building of Dolat Khaneh
which was probably built in the Saadat Abad garden, moved to his new Dolat Khaneh. Apparently, the King Tahmasp palace was built in the centre of Saadat Abad garden and was called as Arshi Khaneh. It is said that from the 16th century A.D onwards, the palace was called Chehel Sotoun.

The building was built by imitating the buildings of Tabriz and was built as a two-storey building where the first floor is from the Safavid period and second floor is the extensions of the Qajar era. There is a huge porch all around the top floor and has a beautiful view over the garden. Shah Tahmasp ordered painting on the walls and decorates them with the stories of Shirin and Farhad, Laila and Majnun with scenes of war and polo matches and hunting and ... to reminded of the Palaces of Tabriz. Unfortunately many of these paintings have been destroyed. As long as the Safavid capital was in Qazvin, New Year greeting ceremony was held in this building. Heydar Mirza, son of Shah Tahmasp in his one-day reign, sat on the throne in this palace and Ismail II’s coronation also took place in this garden.

The layout is drawn on the basis of two hexagons. There is certain diversity in its interior spaces including rooms, the porch and the other spaces. Although from outside, there is symmetry in facade, but inside even in the four rooms located in four corners, each one has a specific form, none like no other and even within a single room and every corner is different. Even the Karbandy in the rooms are also very diverse.

Today, apart from Chehel Sotoun (forty columns) pavilion, basement and part of the Alighapoo building, nothing has remained from the royal palace. Today, Chehel Sotoun building has become the Qazvin Calligraphy Museum (Image 75) and is a whereabouts of valuable works of old books and Calligraphy and so on. The destruction of this valuable building gradually began after moving the capital from Qazvin to Isfahan in the year 1598 A.D. (Plan 20)
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5.4 Notes and Reference

1. Yavari, Hosein, Bavafa, Roghayeh, Isfahan the Sky Gardens of Manifestation of the
Wisdom of Islamic Art in Safavid Architecture, Sima e Danesh Publications, Tehran,
2011, pp. 147-148

2. Ibid, pp. 92-94

3. Ibid, pp. 96-97

4. Pirnia, Hassan, Eqbal, Abbas, Iran's History from the Beginning to the Extinction of the
Qajar, Khayyam publications, Fall 1997, p. 691

5. Parizi Bastani, Mohammad Ibrahim, Ganjali Khan, Journal of School of Humanities
(University of Isfahan), p. 72

6. Pirnia, Hassan- Eqbal, Abbas, Iran's History from the Beginning to the Extinction of the
Qajar, Khayyam publications, Fall 1997, p. 697

7. Pope, Arthur Upham, Persian Architecture, translated by Gholamhossein Sadri Afshar,
Dot publications, Tehran, 2011, p. 207

8. Yavari, Hosein - Bavafa, Roghayeh, Isfahan the Sky Gardens of Manifestation of the
Wisdom of Islamic Art in Safavid Architecture, Sima e Danesh Publications, Tehran,
2011, p.128

9. Pirnia, Hassan- Eqbal, Abbas, Iran's History from the Beginning to the Extinction of the
Qajar, Khayyam publications, Fall 1997, pp. 725-728

10. Mahmud, Mahmud, Political Relations between Iran and Britain, Eqbal publications
November 1982

11. Hosouri, Ali, Traditional Design Principles in Iran, Cheshmeh publication, 2002

216
12. Aryanpour, Alireza, study of the Iranian gardens and historical gardens of Shiraz, Farhangsara publications, p.30/ Norouzi, Nastaran, A Comparative Analysis of Iranian garden during the Achaemenid and Safavid era, the first National Conference on Urban Planning and Architecture throughout the history, Qazvin, Imam Khomeini international University, 2013


14. Shahcheraghi. A. Azadeh, Paradigm Campus: Introduction to the Recognition and Reinvention of the Persian Garden, University of Tehran


20. Koch, Heidmarie, of Darius, According to Darius (Es kündet Dareios der König), translated to Persian by Parviz Rajabi-karang publication- Tehran, 1997, pp. 311 to 315


23. Zarei, Mohammad Ebrahim, Assistant Professor of Archaeology at Abu Ali Sina University, Reflecting Role of Chahar-bagh in Garden Carpets in the West Iran with Emphasis on Examples of Kurdistan Province, Goljam Journal, Association of Iranian carpets, Issue 19, Summer 2011, pages 43-60, p. 46


27. Chardin, Jean, French Chevalier Chardin Itinerary, translated by Hussein Arizi, p. 120


30. Mirza Hussain Khan, Son of Muhammad Ibrahim Khan Tahvildar, Geography of Isfahan, Tehran Publications, Tehran, 1963, p. 27
31. Arbab, Agha Mohammad Mehdi, Isfahan is half of the World as Per Definition, Tehran Publications, Tehran, pages 246 to 252

32. Beik Turkaman, Eskandar - Movarekh, Mohammad Yousef, The History of Beautiful World of Abbasi, correction by Soheyli Khansari, Islamiyah publications, Tehran, 1938,


34. Abharian, Homa, Persian Garden, Journey of the body to sense, art and architecture, Vol. 32, Summer 2010, pages 90-95, p. 92

35. Ibid, p. 93

36. Ghasem Shahi, Sahar - Panahi, Arash, Assessing the Sustainability by Relying on Integration of Cooperative Garden and the Persian Garden, the National Conference on Human-oriented Architecture and Urban Planning, 2013

37. Ibid

38. Qanat is a gently sloping underground channel or tunnel constructed to lead water from the interior of a hill to a village below. The qanat technology is known to have been developed in Iran by the Persian people sometime in the early 1st millennium B.C, and spread from there slowly westward and eastward.


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41. Ardalan, Nader - Bakhtiar, Laleh, A Sense of Unity, Mystical Tradition in Iranian Architecture - Khak publications, p. 68

42. Abharian, Homa, Persian Garden, Journey of the body to the sense, art and architecture, Vol. 32, Summer 2010, pages 90-95, p. 93

43. Ibid, p. 95


45. Koch, Heidmarie, Persepolis and its Surroundings, yassavoli publication, Tehran, 2006

46. Abharian, Homa, Persian Garden, Journey of the body to the sense, art and architecture, Summer 2010 Vol. 32, pages 90-95, pp. 92-93

47. Ibid, p. 91


52. Antique, Sedigheh, Traditional Water Management in the Persian Garden, Traditional Knowledge International Conference on Water Resources Management, 2011, p. 1

53. Ibid, p. 2
54. Daneshdoost, Yaghoub, Persian garden, derived from Speech at School of Architecture in Shahid Beheshti University

55. Antique, Sedigheh, Traditional Water Management in the Persian Garden, Traditional Knowledge International Conference on Water Resources Management, 2011, p. 6


57. Nasr (Saha), Tahereh, Expression of Wisdom in the Persian Garden, Rakhshid Publications, Shiraz, 2010,

58. Ibid


64. Stronach, David, the formation of the Pasargadae Royal Gardens and its impact on the Persian garden, translated by Kamyar Abdi, Journal of Arts and Architecture "Asar", Issues 22 and 23


68. Ardalan, Nader and Bakhtiar, Laleh, A Sense of Unity, Mystical Tradition in Iranian Architecture - Khak publications, p. 68

69. Abharian, Homa, Persian Garden; A Journey from the Heart of Historical Monuments, Art and Architecture, No.32, summer 2010, pages 90-95, pp. 92-93


71. Ibid, p.162

72. Ibid, pp. 155 to 157

73. Mirfendereski, Mohammad Amin, Persian garden, human effort, (Selection of conversations of Mirfendereski in an interview with the newspaper, 2 July) 2009


78. Porter, Eve, Garden of Paradise and Garden Carpets, Metaphors, Museums Magazine, Museums Magazine, Issue 41, for a conference and exhibition of Persian garden, 2005,


81. Arrian, Expedition of Alexander, VI, 29

82. Stronach, David, the formation of Pasargadae Royal Garden and its impact on the Iranian garden, translated by Kamyar Abdi, Journal of Arts and Architecture of Asar, Vols. 22 and 23


85. Ibid, p.177

86. Ibid, p.180

87. Kampfer, Engelbert, In the Court of the Shah of Iran (Kampfer Logbook), translation by Keykavous Jahandari, National Heritage Association, Tehran, 1971, p. 206
88. Savory, Roger, Safavid Iran, translated by Kambiz Azizi, Tehran, Sahar Publications, 1984

89. Chardin, Jean French Chevalier Chardin Itinerary, translated by Hussein Arizi


91. Nightingale Garden


94. Triveh, Sarah, Historical and physical studies of Fin Garden, Journal of Landscape Architecture IV, No. 67


96. Karbndia is type of building cover consisting of arches with a certain arch type and angle that intersect each other under geometric rules and shape the original cover of dome.


100. Sharif, H. R, A Review of Historical Course and Identification of the Architectural Style of Bagh-e Eram, 2005

101. Deputy of Studies’ research report, Shiraz university, 2005


104. Ibid