1.1 Introduction:
Viruses are terribly little germs. The main source their production is a protein coating from genetic material. Diseases like influenza, warts and cold are the main infections caused by viruses side by side they cause different diseases like Ebola, smallpox, Aids. They are like hijackers as they disturbed the human systems. These viruses used their cells to multiply there number and traditional cells turnout the viruses like them. The traditional cells can be killed, damaged, modified and which causes the sickness. The different viruses attack on human body and damages liver, system or blood. For this when we took medicine the sickness does not remain forever. The viral infection does not killed by antibiotics. There are some medicines which are used to treat viral infections. Vaccination is the best option to stop the viral diseases to enter in our body.

Viral diseases are spreading large amount of infections which are caused by different types of the viruses. Viruses are microscopic parasites, which lack the capacity to thrive and reproduce outside of a host body. There are many types of viruses that cause a wide variety of viral diseases. The following diagram shows the lifecycle of the viral disease.
Viral diseases are more responsible for considerable morbidity and mortality worldwide. The Infections due to viral diseases are a big risk to public health and it can be remain as a major problem in the whole world. In the world including India, there are many countries which have been reported a cases caused by viral diseases. There is The Common treatment which is available for this illness includes various drugs but registrant pattern of some pathologic viruses decline the scenario. Also serious side effects of these drugs are observed. During the last five centuries more than 70 million new viral infections have been estimated to occur annually in more than 100 endemic countries or areas, with a registered further spread to unaffected areas. The viral disease cases are multiplying every year due to the wide spread global outbreak. According to World Health Organization (WHO) every year around 70–100 million dengue infections occur. Almost 50% of the population in the world living in different countries are infected by the dengue virus. Now a day’s more than 70% of the world population exposed to dengue.
What is dengue?

The dengue viruses are belongs to the genus animal virus within the family provirus. In association with the dengue fever virus, this genus additionally includes variety of alternative viruses transfer by mosquitoes and ticks that are to blame for hominid ailments. Animal virus consist the yellow fever, West Nile, Japanese cephalitis, and tick-borne cephalitis viruses. Around 1943, Ren Kimura and Susumu Hotta before all else remotethe dengue fever virus. The above researchers were learning infected blood cases taken throughout that year dengue fever epidemic in metropolis, Japan. A year later, Albert B. Sabin and music director Schlesinger severally isolated the break bone fever virus. Each pairs of scientists had isolated the virus currently observed as infectious disease virus one (DEN-1). Dengue is mosquito borne viral infection in the world. The important culprits responsible for transmitting dengue between words population are Aedes aegypti and Aedes albopictus.

![Dengue Lifecycle](image)

Fig.1.1.2  dengue lifecycle
The above figure explains the life cycle of the dengue disease. When dengue virus enters into human body it directly comes in contact with blood. Dengue virus is a single stranded RNA virus. Dengue spreads worldwide during rainy seasons. The Aedes aegypti mosquito produces saliva containing around 100 different proteins which belong to D7 protein family. Many scientists say that the saliva of Aedes aegypti is the main cause of viral disease as the virus gets transmitted to the body of the patient through it. The spit of mosquito make the virus spread much faster because of immune response of the host is weak. But mainly it lowers the blood platelets in the human body. Chikungunya is also another airborne disease which is caused by same mosquito i.e. Aedes aegypti. But the major difference between chikungunya and dengue is joint pain and muscle pain which is larger in case of chikungunya as compared to dengue. When dengue mosquito bites a person, proper signs or symptoms appears. Dengue fever is also known as break bone fever. Many people from India are suffering from either dengue or malaria. These are acute, chronic and infectious which can lead to death of the person. Malaria directly effects on the red blood cells i.e. RBC’s and platelets in human blood. The Dengue disease spread by four closely connected viruses named DEN-1, DEN-2, DEN-3, and DEN-4. These four viruses are known asserotypes as a result of every have completely different interactions with the antibodies in human bodily fluid. The infectiousdiseaseviruses are similar however even among one serotype, here’s some genetic variation. Despite these variations, infection with every of the bad serotypes leads to identical disease and vary of clinical
symptoms. Within the Seventies, each DEN-1 and DEN-2 was obtained in Central America as well as Africa, and each serotype was gifted in geographical region. Around the year 2004, however, the geological distribution of the four serotypes had unfolded wide. Now a day’s all these infectious disease types flow along in tropical and semitropical areas around the world. These four infectious disease serotypes share identical geographic and condition. Scientists expect that the infectious disease viruses derived in dehumanized ape and jumped from this ape to humans in Africa or geographical region around five hundred and thousand years ago. After sick due to an infection with single dengue serotype, someone has protection across that individual serotype. People are shielded from infections with the remaining 3 serotypes for 2 to a few months once the primary dengue fevers infection. Sadly, it's not long-run protection. At the moment short amount, someone may get infected by some of the three dengue serotypes. Researchers haven’t that resultant infections will place people at a larger risk for severe dengue fever sicknesses than people who have not been antecedent infected. The anatomy of virus of the dengue fever is slightly spherical in shape, and it is about fifty nm in diameter. The centre of the dengue virus is that the nucleocapsid, the anatomy that's manufactured from the infective agent order beside C proteins. The nucleocapsid is encircled by a lamina known as the infective agent envelope; a lipid double coated which is collected from the host. Enclosed inside the infective agent envelope are 180 imitations of the E and M proteins that stretch over the lipid bi-layer. The main function of these proteins is to protect the outermost layer which restraint the introduction of the virus in to the human cells.

As The dengue fever microorganism copy method begins the virus bind to a person's vegetative cell. Once this bond, the film of cells surrounds the virus and makes an envelope which bound the particles of the virus in round shape. This envelope is known as endosome. Unremarkably these cells use the endosomes to require in big molecules and fragments from surface of the cell for nourishment. By stealing this traditional cells method, the virus of dengue fever is in a stand to come in a cells bunch. Once the virus come into a bunch cell, the virus enter down inside the cell whereas fixed within the
endosomal membrane. The scientists have stated that 2 environments are required to dengue fever virus to survive the endosome. Where the acidic setting is there in the cell the endosome must be down within the cell. A charge should be taken by endosomal membrane. Withthen endosomal membrane the virus envelope is intermix which is allowed by these two conditions and this method turnout the dengue fever nucleocapsid inside the protoplasm of the cell. Once it's free into the cell protoplasm, however will the virus replicate itself? Within the protoplasm, the nucleocapsid opens to uncoated the infectious agent ordination. This method releases the infectious agent RNA into the protoplasm. The infectious agent RNA then hijacks the host cell's machinery to duplicate itself. The virus uses ribosomes on the host's rough endoplasmic reticulum (ER) to translate the infectious agent RNA and manufacture the infectious agent peptide. This peptide is then moving kind the 10 dengue fever proteins.

The fresh synthesized infectious agent RNA is boxed-in within the C proteins, forming a nucleocapsid. The nucleocapsid enters the rough ER and is engulfed within the ER membrane and enclosed by the M and E proteins. This step adds the infectious agent envelope and protecting outer layer. The immature viruses travel through the complex, wherever the viruses mature and convert into their infectious kind. The mature dengue fever viruses are the cell and may prolong to infect different cells.
1.1.5 Anopheles mosquito.

The above figure shows life cycle of malaria. The diseases are different but common thing in both the cycles is that both diseases affect the blood cells. Malaria can be treated and can be controlled if diagnosed early. Malaria parasites are maintained in a lifecycle involving two hosts, humans and female Anopheles mosquitoes. Human infection begins when an infected female Anopheles mosquito takes a blood meal and introduces plasmodia sporozites. The lifecycle of malaria is outlined in Malaria can also be transmitted via blood transfusions, sharing of needles by infected persons, accidental needle sticks, and organ transfusions. Different ways of spreading of malaria is shown in the figure below.
The common symptoms of malaria and dengue
1. Headaches
2. Weakness
3. Muscle pain
4. Lower back pain
5. Flu like illness
6. Chills
7. Nausea
8. Vomiting
9. Coughing
10. Diarrhoea.

The first use of the medicinal plant is nobody known till the date. This search surely for human desire, culture, religious reason or temporary happiness. But man started to understand the medicinal use of the different plants. This knowledge about medicinal plants was first transferred orally as there was no birth of writing anything. About 4000 year ago the first written text was found
on small clay board. But now a day the knowledge about medicinal plants is extended all over the world where man needs these plants for treating or curing many diseases.

As per the WHO information, around 80% of population living in outland or country side areas uses medicinal plants for initial health treatment. The rural people have basic knowledge of use of traditional and medicinal plants. Since our school days, we know that food, clothes and shelter are the human's basic needs. In the present scenario, environmental pollution is the greatest challenge faced by all over the world. There are different things that cause environmental pollution which include increasing number of vehicles, increasing population, fossil fuel emission from power plants, industrial revolution and last but not the least cutting of trees. Different types of pollutions are caused due to these reasons. Automatically it effects on human health. This causes different types of infections, diseases, illness etc. and therefore for treating these infections or diseases human need medicines, which are very important to maintain the human health. Therefore, medicines also play an important role in human’s basic needs. In India, Plants are one of the most important sources of medicines. The medicinal plants are well provided for the alternate metabolites and essential oils of salutary importance. The principal advantages pronounce for therapeutic uses of medicinal plants in various diseases are their safety along with being money saving, effective and their easy receptiveness. Medicine can be defined as a substance or preparation used to treat or cure disease. There are several types of medicines present in all over the world but the extracts which are obtained from various parts of trees have been used for treating and curing diseases since ancient period, in several countries including India. These naturally occurring plants which are used for medicinal purpose are known as medicinal plants. In Ayurveda many such plants are used for treating various types of diseases since ages.

1. Alternantheraphiloxeroides
2. Carica papaya
3. Cladosiphonokamuranus
4. Momordicacharanthia
5. Hippophaerhamnoides
In India there are many plants and their parts are used to treat many diseases. They are mentioned as below.

1. Amla: the fruit of amla is rich in vitamin C and can be used to treat cough, diabetes, cold, and high acidity.

2. Ashok: the flower of ashok can be used in menstrual pain, urine disorders as well as diabetes too.

3. Ashwagandha: the roots and leaves of this plant used to treat the nerve disorders and stress relevant.

4. Bael: the fruit and bark of this plant is used for diseases like diarrhoea, constipation etc.

5. Bhumi amla: this whole plant has medicinal properties. It is very useful in jaundice, dropsy and anaemia.

6. Brahmi: the whole plant is useful for nervous, memory and mental disorders.
7. Chiraita: it is useful for different skin disease, burning and fever.
8. Madhunasin: the leaves of this plant are used for treat the diabetes and asthma.
9. Guggul: it is useful in paralysis, arthritis etc.
10. Giloe: it is used to treat pile, fever, jaundice, gout etc.
11. Calihari: seeds of this plants are useful in case of skin diseases, labour pain etc.
12. Kalmegh: fever and weakness can be treated by the whole plant.
13. Long pepper: the fruit and root is used for bronchitis, appetizer, enlarged spleen, cold etc.
14. Makoi: the fruit of this plant is used for diuretic, anti-dysenteric.
15. Pashanbheda: The root of this plant is very useful for kidney stone.
16. Sandalwood: The oil or wood is very useful for skin disorder.
17. Sarpaganda: The root of this plant is useful to reduce hypertension.
18. Satavari: Theroots of this plant are very useful medicine for cough and general weakness.
19. Tulsi: The leaves and seeds of Tulsi are useful for many diseases mostly used cough, cold and bronchitis.
20. Henna: leaf, flower seeds of henna has anti-inflammatory property.
21. Ghritkumari: The pulp of this plant is having various uses like ulcer, wound healing and skin care.
22. Sadabahar: The whole plant is useful for leukaemia.
23. Neem: Neem is useful in many villages for different diseases. It is very useful and known as doctor of medicinal plant.
24. Nageshwar: The bark, leaf and flower are useful to treat asthma, skin burning etc.
25. Dalchini: Dalchini is useful in Asthma, Bronchitis etc.

By using available information, some medicinal plants like Basil, Carica Papaya, Azadirachta Indica, Zingiber, Curcuma Longa, Allium sanctum were selected to prepare a formulation which can be used to treat diseases like dengue, malaria and other airborne infections.

Basil.
This is commonly known as Tulsi means the incomparable one. It is also known as queen of all the herbs. There is different varieties basil available globally and they are used in different ways as per their traditions amongst masses. The scientific classification of basil is as below.

**Scientific classification:**

- **Kingdom:** Plantae
- **Subkingdom:** Tracheobionta
- **Super division:** Spermatophytats
- **Division:** Magnoliophyta
- **Class:** Magnoliopsida
- **Subclass:** Asteridae
- **Order:** Lamiales
- **Family:** Lamiaceae
- **Genus:** *Ocimum*

*Ocimum sanctum* is a shrub and is also commonly known as holy basil in English and Tulsi in Sanskrit. Holy Basil is a plant of Indian origin which is used in Ayurveda as an ‘adaptogen’ to counter the daily life stresses. Basil is many branched shrub about 75cm in height. It is an aromatic herb cultivated and worshiped in front of temple and houses in India. There are many types of basil available globally, among that, Rama and Krishna Tulsi are widely cultivated in India. And they are easily available and grow rapidly and
randomly everywhere, wherever seed are thrown. For present work we used Krishna Tulsi, which was brought from botanical garden of Savitribai Phule, Pune University.

Basil is traditionally used as medicine so it is also called as the “Elixir of Life”. Basil is generally used to treat cough, cold, temperature, flu, head and ear aches, skin diseases, infections, animal and insect bite, toxicity of various poisons etc. But in modern culture basil is used as herbal or green tea to lose weight. Basil have lots of medicinal properties like, stress reliance, anti-aging effect, anti-oxidant properties, radiation protection, energy and performance enhancement, heart and vascular protection, liver support, lung and bronchial support, nutritional, anti-inflammatory actions, anti-biotic protection, immunity tune-up, height safety margins etc.

Natural basil has nutritional and pharmaceutical properties. This is because composition of basil is extremely compounded. Basil contains nutrients and different biologically active compounds in it. The overall properties of basil cannot be duplicated or created. The main compounds in the basil are eugenol and ursolic acid. This two components and their oxidised component are very useful for medicinal purpose. They are highly anti-bacterial and anti-viral in properties.

Eugenol (4-Allyl-2-methoxypheno) ursolic acid (3-beta-3-hydroxy-urs-12-ene-28-oic-acid)

The nutritional values of basil are discussed below.

1. 1% Calorie
2. 0% Cholesterol
3. 0.2Grams of sodium
4. 0.2Grams of carbohydrates
5. 31% vitamin K
6. 6% vitamin A
7. 2% vitamin C
8. 3% manganese
9. 1% folate
10. 1% calcium
11. 1% potassium
12. 1% magnesium

The antibacterial and antiviral property of basil is the main reason to select it for our study.

1. Efficiency: the Tulsi leaves have large number of medicinal properties. Basil leaves are composed of many plant-derived chemical compounds which have disease preventing and health promoting properties. The leaves are used as nerve tonic and they also sharpen the memory. They contain many polyphenolic flavonoids like orientin and vicenin. They assist to separate the catarrhal matter and phlegm from the bronchial tube. The leaves empower the stomach and actives a mess of the process of sweating. The seed of the plant are tenacious. Basil leaves are composed of many health benefiting essential oils such as Eugenol, citronellol, linalool, citral, limonene, and terpineol which have anti-inflammatory, and antibacterial properties. They contain high levels of beta-carotene, vitamin-A, cryptoxanthin, lutein, and zeaxanthin which act as protective scavengers against oxygen-derived free radicals and reactive oxygen species (ROS) that play a role in aging and various disease processes. Basil herb consists of huge amount of minerals like potassium, manganese, copper, and magnesium. The mineral Potassium helps to control heart rate and blood pressure and is substantial component of cell and body fluids. The Manganese is co-factor for the antioxidant enzyme, superoxide dismutase and it is utilised by the human body. Iron is the irregular source of basil leaves. The fresh leaves of basil contains about 26% of RDA of iron, which is a part of haemoglobin within the red blood cells and used to determine the oxygen-carrying capacity of the human blood. The pathogenic bacteria’s like Staphylococcus, enterococci; Shigella and Pseudomonas are prevented by anti-infective functions present in the basil herb oil.

2. Fever & Common Cold: The leaves of this plant is authoritative for different types of fevers. During the season of rain, when these two diseases are at their peak, the bail leaves with tea are boiled; which behaves as
defensive across fever of dengue and malaria. In case of vital fevers, in half litter of water basil leaves and cardamom powder mix together with sugar and milk which helps to decrease the body fever. To lower down the fever, the extract of basil leaves can be used. In each 2 or 3 hours the juice of basil leaves in water can be given. Also giving sips of cold water in the middle time, it is very useful in children to lowering down the temperature.

3. Whooping Cough: Tulsi is substantial component of abundant Ayurvedic sweet liquids for cough and syrup for soothing cough. It relieves to move gelled waste in bronchitis and asthma. Tulsi leaves when grind with teeth decreases cold and mild sickness.

4. Sore Throat: for this syrup of basil leaves in water can be used. Also it acts as a mouth freshener.

5. Respiratory Disorder: in the treatment of respiratory system disease, the leaves of basil are used as medicine to treat it. A mixture of extracts of basil leaves and ginger with honey are the best medicine for asthma bronchitis as well as influenza cough and cold. In case of influenza the extract of leaf of basil, clove and common salt gives quick relief.

6. Stones in kidney: Kidneys can be treated by basil as it has very powerful effects on it. For the stones in kidney the extract of basil leaves with honey expel out from the urinary tract.

7. Heart Disorder: The cardiac diseases and weakness are treated by basil which has advantageous effect towards them. The compound in basil controls the cholesterol in blood.

8. Sickness in children: Fever, Cough, cold, Diarrhoea and omitting are the common illness in children, the extract of basil leaves is the best medicine for it basil leave when taken with saffron clears the blemishes appeared by chickenpox.

9. Stress: leaves of basil are announced as anti-stress agent or adatogenic for stress. The leaves of basil are able to take significant care against stress. Chewing leaves of basil, two times in a day can prevent stress for healthy person. It purifies blood and helps to keep away many common illnesses.

10. Mouth Infections: Chewing of the leaves of basil is very useful for curing mouth ulcer and mouth infections.
11. Insect Bites: The juice of the leaves is a protective and healing for insect bite. For this a juice of basil leaves around one teaspoon is can be taken each hour. Juice can also be used on the injured parts. When insects and leeches bites the paste of basil roots used as a medicine.

12. Skin Disorders: the basil leave juice is very effective to cure different type of skin diseases like ring worm. In the medication of leucoderma the juice of basil leaves are used successfully.

13. Teeth Disorder: the whole plant is useful for teeth disorders. The powder of dry leaves is used to brush the teeth. The paste of leaves with mustered oil is used as a toothpaste. It is very supportive in dental health. It corrects the dirty smell of breath and gum massage. It can be used as mouth freshener.

14. Headaches: Tulsi is a best for treating headache. The leaves extracts can be used to cure this problem. To get a relief from heat and headache, the crushed leaves and sandalwood mix together to form a paste and applied on the forehead. For coolness in summer or in general days this pest is very useful.

15. Eye Disorders: deficiency of vitamin A causes sore and dry eyes and night-blindness. The juice of leaves of basil is productive solution for eye disorder.

Skin Benefits of basil:
Tulsi plant has abundance effects for attractive skin. The basil leaves maintains the shine of hair and glow of skin. The juice of Tulsi leaves have large amount of organic compounds which are useful many skin and hair problems. Tulsi is gifted with many characteristics like antiseptic and purifying which block the skin diseases. Some of them have been explained below.

1. Prevention of Acne and Pimples: as the Basil leaves removes all the toxins from body hence, they helps to prevent the attack of acne and pimples. They include antibacterial and antifungal properties and therefore the paste of basil leaves and sandal wood helps from inflammations.

2. Lightens Scars and Marks: the combination of gram floor and Tulsi paste used as face pack is best mask for injury marks and helps to get a clear and uniform skin tone. Gram floor has Skin whitening effects and Tulsi kills the acne bacteria.
3. Advantageous for Face Skin: a Massage of dehydrated leaves of basil on face increases health of the facial skin; it gives a young and fresh appearance. It also improves the tone of our skin.

4. Avoidance of Blackheads: the leaves of Basil help to avoid arrival of blackheads on nose, chin etc. Placing the wet plants on nose for 5 minutes removes the blackhead.

5. Facial Glow: Dry powder of Tulsi when scrubbed on face it removed dark spot, dirt and dead skin on the face and alternatively adds glow on face.

6. Prevention from Inflammation: Antibacterial and antifungal compounds are present in basil leaves for preventing inflammation paste of basil leaf powder with sandal wood and rose water is useful.

7. Curing Ringworms and Skin Infections: The basil leave consist of characteristic like antibacterial, antibiotic and antifungal, this can lower down the growth of bacterium like E coli and B anthraces. These bacteria responsible for different type of skin infections. To cure skin itching the mixture of basil leaves and sesame seed oil can be used in equal proportion. For curing ringworm basil leaves with lemon juice is very effective.

8. For Younger and Fresh Look: Basil consists of antioxidant which helps to look skin younger and fresher. It is very useful for the skin to keep in good condition. It gives moisture to hair and skin.

9. Skin Tightening: Basil leaves are useful for Skin with blemishes. The skin infections which are caused by pimples and acne can be reduced by using a mixture of white portion of egg with paste of basil.

10. Promotes Quick Healing: boiling basil leaves in mustard oil is good medicine for curing all types of skin diseases.

11. Relieves Skin Irritation: Applying Tulsi paste on face relaxes skin from irritations.

12. Heals Wounds, Cuts, and Burns: The dry Tulsi powder with coconut oil can heal wounds, cuts and burns.

13. Treatment of Vitiligo: A vitiligo is nothing but a type of skin disease which is identified as white spot to cure this disease intake of leaves of basil is useful.

14. Cams Itching: By massaging basil leaves on infected areas gives a quick result from itching application of basil leaves lemon juice Cams the itching.
15. Treatment on Skin Diseases: Lots of beauty product companies used Basil as main component to treat different skin diseases like eczema, acne and pimples etc. This is because of antibacterial properties present in basil leaves.

Advantages of Hair Care Of basil:
The high pollution is main cause for Dry and damaged hair. It’s very necessary to eat balanced diet to keep hair problems away. Herbals products and homemade products are used to cure hair problems. It is highly important to keep ourselves hydrated and eat a balance diet to ward off hair problems. Dry and damaged hair is responsible for lowering down the beauty. For all these problems the wonder herb basil is very essential for healthy, shiny and beautiful hair.

1. To Prevent of Hair Loss: It is current problem which is happened because of itching and sweating the scalp for these hair oil and crushed basil leaves are useful which maintain cool scalp also lower down itching and helps in growth of Hair. It also helps in managing the scalp health.

2. Treats Dandruff and Dry Scalp: The main reason of hair loss is dry scalp as well as Dandruff. The paste of Tulsi keeps roots healthy and keeps dandruff away.

3. Strengthen the Hair Shaft: Basil leaves are effective in strengthening the hair shaft.

4. Increase Immunity: the composition of basil is highly complex which consists of anti-oxidants adopt genes and increases the immunity. Therefore intake of juice of basil leave helps to keep healthy and moisture slap.

5. Medicine for Hair: To treat white hair powder of amla and basil leaves on hair is very useful. It is very useful for restrain white hair and hair fall too.

6. Refreshing Hair Follicles: for generating and refreshing the healthy hair Basil leaves are very useful. The hair follicles are stimulated by basil leaves.

7. To cure radiation damages: Antioxidants is the major source of basil leaves. The flavonoids, orientin and vicenin present in basil leaves helps in caring the chromosomes and cell structures from oxidation, and therefore it is useful to prevent cell ageing and death and gives protection against radiation damage.
Above all these advantages, the new discovery is that the basil is having advantages towards the environment too. Basil transparently provides oxygen for around 20 hours and ozone for 4 hours along with the formation of fresh oxygen which is having capacity to absorb noxious gases like carbon monoxide, carbon dioxide and sulphur dioxide from the environment.

Carica Papaya:

![Carica Papaya](image)

Fig. 1.1.7 carica papaya

Next plant which was selected is carica papaya which is highly recommended for the treatment of dengue fever, in order to increase the blood platelet count. The scientific classification is as below.

Kingdom: Plantae
Subkingdom: Tracheobionta
Super division: Spermatophyta
Division: Magnoliophyta
Class: Magnoliopsida
Subclass: Dilleniidae
Order: Violales
Family: Caricaceae
Genus: Carica
Species: Carica papaya

Papaya or papaw or pawpaw’s are different names of the fruit of carica papaya. It is small tree plant having a one stem of about 10 meter in height. The leaves are large i.e. about 50 to 60 cm in diameter. It is mostly cultivated in India and Brazil. It is yellow orange in colour with rich orange pulp. It is with or without seeds. Seeds are mostly grey in colour. The carica papaya is rich source of vitamin A, vitamin C, vitamin E and vitamin B. it is also rich in minerals, potassium, magnesium and fibres. It is known as “Power house of nutrition’s”. In addition, the papain which is a digestive enzyme is found in carica papaya. It treats and helps to become better all types of digestive and abdominal problems of human. The fruit contains beta carotene which prevents damage caused by free radicals. The different nutrients in papaya help in preventing the oxidation of cholesterol. Seeds of this plant have anti-helminthic and anti-amoebic properties. It helps to detoxify the liver and it protects kidneys from kidney failure. It cures for piles and thyroids. The juice of roots of this plant use to ease the urinary troubles. Therefore, the whole plant of carica papaya is package of nutritional values.

1. The raw fruit of papaya contains enzymes like papain, chymopapain etc.
2. Fruit: it contains carotenoids, b-carotene, and crytoxanthin.
3. Roots: roots contain Carposide.
4. Seed: Glucosinolates Benzyl isothiocynate, papaya oil
5. Shoots, leaves: Minerals Ca, K, Mg, Zn, Mn, Fe.
7. Leave: Alkaloids Carpinine,carpaine,vitamin C and E

Papaya is the power bank of vitamins and minerals. Various types of vitamins and minerals are present in papaya.

Vitamins-
- Vitamin A- 6%
- Beta-carotene- 3%
- Vitamin B1- 2%
- Vitamin B2- 2%
The papaya fruit contains low calories just 43 calories and does not contain cholesterol. Papaya contains soft, eatable food with a better quantity of dissolvable dietary fibre that which helps to have normal vitals movements that lowers muscle spasm problems. It is having lots of vitamin C in it. In many studies it is proved that vitamin-C takes a valuable part in a free radicals scavenging, increasing immunity, and anti-inflammatory actions. It is another good source of Vitamin-A and flavonoids such as β-carotene, lutein, zeaxanthin and cryptoxanthin. For keeping the healthy lamina, skin and vision the vitamin A is very important. These compounds have excessive antioxidant characteristics shows a guarding towards free radicals derived from oxygen and reactive oxygen species (ROS) which shows effect in aging and many illness processes. This fruit contains many vitamin as B-complex vitamins such as Folic acid, pyridoxine (vitamin B-6), riboflavin, and thiamine (vitamin B-1). Mature papaya also consist a fine amount of potassium about 257 mg and calcium. The Potassium is essential element for body fluids and cells also useful in ruling blood pressure as well as heart rate nullify the impact of sodium salt. From folk medicines the seeds of papaya are known as folk established fact towards lots of diseases. These seeds have characteristics
like anti-inflammatory, anti-parasitic, and analgesic, and consume for treating stomach-ache, and infections like ringworm.

The carica papaya is used to treat blood pressure, warts, corns, sinuses, cutaneous, tubercles, muscle relaxant, eczema etc. It is used as medicines on colon cancer, anti-inflammatory, allergies and side effects. It promotes anti-sickling activity, respiratory disorders and also lung health etc.

For this study we have selected leaves of carica papaya. The aqueous extracts of carica papaya leave are used to cure dengue fever as it contains high anti-oxidation properties.

As early says that, dengue fever is cured by juice of leaf of papaya and also gives a variety of benefits towards health. It shows a lots of other health benefits. They are explained as below.

1. Aedes aegypti mosquito transfers the dengue virus and allows causing a dengue disease which causes death. The saliva produced by Aedes aegypti mosquito which consist more than 100 different types of proteins containing D7 family protein. According to Researcher’s this saliva when transfer in to human body increases the dengue virus. These viruses are attacked off by immune response of antibodies. These viruses spread the infection very fast. The D7 protein is more active in salivary gland of mosquito which is infected by dengue as compare to other mosquito.

This disease sometimes can be incurable and is indicated by signs of illness just like headache with high fever, uncompromising pain of muscle, joint ache, red rashes with itching and lower down the platelets count. Up until now, no particular medicine has been specified systematically for dengue disease. Painkillers like Aspirin and Ibuprofen are the painkiller which is having individual adverse effects. The leaf of Papaya extract is a conventional mode to healing a fever caused by dengue showing no other effects. Many researchers as well as distinct case studies of different cases have showed the effect of papaya leaf extract which consist of the enzymes which increases platelets, are chymopapain and papain called as thrombocytes and also make signs of illness less painful. Many drug companies are working on extracts of leaf of papaya to prepare medicine in tablet and syrup form. The practitioner’s advice to take about 25 ml of papaya leaf extract two times per day, complete week to instant effect.
2. The anti-malarial properties are obtained in papaya leaf extracts. Thus, juice of this plant leaf is generally worked in different regions on earth like a protective to keep from happening malaria disease from few native regions.

3. A very large anti-cancer characteristics of this fruit gathering together in juice of the leaf. From the journal of Ethno pharmacology, extract from papaya leaf consist of some enzymes which have exciting characteristic against cancer cells an extensive size of tumours like cervix cancer, breast cancer, liver cancer, lung cancer and pancreatic cancer without any side effects on the body. In different regions of the world papaya leaf extract is used for chemotherapy. The leaf extract boosts the immune system's reaction to cancer by controlling the T-cells.

4. Papaya leaves include valuable nutrients such as vitamins A, B1, C and E, calories, protein, carbohydrates, calcium, phosphorus, iron and water. Extracts of leaves have valuable enzyme known as papain which supports in digestion by separate down the proteins naturally.

5. More than 50 active elements are present in the juice of this plant leaf. It contains the karpain compounds which prevent microorganisms like fungi, worms, parasites, bacteria and also different types of cells of cancer. It is frequently used in herbaceous medicines to kill worms in intestine as it include tannins that take care of the intestine from re-infection from tanning proteins in the filling the intestinal wall. This way the worms cannot attach themselves. Thus, they are productive in restraining the agent of typhoid fever.

6. Other wonderful advantage leaf of papaya extract is power of leaf to fight against common cold virus. The WBC’s and platelets are re-established by this way naturally. Around 50 elements are present in a leaf of Papaya along with vitamins A, C and E which helps to increase immune system.

7. When leaves of papaya boiled with orange juice its supports in fatburn process.

8. In menstrual pain the extract of this plant is active. For reliving the pain juice of papaya leaf, ginger and salt together gives a best result. It is best source for dietary fibre, vitamin C, vitamin A, vitamin E, and foliates and is also higher in antioxidants, flavonoids, and carotenes.
Papain and chymopapain are enzymes present in papaya which are very good for human health. By These enzymes human life, health mental and physical functions are controlled very well. For good looking skin fruit of this plant is very important as it included in many beauty products especially in face pack to keep blooming as well as bright skin. Above all the benefits of leaf of papaya extract are discussed below in different manners.

9. Extract of this leaf contains superior essence of vitamins A as well as C which boosts the health of skin.

10. The extract of Papaya leaf is the best cleansing agent. This can be assign to source the appearance of karpain compounds that prevent microorganisms and other toxins, thus results a clear skin and provide guardianship opposing to skin problems like pimples, freckles and blemishes.

11. Extract of papaya leaves is excellent in handling eczema. It gives best results after scrubbing on affected areas.

12. Extract of Fresh papaya leaf helps in curing open cuts and swelling.

13. For smooth and soft skin and feet, the white cloudy portion from the plant leaf tip is very useful.

For the hair care treatments the papaya leaf shows best results. The papaya leaf is mostly used in the hair products like shampoo, conditioners, hair spa product etc. and it is because the higher amount of different vitamins, minerals, enzymes present in this leaf. It helps in fast growth of hair. It also helps in reducing the problems like dandruff, balding, and thin hair. Papaya leaf extract have the following advantages for hair.

14. Regular use of papaya leaf extract increases the hair condition and hair structure. The regular use of conditioner naturally made by Papaya leaf extract coconut milk and honey gives shine to dull, rough hair.

15. For scalp and dandruff problems, extract of papaya leaf is very useful. Much anti-dandruff shampoo contains papaya leaf extract in it as it is rich source in karpain compounds. It is very useful in removing excise oil and dirt from hair without any side-effects.

AzadirachtaIndica
Next plant on the list is AzadirachtaIndica. This is commonly known as Neem. The scientific level classification is as below.

Kingdom: Plantae
Subkingdom : Tracheobionta
Super division : Spermatophyta
Division : Magnoliophyta
Class : Magnoliopsida
Subclass : Rosidae
Order : Sapindales
Family : Meliaceae
Genus : Azadirachta
Species : Azadirachta Indica

From about more than 1000 years the medicinal properties of this plant are known to world. It is known as “the village pharmacy”. It naturally grows in India. It grows in tropical and semi-tropical regions. It is evergreen tree but
sheds its leaves during drought. It is about 700m in length and widely branched tree. It has lots of properties such as analgesic, antibacterial, antifungal, antipyretic, anthelmintic, anti-inflammatory, immune stimulator antiviral etc. Each part of Azadirachta Indica is used as an Ayurvedic medicine in our India. Its bark, leaves and seeds are used for making medicines. Sometimes roots, flowers and fruits are also used in pharmaceuticals, toiletries, agriculture, insect repellent and medicinal cures. Its fruits and seeds are the source of Neemoil. It has several pharmacological activities. Thousands of diseases have to respond to Azadirachta Indica. The extracts of various parts of this plant are most frequently used by people in toothpaste, soaps, cosmetics, insect repellent, lotions and creams.

The medicinal values shown by the various parts of this plant are as follow. Each part of this plant contains different chemical compounds. Many products of Neem are prepared by using the extract of Neem which is widely used in all over India due to its medicinal properties. The Neem products have very high antifungal, antibacterial and antiviral properties. It is used as the most divine medicine in Ayurveda due to its healing properties. It is also being used to heal major skin diseases in Unani medicine. The Neem oil is used for healthy hair and also for better liver function and to balance sugar levels in human body. It is also used as an insecticide. The content present in the neem which reduces the sugar levels from blood, heal ulcers in the digestive tract and also prevent conception. It also helps to treat head lice, skin diseases, wounds, and skin ulcer too. As a mosquito repellent and as a skin softener, to kill bacteria and prevent plaque formation in the mouth. It is also used as tonic and astringent.

Some adverse effects on Neem products have also been reported on kidney repair, infertility, miscarriages and imbalanced blood sugar level.

1. Leaf: Isomeldenin, nimbin, nimbinene, nimbandiol, immobile, Nimocinol, quercetin, beta-sitosterol.
2. Flower: Fatty acid, glutamic acid, tyrosine, arginine, methionion, Phenylalanine, histidine, arminocaryllic acid.
3. Bark: Nimbn, Nimbinin, Nimbidin, Tannins, Glucose, Arabinose, Fructose, Margocine


For the present study we have selected leaves of this plant as it has inherent medicinal properties. As the leaf has many antioxidant properties it can be used to treat the fever, cough and cold when combined with other medicinal plants.

This plant leaves strengthen the immune system and increase biological functions, boosting respiratory function, improves digestive health and also supports liver by removing toxins from the blood. Many viral diseases are treated by this plant leaves in India in which the extract of this leaves absorbs and eliminates the entire virus. The paste of Neem is prepared and applied on the infected or injured part as a preventing measure. Also this paste is used to treat warts, chicken pox, as well as small pox. Because, Neem have the ability to absorb the virus and protects the uninfected areas by entering the virus. Neem extracts toxic to disease given through sexual relation and increases the speed of healing. The neem leave tea and cream made by leaves on cold rashes relieves symptoms of disease spread by sexual relations.

1. Neem leaves consist of high anti-viral activity, when they used in hot bathing water; it helps to reduce skin infections. This helps to reduce the microbial activities which cause itching in diseases such as rash, cold sores and warts. It calm downs the burning infections by soothing scratch and inflammation. Neem leaves helps to carry off all the intestinal worms and build up active performance of the intestine.

2. Cardiac Care: Neem leaves are active blood purifier and by drinking Neem soaked warm water the high blood sugar can be managed. Extract of Neem leaves is best blood purifier which removes all toxins through the body. Leaves supports in stretching the blood vessels to improve circulation of blood and reduces heavy heart rates. Also it lowers down irregular heartbeats and regulates the high blood pressure.

3. Fungal disease: this plant is very active across diseases spread by fungus that act on body. Examples such fungal diseases are the infection of lung,
mucous membrane and bronchi. Neem leaves lower down the indications of all the infections caused by fungus. The infections of hair, skin and nails that involve ringworm that found on hands as well as on feet can be treated by leaves of neem. Chewing the juice of the leaves also restrain cancer cells.

4. Malaria: Neem leaves are helpful as a medicine towards the malaria fevers. The Neem element i.e. gedunin is very energetic regarding to malaria. The extract of leaves result in elimination of layed egg. Chewing the juice Neem leaves is a boosting action towards of malaria.

5. Cancer: Neem leaves consist of Polysaccharides and liomnoids and also useful for less active the cancer and tumour cells.

6. Arthritis: Aid for arthritis as well as the pain and swelling in joints are cab be decrease by different parts of neem plants which are having different properties. A massage by neem oil is very useful in muscle aches relaxation as well as joint pain and supports alleviate rheumatism, osteoarthritis and lower back pain.

7. Cures Poison: In curing or treating the poisons and insects bites the Neem leaves extract are very useful. This is because anti-clotting agents that exist in Neem leaf extract. Neem leaves are useful as medicines to ulcers and inflammation as they have characteristics of anti-inflammatory and anti-ulcer activity. Neem leaves are easily available also, used to cure beauty and skin care.

8. Miniaturisation of Skin: For graceful, soft and moisturized skin neem juice is very useful. They are emphatic for removing injury marks as well as black spots appeared by pimples. By applying face pack of Neem leaf, it clears all the pimples on the face and also clears the small wounds.

9. Cures Acne: for curing the acne, the Neem leaves are boiled in to the water till the green colour appears, by adding this solution in regular bathing water clears all skin infections, body odour and acne problems.

10. Skin Toning: Neem leaves used as tonner in most of the beauty parlours. Wiping the face by warm Neem water and keeping it for overnight increases the skin tone. And also removes the acne and reduces the extra hair growth.

Use of Neem Leaves in bath Water: The Neem leaves when boiled in the water gives various health advantages. The use of neem leaves in water helps to keep illness away from human.
11. For Hair benefits – Scalp and hair issues: neem is the best solution for dry scalp, dandruff and hair fall as it consists of anti-bacterial properties. To reduce these problems the water containing leaf is very useful and gives instant results.

12. for injuries: for the fast treatment of burn injury neem water is very useful. To repair the burnt skin faster neem water is so useful and it protects many infection from the infected area.

13. Chicken pox: Bath with Neem water soothes the patient’s skin from post chicken pox which is advised by many doctors to prevent further spreading.

14. Eyewash: To lower down the irritation of eyes neem water is very useful.

15. Sore throat and tired foot: For the sore throat Gargling with neem leaf water is the best option. And for foot ach, soaking the foot in to the warm water containing neem is useful.

A. Other uses:

16. To reduce the freeze hair, the hair mask made up of neem leaf, honey and water is useful.

17. It is very safe to take neem leaves internally. The viral infections like common cold, herpes, influenza and chicken pox can be treated by neem. The fever caused by viral infection can be lower down by the neem water.

18. Pain killer, anti-inflammatory and fever reducing compounds are can be produced by neem leaf and seeds. This can help to heal cuts, wounds, ear aches, sprains, headaches etc.

Zingiber:
The classification of zinger is as given below.
Kingdom: Plantae
Subkingdom: Tracheobionta
Superdivision: Spermatophyta
Division: Magnoliophyta
Class: Liliopsida
Subclass: Zingiberidae
Order: Zingiberales
Family: Zingiberaceae
Genus: Zingiber Mill.
Species: Zingiber officinale Roscoe

Ginger is a flowering plant and its root and it is widely used as a spice as well as traditional medicine. It is approximately one meter tall, has narrow leaves and yellow flowers. It has to be replant every year. The common names of zinger are ginger; African ginger, black ginger, Cochin ginger, race ginger etc. It mostly grows in India, Africa, Mexico, and Hawaii. The odour taste is characteristic, aromatic. Because of its pungent taste and aroma it is used as spice from long time in the whole world. Ginger is an underground rhizome of plant zinger officinal roscoe.

Ginger is employed therefore wide in Ayurveda that it's a complete cabinet in itself. There’s an Ayurveda Sanskrit literature tells that to improve the digestion ginger must eat before two meals. The ginger is only
ingredient which makes strong hunger and also improves absorption and transmission of different nutrients through the body and clears all the circulatory channels in the body. Ginger is the best spice which can be used every day. In case of acidity, haemorrhage like menstruation, giddiness and skin problems can be cure by ginger. Many Ayurvedic book tells about ginger is very useful on the pain in joints blockages etc. The new science of worldwide analysis tells the effective characteristics to prevent motion, motion sickness, and constipation early stages of autoimmune disorder. Before the lunch 2 to 3 thin slices of ginger, salt in a juice will be very useful to improve digestion properly. In cooking 2 to 3 slices of ginger can be added in the vegetable mixture which will give a best test as it’s pungent in test. Ginger has lots of medicinal properties like, anti-inflammatory properties, Anti-thrombotic properties, antibacterial properties, anti-oxidant properties, antitumor properties, anti-microbial properties, blood pressure lowering properties, cholesterol lowering properties etc. Ginger root has anti-inflammatory, carminative, anti-flatulent, and anti-microbial properties. Ginger is richest source of volatile oils which consists of zingiberene. Zingiberol, zingiberene, phellandrene, linalool, zingerone, shogaol, farnesene, and small amounts of β-phelladrene, cineol, and citral are the main constituents of the volatile oil. The gingerols and shogoals are responsible for pungency of ginger. Ginger provides variety of vitamins and minerals. They are as shown below.

**Energy**: it contains 80 Kcal i.e.4% energy.

- Carbohydrates: 17.77 g i.e. 13.50%
- Protein: 1.82 g i.e. 3%
- Total Fat: 0.75 g i.e.3%
- Cholesterol: Ginger does not contain cholesterol i.e. 0%.
- Dietary Fibre: 2.0 g i.e. about 5%

**Vitamins**: it contains lots of vitamins in it are as shown below.

- Folates: 11 µg i.e. about 3%
- Niacin: 0.750 mg i.e. 4.50%
- Pantothenic acid: 0.203 mg i.e. about 4%
• Pyridoxine: 0.160 mg i.e. about 12%
• Vitamin A: do not contain vitamin A.
• Vitamin C: 5 mg i.e.8%
• Vitamin E: 0.26 mg i.e.1.50%
• Vitamin K: 0.1 µg i.e. 0%

**Electrolytes:** ginger consists of sodium and potassium.
• Sodium: 13 mg i.e. about 1%
• Potassium: 415 mg i.e. about 9%

**Minerals:** As ginger or zingeber is a root it consists of lots of minerals.
• Calcium: 16 mg i.e. 1.60%
• Copper: 0.226 mg i.e. 25%
• Iron: 0.60 mg i.e. 7.50%
• Magnesium: 43 mg i.e.11%
• Manganese: 0.229 mg i.e.10%
• Phosphorus: 34 mg i.e. 5%
• Zinc: 0.34 mg i.e. 3%

One inch of ginger in tea or in soup or juice contains all available nutrients which are beneficial for our body. The nutritional values of ginger play a very essential character in selection of the root of this plant for the present study.

Ginger’s flavour is due to zingiberene while its pungency is due to gingerols. Ginger facilitate improve the viscous motility and are medication, medicinal drug (analgesic), nerve soothing, antipyretic similarly as anti-bacterial properties. They conjointly facilitate to decrease nausea iatrogenic by ailment or pregnancy and relieve a migraine headache. On cooking gingerols and shogoals breaks down into zingerone, which are less pungent and adds on to the flavour of ginger. Large number of bioactive compounds is present in ginger. Out of these shogoals has strong anti-coughing effect while gingerols has anti-inflammatory and analgesic effect. Because gingerols inhibits production of new blood vessels therefore it is also used in the effective treatment of tumour. Zingerone, is effective against *E.coli* induced diarrhoea, especially in children. Ginger is also used in the treatment of nausea in pregnancy and chemotherapy.
Benefits of ginger:
1. Settles stomach issues.
2. Sooths migraines.
3. Reduces motion sickness.
4. Reduces joint pains and relieves arthritis.
5. Successful in killing cancer cells.
6. Treats a variety of cardiovascular conditions.
7. Lowers blood sugars and increase insulin release.
8. Effective in treating asthma.
9. Slow down DNA damage.
10. Reduces cough and cold.
11. Helps in purifying blood.

Ginger is a multifaceted remedy with lots of healing effects, some of which are stated below:

1. Stroke and heart condition:
   Ginger drastically lowers the blood pressure by improving blood sugar level, thus improving the heart conditions of the patients with type 2 diabetes.

2. Digestive problems:
   Ginger contains large number of phenolic compounds which helps to reduce gastrointestinal irritation and increases saliva and bile production. It also helps to control movement of food, gastric contraction in the tract.
   The dyspepsia is consisting of large and irrational pain stomach at upper portion can be relieved by intake of ginger soup in an empty stomach.

3. Nausea: In case of cancer treatment the ginger tea is the best home cure for nausea.

4. Cough & Cold: chewing a raw Ginger or a ginger tea relieve cough and cold.

5. Morning Sickness: The morning sickness is often seen in pregnant women which can be cure by ginger candies.

6. Osteoarthritis: The joint pain can be reduced to some extent by regular use of ginger due to its anti-inflammatory properties.

7. Absorption
   The absorption of nutrients as well as food transport of food from mouth to colon is the main support to good health the stocking of food in a track pharming the food which is verse case of absorption. It can be serving as
emergency. The proper digestion and assimilation is directly proportional to each other. It can otherwise, causes nutritional deficiency. Therefore intake of ginger in daily food is very necessary.

8. Compromised Immunity and metabolism operate. As per Ayurveda ginger is very effective at warm body. Also it facilitates to break down the build-up of poisons in the organs. It cleanses the system alymphaticum, body’s installation. To improve immunity and respiration combination of essential oil and ginger oil is very effective.

9. Infection of Microorganism: Ginger extract can kill cocci aureus and true bacteria pyogenes present in any system due to its antibiotic properties.

10. Less pain and swelling in muscles: Gingerols in ginger are super anti-inflammatory, which plays an important role in controlling painful muscles.

11. Ginger powder helps to reduce menstrual pains.

12. Lowering of Cholesterol: The heart diseases are related with high level of LDL i.e. is bad cholesterol. Ginger helps to reduce LDL cholesterol and blood triglyceride level.

13. Prevention of cancer: 6 gingerols, a chemical compound present in raw ginger has protective effects against cancer. When added to anti-nausea medications, it further reduces nausea and vomiting from chemotherapy.

14. Alzheimer’s diseases and brain function Improvement: The bioactive compounds in ginger prevent inflammatory reaction which occurs in the brain. Ginger also enhances brain function directly. Ginger protects against age-related decline in brain function.

15. Infection reduction: Gingerols a bioactive substance present in fresh ginger helps to fight the infections by inhibiting development of different bacteria. The gingivitis and period onthis are oral bacterial deceases can be treated by ginger. The respiratory infections can also be treated by fresh ginger.

16. To counter motion sickness: Taking 1 gram of dried, powdered ginger 30 minutes to two hours before travel helps to ease travel related nausea.

17. It has a warming effect and stimulates circulation.

18. It inhibits rhinovirus, which can cause the common cold.

Side Effects of Ginger:
Though ginger is free from harm for general use but on other side it shows some side effects.

1. Ginger causes heart burn, stomach upset and diarrhoea
2. Ginger can increase bleeding which is of concern in case of patient undergoing treatment for blood thinning.
3. Sometime it can be lower down a blood sugar level and blood pressure which is very serious condition.
4. Ginger should not be given to children under the age of two
5. Pregnant women should not take more than 1 gram per day.

Curcuma longa:

1.1.10 curcuma longa
The scientific classification of curcuma longa is as below.
Kingdom: Plantae
Subkingdom: Tracheobionta
Superdivision: Spermatophyta
Division: Magnoliophyta
Class: Liliopsida
Subclass: Zingiberidae
Order: Zingiberales  
Family: Zingiberaceae  
Genus: *Curcuma* L.

Turmeric is a rhizome of plant *curcuma longa* and *curcuma longa* belongs to zingiberaceae family i.e. ginger. Turmeric is most useful and important spice used in most of the south Asian and Middle Eastern countries including India. This plant is about 65-90cm in length with short stem. The rhizome is about 2.0 to 7.0cm in length and about 2.5cm in width. The rhizomes are yellow-brown in colour and dull orange from inner side which shows bright yellow colour when powdered. The *curcuma longa* is widely used as spice, preservative, and colouring agent in Indian culture. It is bitter in taste and its fragrance is in between orange and ginger. It is also known as kitchen queen. In Ayurveda Turmeric is the best medicine in curing many diseases. Many diseases are treated by *curcuma longa* like, fever, inflammation, wounds, infections, dysentery, injuries, jaundice and other liver related problems. It can also be used to treat cold-flu, diabetes, cancer, to lose weight etc. The people from where the turmeric is grown use the turmeric leaves to cover and cook the food. Leaves of Turmeric have a characteristic flavour. Many researchers have been stated that the increasing tumour cells, pancreatic cancer and colon cancer can be treated by compounds present in turmeric like Curcumin and polyphenolic. It also contains essential oils like turmerone, curcumene, cineole, and p-cymene. They have lots of value in cosmetic industry as they are having antioxidants, anti-amyloid and anti-inflammatory properties in it. The root herb of this plant do not contains cholesterol therefore; it is very high in antioxidants, and dietary fibre. Both of them help control blood cholesterol levels.

1. Protein: 6.3%  
2. Fat: 5.1%  
3. Minerals: 3.5%  
4. Carbohydrates: 69.4%  
5. Essential oils: 5.8%

The main compound of *curcuma longa* is curcumin which shows different biological activities and which is used as medicines since last few centuries.
Fig. 1.1.11 various cur cumin present in the curcuma longa

- Anticancer
- Antibacterial
- Antifungal
- Antiviral
- Anti-diabetic
- Anti-Alzheimer
- Anti-inflammatory
- Anti-venom
- Antioxidant
- Anti-HIV

All these properties are useful for human health. Therefore, in the present study curcuma longa plays an important role. The nutritional composition of curcuma longa is shown as below.

- Energy: 354 Kcal
- Carbohydrates: 64.9 g
- Protein: 7.83 g
- Total Fat: 9.88 g
- Cholesterol: 0 mg
- Dietary Fibre: 21 g
- Vitamins
  - Folates: 39 µg
  - Niacin: 5.140 mg
There are many health advantages of the Curcuma longa explained below.
1. High steroid alcohol analysis tells about turmeric that intake of turmeric extract orally doubly daily for three months lowers the total steroid alcohol, LDL (LDL or "bad") steroid alcohol, and triglycerides in overweight folks with high steroid alcohol.
2. Osteoarthritis:
   Few analysis explains that intake of turmeric extracts together with the alternative flavouring components, will scale back pain as well as improve the operate in folks with arthritis. Few analyses say turmeric plays regarding additionally as Nuprin for lowering the arthritis pain. Also, it doesn't appear to figure additionally as diclofenac for rising pain and performance in folks with arthritis.
3. Hepatic sensation (pruritus):
   Analysis suggests that taking turmeric orally thrice daily for eight weeks reduces hepatic sensation in folks with long-run nephrosis. In an early analysis researchers tells that intake of combination products like,
Curcumin and black pepper or long pepper continue for four weeks lower down the haptic sensation severity. It also improves the quality of life in folks with chronic haptic sensation caused by dichloroethylsulfide.

4. Abdomen ulcers: from many studies it is proved that intake of turmeric three times per day for few week decreases the ulcer from the abdomen. It is very effect than the standard antacids.

5. Illness Alzheimer’s: Alzheimer’s presenile dementia disease: The Alzheimer’s can be prevented by curcumin which is present in the turmeric.

6. Eye inflammation (anterior uveitis): to develop the signs of inflammation from the middle layer of attention the curcumin present in turmeric is very essential.

7. Large intestine cancer:
   To stabilize the carcinoma, intake of turmeric extracts and selected turmeric like Javanese turmeric is very essential and it is proved by many researchers.
   At the high risk of cancer, the curcumin present in turmeric is the best compound which removes the tumour glands from the colon of that suffered person.

8. Bypass surgery (coronary artery bypass graft surgery):
   Much research study says that the intake of the curcuminoids present in the turmeric will benefit when taken before and after surgery of bypass.

9. Skin wounds associated with cancer: by applying the turmeric cream on the wounds can give relief on that wound.

10. A kind of inflammatory gut sickness known as Crohn’s disease: The gut movements, diarrhoea, and abdomen pain can be lower down by the regular intake of curcumin present in the turmeric.

11. Depression: curcumin is the best compound to fight against depression.

12. Diabetes: the turmeric extract when taken twice a day will lower down the percentage of diabetes.

13. Upset stomach (dyspepsia): Some analysis shows that taking turmeric orally fourfold daily for seven days may facilitate improve associate stomach upset.

14. Gum sickness (gingivitis): Gargling by turmeric reduces the gum sickness as well as bacteria level from the mouth.
15. Abdomen ulcers caused by Helicobacter pylori (H pylori) infection: as turmeric has antibacterial properties it shows smaller amount of effect against this infections.
16. Irritable gut syndrome (IBS): many researchers say that intake of turmeric extract for 8 week continuously reduces the IBS.
17. Joint pain: turmeric consist lots of medicinal properties also it consist of many compound which are used painkiller. Many researchers say that intake of turmeric with some combination of medicinal plant or extract can improve the joint pain.
18. Efflorescence (Lichen planus): turmeric consists of compound curcumene c3 is the most useful chemical which is useful for skin irritation caused by lichen.
19. Many researcher suggest that intake of broccoli powder, turmeric powder and powder of whole, pomegranate fruit with tea leaf extract prevent the rise in specific prostate matter levels in men. It also lowers down Glandular carcinoma.
20. In case of head and neck cancer the radiation treatment causes Inflammation inside the mouth therefore many researcher advice intake of turmeric for up to six month to reduce the inflammation.
21. Atrophic arthritis (RA): Intake of curcumin chemical found in turmeric reduces RA symptoms as well as it helps to reduce swelling in joint stiffness at morning etc.
22. Live through surgery: After any surgery intake of curcumin from turmeric lower down the pain and the swelling therefore it is best medicine for pain relief.
23. Associate disease known as general LE (SLE). Early analysis suggests that taking turmeric orally thrice daily for three months will scale back vital sign and improve urinary organ operate in folks with urinary organ inflammation (lupus nephritis) caused by general LE.
24. Tuberculosis: Early analysis suggests that taking a product containing turmeric and Tinosporacordifolia will scale back bacterium levels, improve wound healing, and scale back liver toxicity caused by anti-tuberculosis medical aid in folks with infectious disease World Health Organization are receiving ant tuberculosis medical aid.
25. A kind of inflammatory gut sickness known as inflammatory bowel disease: A daily intake of turmeric lower down the symptoms and therefore the repeat of inflammatory bowel disease once utilized in connection with standard Medici nation. Alternative analysis tells about intake associate clysters may facilitate folks with this condition.

26. BDNF (Brain-Derived Neurotrophic Factor) is the hormone present in brain is boosted by curcumin. The BDNF increases the growth of neurons and also fights with different degenerative processes inside the brain.

27. Heart disease: Risk of heart diseases can be lowers by curcumin. It increases the capacity of endothelium inside the blood vessel.

28. Boosts Immunity: Curcumin has one of the very important properties is boosting the immunity power.

29. Protects against certain liver disease: Curcumin acts as a best antioxidant and protects the liver from different damages. The TGF–beta expression can be reduced by curcumin as it having that capacity. In case chronic haptic disease curcumin produces ant fibrotic and fibrinolytic drug.

30. Helps in losing weight: macrophages cells are present in fat tissues causes obesity. It is having very much reaction on organs like heart pancreas and muscle of liver. It also increases insulin in blood.

31. Treats Sprains and Swellings: The pinch of turmeric powder in proportion with salt and lime reduces Sprains and swellings.

32. Home Remedy for Chronic Cough: the cough cold and throat infections are reduced by turmeric powder which is a best medicine found in every kitchen.

Side Effects of turmeric:

Turmeric has no side effects when used properly. The sensitive people can have little stomach related problem or diarrhoea.

- Pregnant ladies should use turmeric cautiously. Turmeric can increases problems in gall bladder and decreases blood clotting.
- Turmeric can decrease blood clotting due to which there might be extra bleeding during and after surgery.

Allium sanctum:
The scientific classification of Allium Sanctum is as given below
Kingdom: Plantae
Subkingdom: Tracheobiont
Superdivision: Spermatophyta
Division: Magnoliophyta
Class: Liliopsida
Subclass: Liliidae
Order: Liliales
Family: Liliaceae
Genus: Allium.

Allium sativum is one of those plants that have been used as medicine over several years. This has been most widely used to fight infectious diseases. Allicin is the one of the biologically active compound naturally present in the Allium sativum. It is most abundant sulphur compound. The antibacterial and antifungal properties are present in allicine which rich in sulphur containing compound and mostly found in crushed garlic. This allicine prevents many forms of cancer. Garlic belongs to onion family which is typical herb contains 10 to 20 sections known as cloves; each clove is full of medicinal property. The psychological term for fear of garlic is Allium phobia. The chemicals present in Allium sativum are

- Sulphur compounds- 33
• Amino acids- 17
• Enzymes
• Minerals – mostly selenium
  Some volatile sulphur compounds present in the allium sanctum are as shown below.
  • Ally1 methyl sulphide
  • 3 Dimethyl disulphide
  • 5 Diallyl sulphide
  • 6 Ally1 methyl disulphide
  • 8 Dimethyl trisulphide
  • 10 Diallyl disulphide 14 Ally1 methyl trisulphide
  • 16 3-Vinyl_4(H)- 1 ,Zdithiin
  • 17 Diallyl trisulphide
  The pungent smell of Allium sanctum is because of Allicin present in it. There are various role of Allium sanctum in diseases. They are as follow.
  • Antihypertensive potential
  • Wound healing potential
  • Anti-cancer potential
  • Ant diabetic potential
  • Antifungal potential
  • Immunomodulatory potential
  • Antimicrobial potential
  • Antioxidant potential
  • Anti-inflammatory potential
  • Anti-bacterial
  • Antiviral
  Garlic is very useful and beneficial to human body. It contains lots of nutrients present in it. The sum of nutrients present in the garlic is as follow:

1. Vitamin C  16
2. Iron  9
3. Vitamin B-6 17
4. Magnesium 6
5. Potassium 11
6. Calcium 18
7. Selenium 6
8. Fibre 0.6 gram
9. Manganese 23
10. Copper 20
11. Vitamin B1 5
12. Proteins 18
13. Carbs 9
14. Calorific value 42 calories
15. Saturated fat 1
16. Cholesterol 1
17. Sodium 1
18. Zinc 11
19. Vitamin C 71
20. Vitamin K 3
21. Vitamin E 1

Top benefits of garlic are as follow.

• Provides relief from acne and asthma.
• Helps in digestion
• Helps in curing hypertension
• Helps in curing ear ache
• It helps to reduce high cholesterol level
• Helps in treating cough and cold
• Helps in treating eye infections
• Lower down the intestinal problems.

Garlic used as a remedy for wounds, ulcers, skin infections, flu, athlete's foot, some viruses, strep, worms, respiratory ailments, high blood pressure, blood thinning, cancer of the stomach, colic, colds, kidney problems, bladder problems, and ear aches, etc. Worms present in human and animal body can
be cured by giving alcove of garlic daily. Most of the internal problems can be cured by eating raw garlic. It is also used as a remedy for prostate, diabetes, cystic fibrosis, hay fever, osteoarthritis, (allergic rhinitis), traveller’s diarrhoea, yeast infection, high blood pressure late in pregnancy (pre-eclampsia, swine flu and flu. Garlic is used as preventing bacterial and fungal infections and also used as a mosquito repellent. It also cures earaches, menstrual disorders, chronic fatigue syndrome, hepatitis, abnormal cholesterol levels caused by HIV drugs, shortness of breath related to liver disease, exercise performance, stomach ulcers caused by H. pylori infection, exercise-induced muscle soreness, a condition that causes lumps in the breast tissue called fibrocystic breast disease, a skin condition called scleroderma, and lead toxicity.

1. Hair loss (alopecia areata): By applying topical steroid with garlic gel increases hair growth within three months.
2. Chest pain (angina): By administering garlic intravenously (by IV) for 10 days into heart patient chest pain decreases as compared to intravenous application of nitro glycerine.
3. Benign prostatic hyperplasia (BPH): By taking liquid garlic extract daily for one month there is a drastic decrease in the prostate mass and urinary frequency.
4. Common cold: for preventing measure if garlic taken in case of common cold reduces the number of colds.
5. Clogged arteries (coronary heart disease): People with heart diseases can reduce their sudden death by intake of garlic product. Many researchers suggest that regular intake of garlic product prevents clogged arteries.
6. Corns: The extract of garlic by applying on corns twice a day improves the corns. One particular garlic extract that dissolves in fat seems to work after 10-20 days of treatment.
8. Muscle soreness after exercise: garlic consist of chemical called Allicin helps to reduce soreness in the muscle after physical movement.
9. Performance of Exercise: In the young players intake of garlic increases the performance of exercise.
10. Breast cancer: The breast cancer and diseases related to breast can be decreased by consuming garlic in combination with vitamin E, beta-carotene, and vitamin C.

11. Stomach cancer. Many researchers say that the risk of developing stomach cancer can be reduced by eating more garlic in a day.

12. Stomach inflammation (gastritis): To improve a digestion intake of certain combination of garlic is very useful. Its stops the growth of certain bacteria i.e. H. pylori. It also reduces inflammation in stomach.

13. Hepatitis: The people suffering from hepatitis must consume combination garlic oil with diphenyl-dimethyl-dicarboxylate which improves function in liver as well as increases the oxygen level in liver diseases. For 9 to 12 months garlic consumption level out the oxygen in people suffering hepatopulmonary syndrome.

14. Lead poisoning: The lead poisoning can be treated by intake of garlic about 4 week.

15. Bone marrow cancer (multiple myeloma): the cancer cells in bone marrow can be reduced by garlic intake.

16. Thrush (oral candidacies): Application of paste of garlic paste in infected area in mouth increases the healing rate in oral Thrush.

17. Mouth ulcers (oral mucositis): to remove redness and mouth infections the mouthwash contains garlic is very useful.

18. Hardening and tightening of the skin and connective tissue (scleroderma): Many scientists suggested that intake of garlic will improve the skin and connective tissues.

19. Vaginal yeast infections: To treat the yeast infection the garlic and thyme cream is very useful.

20. Warts: to remove the warts within weeks the fat soluble garlic extract is very applicable. The water-soluble extract is also improving the treatment.

21. Weight loss: The combination of garlic extract reduces excess weight body fat as well as waist and heap circumference.

22. Hypertension: The blood vessel is relaxed by allicin from garlic also it maintains the plate late count.

23. Eye Care: The eye infection and swelling can be cured by garlic as it contains Selenium, Quercetin and Vitamin C
24. **Ear Aches**: Due to its antifungal and antibiotic properties it is used for curing ear aches. Its oil is made by its juice and olive oil and mixture is kept at room temperature only.

**Side effects of garlic:**
1. **Children**: Garlic is very safe at smaller dose but it unsafe when taken in a larger dose by mouth. In children it is very dangerous when garlic is taken at high concentration. As a skin of children is very soft and delicate the garlic may harm or damage the skin of children.
2. **Bleeding disorder**: fresh Garlic may responsible for high bleeding.

3. **Stomach or digestion problems**: The gastrointestinal (GI) tract can be damage by garlic.
4. **Low blood pressure**: In case of people with low blood pressure intake of garlic can be lower the blood pressure.
5. **Surgery**: Before surgery the garlic intake should stop as it interfere with blood pressure and prolong the bleeding.

As our life-style is currently obtaining techno-savvy; we tend to are moving removed from nature. Whereas we tend to cannot shake nature as a result of we tend to are a part of nature. Asherbsare natural product they're free from facet effects, they're relatively safe, eco-friendly and regionally obtainable. Historically there are ton of plants applicable for the sickness associated with completely unlike seasons. There’s a desire to market them to avoid wasting the human lives. This flavourer product is these days are the image of safety in distinction to the artificial medication that is considered unsafe to person and atmosphere. Though herbs had been priced for his or her medicative, flavouring and aromatic qualities for hundreds of years, the artificial product of the fashionable age best their importance, for a moment. With the hope of safety and security human is returning towards nature. He knows that it is time to market medicinal plant globally.

The term “medicinal plant” embodies numerous kinds of plants utilized in herbalism ("herbology" or "herbal medicine"). The use of medicinal plant is useful for study as these plants are healthful functions. In French herbs are known as herbe while this word is derived from herba which is a Latin word. The non woody plants are known as herbs also
different parts of plant like leaf, roots, stem, fruit and seeds are also known as herbs. Before that only non woody parts where known as herbs. Also the parts those are from trees and shrubs. These herbs are different activities as food, Medicine, flavonoid. From many years ago, in historic days plants were used for different types of health beneficial functions. Ancient Unani manuscripts Egyptian papyrus and Chinese writings delineate the employment of herbs. There are many proves available from around 400 years. This profit from Waid, Hakims and European culture etc. In different areas like Iran, Africa, America, Rome and Egypt herbs are used as different therapeutically uses like healing some illnesses. In china these medicinal plants were used constantly in their medical systems. These medicinal plants are widely practice in different areas as a traditional system of medicine. Now a day’s population is rising very much on earth and therefore different type infectious diseases are taking birth therefore for treat them lots of artificial medicine are made by human and therefore lots of side effects are seen over the world. Therefore the naturally occurring medicinal plants are the best for human ailments.

From old civilisation, lots of medicinal plants are safe for human health in India. Many researchers use different types of plants from different forest in India which are having large varieties of good and health related aromatic plants which are manufactured and selected as raw materials for different type of medicines for different type of diseases. Around more than 8000 medicinal plants are used in Indian system, like AYUSH. Also these plants medicines are used by people in Ayurveda, Unani, and Siddha etc. In Indianan medicinal practice system is the most developed medication. Currently the World Health Organization (World Health Organization) calculable that 80 % of individual’s worldwide think about flavour medicines for a few facet of their primary health care wants. According to WHO there are more than 21000 plants having the ability for medicine. Around the world population 1/3rd part of the population is using plants by different ways for their good health as well as for different diseases. Over half-hour of the complete plant species, at just the once or different were used for healthful functions. It’s been calculable, that in developed countries like us, plant medicine represents the maximum amount as twenty fifth of the
whole medicine, whereas in quick developing countries like India and China, the contribution is the maximum amount as eightieth Thus the India have much economic importance as different medicinal plants are present in the country. These countries offer 2 third of the plants utilized in fashionable system of medication and therefore the health care system of rural population rely on autochthonous systems of medication. Treatment with healthful plants is taken into account terribly safe as there are no side effects. The importance of this medicine is because the components present in these medicinal plants are naturally correct. And the excellent truth is that these medicinal plants can be treated by any sexes of any age. The student of Ayurveda totally has faith on these medicinal plants as they are curable for different types of diseases. They super wise all the studies by experiment to get correct decision concerning the effectiveness of various herbs which have healthful worth. Most of the medicine, so developed, is freed from aspect effects or reactions. It can be the rationale why seasoning medications increasing in quality around the world. The plant which has best quality for health give realistic means for the many internal organ diseases treatments therefore it is correct for to cure different type of diseases. Medicinal plants like papaya, Tulsi, Neem, Turmeric and Ginger can cure many common diseases. These are best home elements from country elements. Its well-known indisputable fact that uncountable shoppers are victimization Basil (Tulsi) for creating medicines, black tea, in pooja and different activities in their day to day life. Many plants are known as king of herbs and it is a logo of luck. As many people are known the meditational value of Tulsi therefore they started Tulsi plantation in their gardens at home. These medicinal values of plants from there different parts are the best ingredients for making different types of drug by pharmacopeia and non-pharmacopeia. In the whole world the developing human cultures are started to known the value of medicinal plants. There are number of medicinal plants which have much nutritional values are turmeric ginger green tea, pepper aloe, walnuts, etc. Many plants and their derivatives are thought of as necessary supply for active ingredient that are utilized in salicylate and dentifrice etc. These medicinal plants have not only medicinal use but also they are best in
natural dye, food, perfume, tea, tormentor management and so on. In different countries the medicinal plants are used to keep flies, Mice, ants, out from office as well as home. In many pharmaceutical industries these medicinal plants have more values. Use of medicinal plants to cure different diseases or illness-like symptom, constipation, cardiovascular disease, low spermatozoon count, infectious disease and weak erectile organ erection, piles, coated tongue, emission disorders, respiratory disease, leucorrhoea and fevers are suggested by many practitioners and it is really very effective. Use of medicinal plant for different type of diseases was very much in past 20 years but now it is too much low in knowledge about analysis of this natural medicine filed. Therefore from 1999, World Health Organization has revealed 3 volumes of the World Health Organization monographs on hand-picked medicative plants.

By utilizing the information about the chemical composition, availability, medicinal properties of the selected six medicinal plants, large number of formulations were prepared with different ratios and combinations. These formulations were analysed with normal and infected blood samples to fulfil the objective of this study. All these plants have different chemical, biological as well as medicinal properties.

As India has tradition to use plants as a medicine, we are trying to prepare a formulation which can be used to treat the different types of viral diseases including dengue and malaria. As the viral diseases directly attack the blood cells, the different components in these plants will help to convert bad bacteria into the good bacteria and cause the chemical and cure diseases.