CHAPTER-I
INTRODUCTION

1.1 PREAMBLE

Today information is essential for all round development of the society. Information brings people and thoughts together. Generally information is a concept, an idea, a statement, a fact, news etc. Information seeking has been an important human activity since progress. Human seek information to gather, store interpret and use for various purposes. Information is important to increase the awareness, to change the current state of knowledge, to address a need and to solve a problem. It is described as a planned search for information. Information seeking includes purposive as well as incidental activity. Before the advent of the internet, the information resources in the physical world used to play a central role in information seeking. However, the birth of the information society has not only increased the number of information sources but also placed greater demands on human endowments to seek and then to process larger amount of information.

IT consulting and services is being information intensive business. Librarians have huge scope to play efficient role in this area. Most of the IT Companies have their internal libraries contributing to business growth as well as talent development in many ways. It is observed that sources used by these professional are altogether different and librarians are now aware of same. Also kind of information requirement and how to search, fine tune and repackage it from primary sources is different skill.

For library & information science profession to be in tune with customers, it is very important to study the information seeking habits of software professionals and enhance our skills to match the user expectations. Going further these learnings can be shared with larger professionals and academicians who can turn to adopt necessary changes in our syllabus and academic short term courses.
Information seeking is the process of searching the information from the information resources. Information seeking varies from person to person, that is, the ways and means they are using in seeking and the information they need are different. Information seeking is one of the most popular activities for software professionals and can provide them with an additional information channel which may enhance informal and formal learning activities.

Various studies have been carried out in the area of user studies or information seeking habits in different users but in the field of Information Technology and IT consulting similar study is not undertaken. For this purpose researcher has selected this topic for the proposed study.

1.2 STATEMENT OF PROBLEM
The present study entitled “Information Seeking Habits of Software Professionals in Western India”.

1.3 EXPLANATION OF CONCEPTS
1.3.1 Information
According to Shera (1972) defined as ‘Information’ is a term to which usage has meanings, but for which there are few definitions. In the generic sense, it is that which is transmitted by the act or process of communication, it may be a message, signal, a stimulus. It assumes a response in the receiving organism and therefore, possesses response-potential.

According to Bhattacharya (1978) defined as Information is a message conveyed or intended to be conveyed by a systematized body of ideas. A comprehensive definition of the word ‘information’ is not possible due to its amorphous, complex and multifarious nature.

Information is power. Where information is concerned, there are the have and the have not. It is quite evident by now that information is vital to every individual there is no aspect of a person’s life where information is not required.
Information is an important national resource. It is an indispensable raw material for right decision making from the governmental level to the personal level. It is in fact a vital ingredient for the socioeconomic and cultural development of any nation especially third world countries like India. It is well accepted generalisation that a country, which is rich in information, is rich in the socioeconomic field. (This is mainly due to lack of international cooperation and understanding in the field of information transfer, especially in the area of science and technology).

Information means the communication of knowledge about an event of a given condition or the spread of knowledge derived from observation, study, experience or instruction.

It is a general disposition to use the words ‘data’, ‘information’, ‘knowledge’ identically. Although these words are mutually related yet knowledge is not information and information is not data. A candid assessment is requisite to understand their connotation.

The word data is derived from Latin word ‘datum’ which means anything that is given. Data is prerequisite to information that metamorphoses into knowledge. Data is raw material from which information is extracted. It is bits of information that serves informative purpose. It is a representation of characters set that has no meaning on its own. In other words data merely constitute bare symbols, fact, figure, and idea. After processing meaning is attached with data that becomes information. It can be best understood with an example. The digit 221005 have no meaning as such. But if we are old that it is the pin code of Varanasi it becomes information. Processed in other way it can be a telephone number or date of birth of an individual.

1.3.2 Types of Information

Information can be categorized on the basis of the nature of its use and purposes for which it is used. There are six types of information.
1. **Conceptual information**: The conceptual information relates to ideas, theories, and hypothesis about the relationship, which exist among the variables in the area of a problem.

2. **Empirical information**: Empirical information relates to data and experience of research, which may be drawn from oneself or communication to others.

3. **Procedural information**: Procedural information is the data of investigation, which are obtained manipulated and tested. It is essentially methodological and it is derived from scientific attitude.

4. **Stimulatory information**: Stimulatory information is a type of information, which is motivated by one or environmentally derived.

5. **Policy information**: It is a type of information which is focused on the decision making process is known as policy information.

6. **Directive information**: The information which is used for coordination and for enabling effective group activity, is grouped under the directive information.

### 1.3.3 Importance of Information

Information is a valuable commodity. The progress of modern society is highly dependent on the provision of accurate, meaningful and complete information at the right time. Ready and easy availability of information is an urgent need of present days. Information is recognised as national resource which as of vital significance in all sectors of human endeavour planning, decision making, research and industry, education, socio-economic and culture development. It is an important factor in improving the quality of life of every member of the society.

### 1.3.4 Information Seeking

Seeking means when a person search something which they want to get it means that the thing which they don’t have but they need it. Information seeking is the process of searching the information from the information resources. Information seeking varies from person to person, that is, the ways and means they are using in seeking and the information they need are different.
The term ‘information seeking’ often serves as an umbrella overarching a set of related concepts and issues. In the library world, discussions of database construction and management, community information needs, reference services, and many other topics resonate with the term. Yet, a single, serviceable definition remains elusive.

Like any other complex concept, information seeking means different things in different contexts. In the simplest terms, information seeking involves the search, retrieval, recognition, and application of meaningful content. This search may be explicit or implicit, the retrieval may be the result of specific strategies or serendipity, the resulting information may be embraced or rejected, the entire experience may be carried through to a logical conclusion or aborted in midstream, and there may be a million other potential results.

Information seeking has been viewed as a cognitive exercise, as a social and cultural exchange, as discrete strategies applied when confronting uncertainty, and as a basic condition of humanity in which all individuals exist. In fact, information behavior may be a more appropriate term, rather than information seeking, to best describe the multi-faceted relationship of information in the lives of human beings, a relationship that can include both active searching through formal information channels and a variety of other attitudes and actions, including skepticism and ambivalence. While addressing some aspects of these many alternatives, this paper uses information seeking to denote experiences or situations in which content is accessed, used, and synthesized into personal knowledge.

1.3.5 Information Seeking Habits

Habits are routines of behaviour that are repeated regularly and tend to occur subconsciously, without one’s directly thinking consciously about them.

- Something that a person does often.
- Informal addiction to drugs
- a long loose garment worn by a member of religious order
- an established custom; "it was their habit to dine at 7 every evening"
• (psychology) an automatic pattern of behavior in reaction to a specific situation;
• may be inherited or acquired through frequent repetition; "owls have nocturnal habits"; "she had a habit twirling the ends of her hair"; "long use had hardened him to it"
• a distinctive attire worn by a member of a religious order
• the general form or mode of growth (especially of a plant or crystal); "a shrub of spreading habit"
• attire that is typically worn by a horseback rider (especially a woman's attire)
put a habit on substance abuse: excessive use of drugs

1.3.6 Software Professionals

A software professional is a person who applies the principles of software to the design, development, maintenance, testing, and evaluation of the software and systems that make computers or anything containing software work.

It's prevailing that IT sector is biggest direct job creator in Indian Economy since last two decades. In last five years big IT Indian giants like Infosys, TCS, Wipro, L&T Infotech, HCL, Persistent Systems, and KPIT etc. have almost doubled the employee strength as well as revenue. Along with these Indian companies, other multinationals like IBM, Cognizant Technology Services, SAP, ATOS, HP, etc. have grown many fold during same.

1.3.6.1 Software Engineers Education

To become Software Engineer each individual should at least have bachelor of engineering degrees in computer science, information systems, or information technology.
1.3.7 Western India

West India (Western India) or the Western region of India consists of the states of Goa, Gujarat and Maharashtra, along with the Union Territories of Daman and Diu and Dadra and Nagar Haveli. It is highly industrialized, with a large urban population. Western Maharashtra is the second largest state of India in terms of population. The Western Maharashtra includes the metropolis of Mumbai, cities such as Pune and Nagpur and a wide stretch of Deccan plateau, the Western Ghats Konkan as a coastal region.

The present study Information seeking is concerned with the following phenomenon viz. kind of required information, purpose of reading, purpose of seeking information, methods to access the information, accidental discovery of information, sources of information, form of information sources, modes, used information media, print & non-print sources, problems to acquire information.

1.4 OBJECTIVES OF STUDY

- To identify and study Information requirements of professionals in IT companies.
- To identify & study the standard sources being referred by various experts in multiple domains of IT industry.
- To find out various media used by software professionals to get information.
- To find out problems faced by professionals while seeking information.
- To prepare inputs for librarianship in IT services.
- To compare few standard sources being used.
- To seek the opinion of users about overall functioning & services provided by Library.

1.5 HYPOTHESIS

- E- sources are mostly referred as compared to traditional sources
- Internet is the most preferred media to get the information
1.6 SCOPE & LIMITATIONS
The present study entitled “Information seeking habits of software professionals in Western India”. The researcher has distributed 1000 questionnaire to the software professionals through E-mails (Microsoft Word) and Google forms. Out of which the 313 responses received from Mumbai region, 365 responses received from Pune region and 134 software professionals does not mentioned their location. Whereas 188 software professionals does not respond. The target was to cover 81.2% of the software professionals. The population surveyed consist of Software professionals who are working in Mumbai and Pune region which is in Western India.

The scope of the study is limited to western region of India. The proposed study was limited to Western India covering Maharashtra, Gujarat & Goa states. According to NASSCOM directory. The Maharashtra consists of 365 software companies out of which 352 companies are situated in Pune & Mumbai region. For Gujarat contains only 57 software companies & Goa contains only one software company. In these three states more than 86% companies are situated at Mumbai and Pune which is major IT hub in India. Pune has more of Research and Development centric operations of IT companies, users in this area were more dependent on Library services. In last 5 years more business is generated from this region and it implied more information was required and consumed by users from Mumbai and Pune based IT companies. For this reason, research sample from this area has been selected for the present study.

1.7 METHODOLOGY
The present study made and attempt to investigate the “Information seeking habits of software professionals in Western India”, being empirical in nature. The descriptive research method has been used for the present study with survey as a research technique. The primary data for the present research has been collected using questionnaire as a tool of data collection. Descriptive method is a study designed to depict the participants in an accurate way. Survey method plays a significant role in research. “The survey method is
one of the most effective and sensitive instruments of research survey research can produce much needed knowledge” (Kasyap, 1969)

1.8 QUESTIONNAIRE DESIGN
Questionnaire is often used in survey as primary data collection tools. Questionnaire is a device for securing answer to questions by using a form which the respondent fills the responses. It is a fairly reliable tool for gathering data from large, diverse, varied and scattered social group.

1.9 DATA COLLECTION
The data was collected by the software professionals who are working in western region of India. The questionnaires has been distributed among 1000 software professionals out of which only 812 respondents favorably responded whereas 188 professionals not responded to it in the process of collection of primary data for the present study. Researcher has distributed 1000 questionnaire to the software professionals through E-mails (Microsoft Word) and Google forms. First reminder was sent after 10 days of the first email followed by second reminder with the gap of 10 to 12 days. Some professionals were very helpful for the researcher to distribute the questionnaire to all software professionals, project lead, managers. While emails and telephone was extensively used to make them understand the purpose of the research and assure them that the data was supplied by you would be kept confidential and used for research purposes only. Information was collected through questionnaire in order to substantiate the data gathered. The responses received from the region wise are mentioned below. 313 responses received from Mumbai region, 365 responses received from Pune region and 134 software professionals does not mentioned their location. Whereas 188 software professionals does not respond.

1.10 DATA ANALYSIS
The responses were coded and entered in the computer using Microsoft Excel. Required analysis was done with the help of SPSS (Statistical Package for
Social Sciences) 16.0. Certain statistical methods were applied on the data to get the results which are analyzed.

An enormous data was collected through questionnaire. The analysis of data will help in drawing certain findings which in turn, helped to reach at some important conclusions on the Information seeking habits of Software professionals in Western India.

The data has been represented in tabular & graphical form. Inferential statistics were used to reach conclusions and make simplifications about the characteristics of populations based on data collected from the sample. Mean, Mode, Chi-square and t-tests were used for this study.

1.10.1 Kind of required information

The question was asked to the respondents about the kind of information required. Six options were given i.e. technical information (technology related), software requirement specification, company/client profile, domain information, market analysis and also given one open ended question i.e. any others (please specify). The responses were analysed and presented in table no.1.10.1

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Required Information</th>
<th>Responses</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technical information</td>
<td>687</td>
<td>84.61</td>
</tr>
<tr>
<td>2</td>
<td>Software Requirement Specification</td>
<td>559</td>
<td>68.84</td>
</tr>
<tr>
<td>3</td>
<td>Company/Client profile</td>
<td>341</td>
<td>42.00</td>
</tr>
<tr>
<td>4</td>
<td>Domain Information</td>
<td>132</td>
<td>16.26</td>
</tr>
<tr>
<td>5</td>
<td>Market analysis</td>
<td>119</td>
<td>14.66</td>
</tr>
<tr>
<td>6</td>
<td>Any others(Please specify)</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>7</td>
<td>No Response</td>
<td>13</td>
<td>1.60</td>
</tr>
</tbody>
</table>

Table No. 1.10.1 Kind of required information
Table no.1.10.1 shows that 687 i.e. (84.61%) respondents require technical information, 559 i.e. (68.84%) respondents require software requirement specification 341 i.e. (42%) respondents require company /client profile and 119 i.e. (14.66%) respondents require information regarding market analysis. Whereas 13 i.e. (1.60%) respondents does not respond.

It depict that majority of the software professionals require technical information.

1.10.2 Form of Information Sources

To know which sources mostly used by the software professionals, a question (Q.29) was addressed to the respondents about the type of referred sources by software professionals and to get the information. The options were given: website, blogs, social networking, training programs, and print material. The respondents was asked to specify by tick marking multiple response. The responses were analyzed and presented in table no.1.10.2

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Referred Sources</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Websites</td>
<td>736</td>
<td>90.64</td>
</tr>
<tr>
<td>2</td>
<td>Blogs</td>
<td>484</td>
<td>59.61</td>
</tr>
<tr>
<td>3</td>
<td>Social Networking</td>
<td>360</td>
<td>44.33</td>
</tr>
<tr>
<td>4</td>
<td>Training programs</td>
<td>351</td>
<td>43.23</td>
</tr>
<tr>
<td>5</td>
<td>Print Material</td>
<td>346</td>
<td>42.61</td>
</tr>
<tr>
<td>6</td>
<td>Forums</td>
<td>262</td>
<td>32.27</td>
</tr>
<tr>
<td>7</td>
<td>No Response</td>
<td>23</td>
<td>2.83</td>
</tr>
</tbody>
</table>

Table No.1.10.2 Form of Information Sources

Table no.1.10.2 shows that 736 i.e. (90.64%) professionals referred websites to get the information, 484 i.e. (59.16%) referred blogs, 360 i.e. (44.33%) professionals get the information through social networking and 351 i.e. (43.23%) professionals refer training programs, 346 i.e. (42.61%) professionals use print material whereas 262 i.e. (32.27%) use forums to get information.

The result reveals that, the software professionals referred website and to get the information whereas only (32.27%) professionals referred Forums.
1.10.3 Information Media

Media consist of several different types of Indian communications media like, internet, television, radio, newspaper, magazines and internet based web site. A question (Q.34) was asked about the media do you use to get the information. Eight options were given i.e. books, journal/periodical, newspaper, internet, website/portals, training & workshops, video conferencing and teleconferencing. The data collected from the respondents are analyzed and presented in table no.1.10.3

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Media</th>
<th>Responses</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internet</td>
<td>786</td>
<td>96.80</td>
</tr>
<tr>
<td>2</td>
<td>Books</td>
<td>748</td>
<td>92.12</td>
</tr>
<tr>
<td>3</td>
<td>Newspaper</td>
<td>666</td>
<td>82.02</td>
</tr>
<tr>
<td>4</td>
<td>Journals/Periodicals</td>
<td>556</td>
<td>68.47</td>
</tr>
<tr>
<td>5</td>
<td>Website/Portals</td>
<td>269</td>
<td>33.13</td>
</tr>
<tr>
<td>6</td>
<td>Training &amp; Workshops</td>
<td>227</td>
<td>27.96</td>
</tr>
<tr>
<td>7</td>
<td>Video Conferencing</td>
<td>125</td>
<td>15.39</td>
</tr>
<tr>
<td>8</td>
<td>Teleconferencing</td>
<td>64</td>
<td>7.88</td>
</tr>
</tbody>
</table>

Table No.1.10.3 Information Media

Table no.1.10.3 states that 786 i.e. (96.80%) use internet as a media to gather information which is followed by 748 i.e. (92.12%) use books, 666 i.e. (82.02%) use newspaper, 556 i.e. (68.47%) use journals/periodicals and 269 i.e. (33.13%) use website/portals, 227 i.e. (27.96%) use training & workshops and 125 i.e. (15.39%) use video conferencing whereas 64 i.e. (7.88%) use teleconferencing. Therefore, the hypothesis, “Internet is the most preferred media to get the information.” (Hypothesis No.2) is valid. It can be stated that majority of software professionals use internet as a media & to get the information. It shows that the majority of software professionals use Internet as a media to get the information while only (7.88%) respondents use teleconferencing as a media and to get the information.
1.10.4 Problems to acquire the information

A question (Q40) was posed about the difficulties/problems do you general faced while seeking required information. Ten major problems were given i.e. inadequate library services, information not readily available, information is scattered in too many ways, interdisciplinary nature of literature, lack of time for searching, lack of access to library material due to library rules/procedures, lack of co-operation from library staff, understanding project requirement, lack of domain knowledge, language problem. The responses were analyzed and presented in table no. 1.10.4.

<table>
<thead>
<tr>
<th>Problem</th>
<th>High</th>
<th>Low</th>
<th>Medium</th>
<th>No response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate Library services</td>
<td>319</td>
<td>349</td>
<td>62</td>
<td>82</td>
<td>39.3</td>
</tr>
<tr>
<td>Information not readily available</td>
<td>281</td>
<td>320</td>
<td>120</td>
<td>91</td>
<td>34.6</td>
</tr>
<tr>
<td>Information is scattered in too many ways</td>
<td>169</td>
<td>359</td>
<td>191</td>
<td>93</td>
<td>20.8</td>
</tr>
<tr>
<td>Interdisciplinary nature of Literature</td>
<td>177</td>
<td>390</td>
<td>149</td>
<td>96</td>
<td>21.8</td>
</tr>
<tr>
<td>Lack of time for searching</td>
<td>369</td>
<td>309</td>
<td>68</td>
<td>66</td>
<td>45.4</td>
</tr>
<tr>
<td>Lack of access to library material due to library rules/procedures</td>
<td>309</td>
<td>345</td>
<td>72</td>
<td>86</td>
<td>38.1</td>
</tr>
<tr>
<td>Lack of co-operation from the library staff</td>
<td>232</td>
<td>355</td>
<td>122</td>
<td>103</td>
<td>28.6</td>
</tr>
<tr>
<td>Understanding project requirement</td>
<td>249</td>
<td>391</td>
<td>102</td>
<td>70</td>
<td>30.7</td>
</tr>
<tr>
<td>Lack of domain knowledge</td>
<td>263</td>
<td>382</td>
<td>103</td>
<td>64</td>
<td>32.4</td>
</tr>
<tr>
<td>Language Problem</td>
<td>175</td>
<td>399</td>
<td>174</td>
<td>64</td>
<td>21.6</td>
</tr>
</tbody>
</table>

Table no. 1.10.4 Problems to acquire the information

Table no.1.10.4 states that, 369 i.e. (45.4%) software professionals highly faced lack of time for searching, 319 i.e. (39.3%) faced inadequate library services, 309 i.e. (38.1%) faced lack of access to library material due to library rules/procedures, 281 i.e. (34.6%) professional faced information not readily available, 263 i.e.(32.4%) software professionals faced lack of his domain knowledge, 175 i.e. (21.6%) professionals faced language problem. 249 i.e.
(30.7%) professionals faced understanding project requirement, 232(28.6%) professional faced lack of co-operation from library staff, 177 i.e.(21.8%) professionals faced interdisciplinary nature of Literature, 175 i.e.(21.6%) professionals faced language problem, 169 i.e.(20.8%) professionals faced Information is scattered in too many ways. It is found from table no.1.10.4 that software professionals are highly faced Lack of time for searching.

1.10.5 Inputs required from Librarian

A question (Q.42) was asked to the respondents to know the kind of inputs required from Librarian/Information officer. Four major options were given i.e. Alerting service, Availability of E-resources, CAS/SDI and reprographic service etc. The responses were analyzed and presented in table no.1.10.5.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Inputs</th>
<th>Responses</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alerting Service</td>
<td>573</td>
<td>70.57</td>
</tr>
<tr>
<td>2</td>
<td>Availability of E-Resources</td>
<td>339</td>
<td>41.75</td>
</tr>
<tr>
<td>3</td>
<td>CAS/SDI</td>
<td>255</td>
<td>31.40</td>
</tr>
<tr>
<td>4</td>
<td>Reprographic service</td>
<td>50</td>
<td>6.16</td>
</tr>
<tr>
<td>5</td>
<td>No Response</td>
<td>17</td>
<td>2.09</td>
</tr>
</tbody>
</table>

Table No.1.10.5 Inputs required from Librarian

Table no.1.10.5 shows that 573 i.e. (7.57%) professionals needs alerting services and 339 i.e. (41.75%) availability of E-resources, 255 i.e. (31.40%) needs CAS/SDI whereas 50 i.e. (6.16%) needs reprographic service. The result shows that, the majority of software professionals needs alerting service as an inputs required from the Librarian. Alerting service awake the user about new arrivals and services available in their library.

1.10.6 Print Sources

Print sources are the sources which are available in the print form. (Q.35) the questions was asked to the respondents about the kind of standard sources do you use. There were six options given i.e. book, reference book, yearbook,
directories, periodicals and newsletters. The responses were analyzed and presented in table no.1.10.6.

<table>
<thead>
<tr>
<th>Print Sources</th>
<th>Sr. No.</th>
<th>Responses</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book</td>
<td>1</td>
<td>784</td>
<td>96.55</td>
</tr>
<tr>
<td>Reference book</td>
<td>2</td>
<td>354</td>
<td>43.60</td>
</tr>
<tr>
<td>Year book</td>
<td>3</td>
<td>186</td>
<td>22.91</td>
</tr>
<tr>
<td>Directories</td>
<td>4</td>
<td>72</td>
<td>8.87</td>
</tr>
<tr>
<td>Periodicals</td>
<td>5</td>
<td>147</td>
<td>18.10</td>
</tr>
<tr>
<td>Newsletters</td>
<td>6</td>
<td>80</td>
<td>9.85</td>
</tr>
</tbody>
</table>

Table No.1.10.6 Print sources

Table 1.10.6 shows that books are the predominant print document used by the professionals’ i.e. 784 (96.55%) which is followed by reference book 354 i.e. (43.60%), 186 i.e. (22.91%) use yearbook, 72 i.e. (8.87%) use directories and 147 i.e. (18.10%) use periodicals whereas 80 i.e. (9.85%) use newsletters as a print source.

1.10.7 Non-Print Sources

Non-Print sources are the sources which are available in the electronic form. (Q.35) the question was asked to the respondents about the kind of standard sources you use. Five options were given i.e. web, PDF files, online databases, A/V material, E-books etc. The data collected from the respondents were analyzed and presented in table no.1.10.7.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Non Print Sources</th>
<th>Responses</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Web</td>
<td>773</td>
<td>95.20</td>
</tr>
<tr>
<td>2</td>
<td>PDF Files</td>
<td>739</td>
<td>91.01</td>
</tr>
<tr>
<td>3</td>
<td>Online databases</td>
<td>655</td>
<td>80.67</td>
</tr>
<tr>
<td>4</td>
<td>A/V Material</td>
<td>479</td>
<td>58.99</td>
</tr>
<tr>
<td>5</td>
<td>E-books</td>
<td>395</td>
<td>48.65</td>
</tr>
</tbody>
</table>

Table No.1.10.7 Non-Print sources
Table no.1.10.7 shows the result that 773 (95.20%) professionals use web as a non-print material to get the information. Which is followed by PDF files i.e. 739(91.01%), 655 i.e. (80.67%) use online databases and 479 (58.99%) use A/V material whereas 395 i.e. (48.65%) use E-books as a non-print sources.

**T-Test for Difference of two Mean:**
In many cases, a researcher is interesting in gathering information about two populations in order to compare them. As in statistical inference tests of significance are useful statistical tools for the difference between two population parameters. A test of the null hypothesis that the difference between two responses measured on the same statistical unit has a mean value of zero.

*T-test*

*Test the null hypothesis* that there are no significant difference between average uses of print sources & not print sources.

**To Test:**

*Null Hypothesis:* $H_0: \mu_x = \mu_y$

*Alternative Hypothesis:* $H_1: \mu_x \neq \mu_y$ (two tailed)

*Level of significance* $(\alpha) = 0.05$

Where,

$\mu_x =$Average uses of print sources.

$\mu_y =$Average uses of not print sources

**Calculation:**
Calculation as per table no. 1.10.6 & 1.10.7

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>StDev</th>
<th>SE Mean</th>
<th>t-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print Sources</td>
<td>795</td>
<td>2.04</td>
<td>1.12</td>
<td>0.04</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Non-Print Sources</td>
<td>801</td>
<td>3.806</td>
<td>0.827</td>
<td>0.029</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Result:**
Since p-value < 5% L.o.s., Therefore we reject $H_0$. 
Table no. 1.10.6 & 1.10.7 shows that 795 out of 812 software professionals use print sources whereas 801 out of 812 use non print Sources.

The average uses of non-print sources is more than average uses of print sources. Therefore, the hypothesis, “E-sources are mostly referred as compared to traditional sources.”(Hypothesis No.1) is valid. It can be stated that the non-print sources are mostly referred as compared to print sources.

1.11 SUMMARY OF MAJOR CONCLUSION

- Software professionals require technical information.
  Table no.4.2.13 shows that 687 i.e. (84.61%) respondents require technical information, 559 i.e. (68.84%) respondents require software requirement specification 341 i.e. (42%) respondents require company /client profile and 119 i.e. (14.66%) respondents require information regarding market analysis. Whereas 13 i.e. (1.60%) respondents does not respond.

- Library resources are the sources of information use by respondents in rank first position.
  Table No. 4.2.23 shows that the Library resources are the sources of information use by respondents in rank first position. Online databases are in second position. Internet is in third position. Conference/workshops/seminars are in fourth position. Library catalogue is in fifth position. Expert is in sixth position. Supervisors (PM/TL/PL) is in seventh position. Library staff is in eighth position. Librarian/ Information officer is in ninth position. Whereas colleagues (Institution) is in tenth rank.

- There is average uses of non-print sources is more than average uses of print sources.
  Table no. 4.2.28 & 4.2.29 shows that 795 out of 812 software professionals use print sources whereas 801 out of 812 use non print sources. Therefore, the hypothesis, “E-sources are mostly referred as compared to traditional
sources.” (Hypothesis No.1) is valid. It can be stated that the non-print sources are mostly referred as compared to print sources.

- **Software professionals use Internet as a media to gather information.**
  Table no.4.2.27 states that 786 i.e. (96.80%) use internet as a media to gather information which is followed by 748 i.e. (92.12%) use books, 666 i.e. (82.02%) use newspaper, 556 i.e. (68.47%) use journals/periodicals and 269 i.e. (33.13%) use website/portals, 227 i.e. (27.96%) use training & workshops and 125 i.e. (15.39%) use video conferencing whereas 64 i.e. (7.88%) use teleconferencing. Therefore, the hypothesis, “Internet is the most preferred media to get the information.” (Hypothesis No.2) is valid. It can be stated that majority of software professionals use internet as a media & to get the information.

- **Software professionals are highly faced Lack of time for searching while acquiring the information.**
  Table no.4.2.35 states that, 369 i.e. (45.4%) software professionals highly faced Lack of time for searching, 319 i.e. (39.3%) faced Inadequate Library services, 309 i.e. (38.1%) faced Lack of access to library material due to library rules/procedures, 281 i.e. (34.6%) professional faced Information not readily available, 263 i.e.(32.4%) software professionals faced Lack of his domain knowledge, 175 i.e. (21.6%) professionals faced Language problem. 249 i.e. (30.7%) professionals faced understanding project requirement, 232(28.6%) professional faced Lack of co-operation from Library staff, 177 i.e.(21.8%) professionals faced Interdisciplinary nature of Literature, 175 i.e.(21.6%) professionals faced Language problem, 169 i.e.(20.8%) professionals faced Information is scattered in too many ways.

- **Software professionals need alerting service and reprographic service.**
  Table no.4.2.37 shows that 573 i.e. (7.57%) professionals needs Alerting services and 339 i.e. (41.75%) availability of E-resources, 255 i.e. (31.40%) needs CAS/SDI whereas 50 i.e. (6.16%) needs Reprographic Service.
1.12 CONSPECTUS

The whole study is divided into five chapters.

Chapter 1: Introduction

Introduces the concept of Information, Information seeking, habits, Software professionals, Western India, Objectives, Hypotheses, scope of the Study, Methodology, Data Collection, and Data Analysis.

Chapter 2: Review of Literature

The Review of Literature covers literature on all aspects of “Information Seeking Habits / Behaviour” published overall in India and abroad.

Chapter 3: Research Methodology

This Chapter includes various research method has been used by the present study.

Chapter 4: Data Analysis and Interpretation

The chapter includes Data Analysis and Interpretation. The data analysis has been carried out applying suitable statistical methods.

Chapter 5: Findings, Conclusion and Suggestion

This chapter indicates the findings, conclusion drawn from the analysis of the data. It offers suitable and relevant suggestions and further it also offers areas for further research.