WEB DEVELOPMENT

Objectives of this chapter:

- 4.1 Planning for website.
- 4.2 Web Implementation Guidelines
- 4.3 Aspects related to publishing a website
- 4.4 Important guidelines or checklist.
- 4.5 Project: School Website

Introduction

We will learn to make small projects and we will also know that how a website is planned and launched on internet. There are four stages of planning a website viz: goal of site, designing for viewers, work strategy, development of subject matter. Similarly there are many stages to put website in use for, example, selection of name of Domain, Registration of Domain Name, selection of Server, testing the website off-line as well as on-line etc.

4.1 Planning for website.

The website developed by proper planning is always effective. To build a website we should first make its planning. If done with proper planning, the objective of site would be fulfilled. We communicate through websites. Hence we have to decide while planning that what we wish to communicate and by which technique. First & foremost purpose of designing a website is to keep in mind the goal and target of website. The website should always be built to achieve its goal.

4.1.1 The goal of the Site

Every site has some specific purpose. This purpose guides us what to include in the site. User can prepare a detailed and decorative site. But the condition is that it must support the purpose of the site. The following facts are to be kept in mind while building a site:

• Purpose of organization.

- important purposes of your site.
- Method to develop the site
- Fulfilling these requirements.
- Working strategy of site to achieve the goal.
- Time of developing the site.
- Time of updating the site.

4.1.2 Designing for the Audience

After fixing the aim of website, we have to know about nature of viewers of the site, which type of people will be hitting it: children, students, advocates, doctors or housewives. We have to keep in mind about their expectation from your site.

For example if the designer is building the site for a publisher then the viewer's certainly would be students, children, teachers, professors and other intellectuals. In such a case the site will be designed according to their interest and expectations.

4.1.3 Strategy

When the designer has decided to build a particular site, we will have to think about its work-strategy. The mode of works to carry out for achieving the goal is called work-strategy. Many kinds of information can be included in the website.

- Text information
- Audio or Voice information
- Video information

A simple website is good and impressive. In other words it should not be complicated.

4.1.4 Contents

After finalizing above jobs we now need the contents of site to enter. The contents of the site supplies all the important information to the viewer, hence the contents should be at proper place and arranged systematically. If there are links in a sequence, then it is easier to search the required information.

4.2 Web Implementation Guidelines

After making complete and proper planning and deciding about information (contents) and links we have to work for its implementation part. We probably know that the content of the website is its most important aspect, but it's also very important that its intended audience are able to find it, and that **visitors** to our site can quickly locate the information they are seeking. It's also a good idea to check that it's thoroughly optimized to attract new visitors and track their activities.

Selection of Domain Name, Registration of Domain, Selection of server

and managing the site etc. are under the Web Implementation Plan.

4.2.1 Choosing Domain Name

Domain name is the address of your site .Choose a domain name that is brief, easy to remember, and suited to the content of your website. Some common top-level domains include .com, .edu, .org, and .net, which stand for commercial, education, organization, and network respectively. It should not include hyphens. Maximum numbers of letters included in it can be 63.

4.2.2 Registering Domain Name

After deciding about the Domain Name, we have to register it. Designer can register the site through the service provider. Service provider **asks** to fill a form and also charges fee for its registration. After filling the form it is verified whether the Domain name provided by the designer is free and is not already registered by anyone else. If the name is available then designer gets the confirmation message about registration through email.

4.2.3 Choosing a Server

To put the site in practice we have to choose the server or host. It is very important task Designer can buy or hire the server where the site is to remain permanent. In the **web world** the role of server is very important. Such a specific server is named Web server. Whenever designer opens any site on the browser, it connects to the concerned server. Securing the bandwidth necessary to keep the website running smoothly. Bandwidth is the amount of data transferred within a given time period.

Designer may need to buy more bandwidth as the **website grows** or else the visitors may experience lag, which could drive them away from the website. Many hosts also provide software aid in building the website.

4.2.4 Organizing Web page

If a person cannot find what they are looking for on the website within 30 seconds, there is a good chance they will leave and never return. Organizing the website into specific sections and then providing links to those sections at the top of each page is an effective and simple way to make the website easy to navigate. The Webpage should be beautifully organized. So that it gives a balanced look. The size of the page is an important point in organizing webpage. The following points must be kept in mind while designing a webpage.

- 1. Size of a web page should not be more than two screens. If we have to use a longer page, the establish internet link through bookmark.
- 2. If the document is longer than one screen then show only a part of it to

the viewers and remaining part maybe shown only on their demand/requirement.

4.2.5 Look

Webpage should have a fine look so that one is attracted to read it. In a webpage with a good look designer should insert links graphics, animation, sound and video clips. The various contents in the webpage should give an impression of diversity and a beautiful view. Usage of proper font size/colour, background colour, table, graph etc. gives a good look to the site.

4.2.6 Validate the code.

Validate the HTML, CSS, XHTML, JavaScript, and XML codes to ensure that the website has clean code and function as intended for visitors. There are several programs available online that validate each type of code.

4.2.7 Offline Testing

After designing all the webpages it is tested on the browser. No internet connection is required for this test that is why it is named as offline test. In offline test first of all home page is opened in different browser. Then we check all the linked pages one by one. Designer should ascertain it here that all pages have a good appearance. The website should be thoroughly tested to confirm that the design and page structure are displayed as **intended.** Specifically, view the website with the most popular browsers, including Chrome, Firefox, Internet Explorer, Opera, and Safari, as those browsers are used by the majority of people who are browsing the Internet.

4.2.8 Uploading the Site

To make the site available to all the viewers on the internet is called Upload.

To transfer the webpages to the "**Host**" we need File Transfer Protocol (FTP) client. For this purpose first of all we set FTP programmer as Cute FTP. Then upload the file after coming online. The copy of the website on computer is called the *local* version, and the copy on the web host is called the *production* version.

4.2.9 Online Testing

When the site is uploaded online, next step is to test it online. Make the internet connection, open the browser, and type URL of the site. Check that all the links of the site are working property.

4.2.10 Using SEO-friendly code.

Utilize both Meta and ALT tags to ensure that the website not only appears in user searches but that pertinent keywords from the content of the website are displayed. Doing so will more likely attract searchers' interests and will facilitate more visits to the website. ALT tags are merely a written description to go along with the pictures on the website, and so they are

necessary to tell search engines and searchers what kind of pictures are there on the website.

4.2.11 Installing website analytics

The statistics will enable to monitor the number of visits website receives, the amount of time visitors stay, the average number of page views for each visitor, and many other useful statistics. Making use of such software will enable to make adjustments to the website to increase its effectiveness.

4.3 Some important aspects related in publishing website 4.3.1 SEO

SEO means search **e**ngine **o**ptimization. Search engine optimization is a methodology of strategies, techniques and tactics used to increase the amount of visitors to a website by obtaining a high-ranking placement in the search results page of a search engine including Google, Bing, Yahoo and other search engines.

SEO helps to ensure that a site is accessible to a search engine and improves the chances that the site will be found by the search engine. SEO is typically a set of practices that webmasters and Web content producers follow to help them achieve a better ranking in search engine results.

4.3.2 Social media marketing (SMM)

SMM is a form of Internet marketing that utilizes social networking websites as a marketing tool. The goal of SMM is to produce content that users will share with their social network to help a company increase brand exposure and broaden customer reach.

One of the key components of SMM is social media optimization (SMO). Like search engine optimization (SEO), SMO is a strategy for drawing new and unique visitors to a website. SMO can be done in two ways: adding social media links to content, sharing buttons or promoting activity through social media by updating statuses or tweets, or blog posts.

SMM helps a company get direct feedback from customers (and potential customers) while making the company seem more personable. SMM became more common with the increased popularity of websites such as Twitter, Facebook, Myspace, LinkedIn, and YouTube.

4.4 Some important guidelines or checklist which must be noted while publishing website.

4.4.1 Page Content

- 1. Spelling and grammar, paragraphs, headers, lists, and other formatting should be correct.
- 2. Company contact details are accurate throughout the website.

3. Images and audio and videos are in the correct places, formatted and working on all devices.

4.4.2Design

Take the necessary steps to ensure that the site design is pixel perfect. If designer has a responsive website. It needs to check the design across all devices. The site should be looking good not just on an office desktop, but also on laptops, tablets, and mobile phones.

4.4.3 Functionality

Take some time to test and validate all of the different features on the website. Lead generation forms, social sharing, should work flawlessly across the website such as:-

- 1. Thank-you message or page displays after form is submitted.
- 2. Company logo is linked to the homepage.
- 3. Load time for site pages is optimized.

4.4.4 SEO

Take some time to ensure that the website has been given a solid foundation for SEO success. From site architecture and content to metadata sitemaps, do not leave any stone unturned such as:

- 1. Pages have **unique page titles** (fewer than 70 characters, includes keywords).
- 2. Pages have keywords (fewer than 10, all words appear in page copy).
- 3. Spelling and grammar are correct in all information.
- 4. Alt tags have been added to every image.

4.4.5 Security & Backups

Designer can prevent loss of data and protect against malware and other damages by properly setting up site security and regular backups.

- 1. 24 x 7 monitoring scripts are installed.
- 2. A copy of the final website has been made for backup purposes.
- 3. Ongoing copies of the website are being created and stored on a regular basis.
- 4. Passwords and other website **credentials** are stored in a secure database.

4.4.6 Compliance

Finally, make sure the website complies with any applicable laws and regulations. Internet law can be hard, and each industry has its own set of rules to follow. Following are a few rules one needs to know about:

- 1. Web pages offer accessibility for users with disabilities.
- 2. Terms and privacy policies are visible to website visitors.

4.3 Project

Project: School Website

We have learnt in details, about planning uploading and online testing etc of a website. Let us now build a project on the subject of **"School Website"**.

For building a project first of all a source file is created in notepad. It is saved as: with ..html extension. Finally it is run on internet explorer.

There are common tags used in building this project, which we have studied in previous chapters. This project contains one homepage and eight web pages. All the eight webpages are linked to **home page**.

Home page is always the first page of the website. This page contains all the information available on **the site**.

Now we are able to make a project in html related to a school ,So that we can able to implement all the concepts which we have discussed in this and previous chapters. Let us make a website of a school.

This is the home page of our website. As shown in fig.4.1

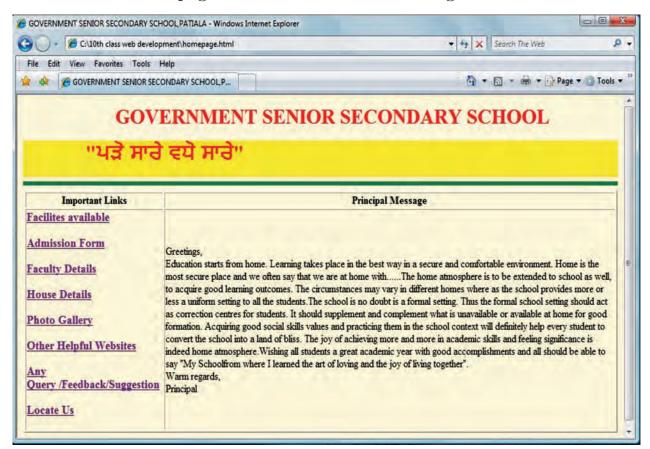


Fig 4.1

Code for this page is as follows in fig 4.2

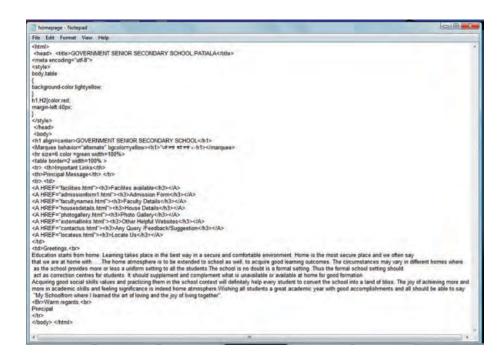


Fig 4.2

The first Link available in the website is facilities available and the code and output for this is shown in fig 4.3 and 4.4



Fig. 4.3

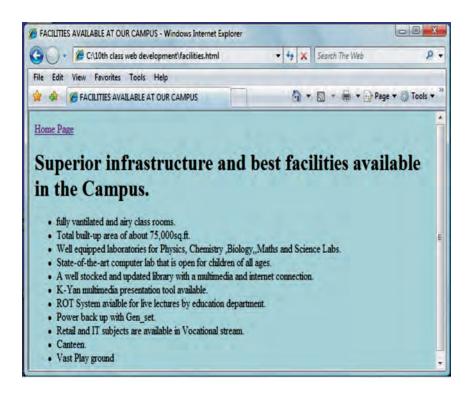


Fig 4.4

The second link is admission form which has following output and code as shown in Fig. 4.5 and 4.6(a) and 4.6(b)

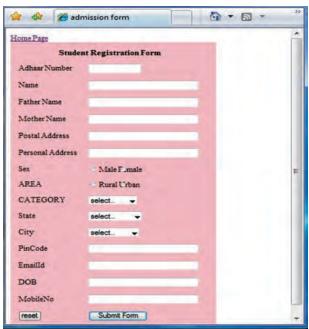


Fig. 4.5

And the code for this form is as follows. Fig 4.6

```
admissionform - Notepad
                                                                 File Edit Format View Help
<html>
 <head> <title>admission form</title> </head>
 <body>
<center><font size=4><b>Student Registration Form</b></font></center>

 Name
<input type=text name=textnames id="textname" size="30">   Father Name
 <input type="text" name="personaladdress" id="personaladdress" size="30"> 
str> std>Sexs/td>
<option value="Goa">GOA</option>
 <option value="Patna">PATNA</option>
 </select> 
 Course
 <select name="Course">
<option value="-1" selected>select...</option>
 coption value="B Tech">B.TECH</option>
<option value="MCA">MCA</option>
<option value="MBA">MBA</option>
 <option value="BCA">BCA</option>
 </select> 
 District
 ttp <tg>\tau\surrce
ttp <tg>\tau\surrce
td><select name="District">
<option yalue="\1" selected>select. </option>
<option yalue="Nalanda">NALANDA</option>
<option yalue="UP">UP</option>

 <option value="Goa">GOA</option>
<option value="Patna">PATNA</option>
</select></or>
```

Fig 4.6 (a)

```
File Edit Formst View Help

<aption value="-1" selected>select. </aption>
<aption value="B. Tech">B.TECH</aption>
<aption value="B. Tech">B.TECH</aption>
<aption value="MBA">MBA</aption>
<aption value="MBA">MBA</aption>
<aption value="AC">B.TECH</aption>
<aption value="AC">B.TECH</aption>
<aption value="AC">B.TECH</a>/aption>
<aption value="Tech">B.TECH</aption>
<aption value="AC">B.TECH</a>/aption>
<aption value="AC">B.TECH</a>/aption>
<aption value="Tech">B.TECH</a>/aption>
<aption value="Tech">B.TECH</a>/aption>
<aption value="Tech">B.TECH</a>/aption>
<aption value="AC">B.TECH</a>/aption>
<aption value="Tech">B.TECH</a>/aption>
<aption value="Tech">ATTA</a>
<a>Aption value="Tech">B.TECH</a>/aption>
<aption value="Tech">ATTA</a>
<a>Aption value="Tech">B.TECH</a>/APA</a>
<a>Aption value="Tech">APATINA</a>
<a>Aption value="Tech">Aption value="Tech"
B.TECH</a>
<a>Aption value="Tech">B.TECH</a>/APA</a>
<a>Aption value="Tech">Aption va
```

Fig 4.6(b)

The next link is for faculty details the output and its code is defined below in fig 4.7and 4.8:-



Fig 4.7

The code for this is as follows



Fig 4.8

The next link is for house details the output in figure 4.9 and its code is defined below inn fig. 4.10 (a), 4.10 (b) and 4.11, 4,12.



Fig 4.9

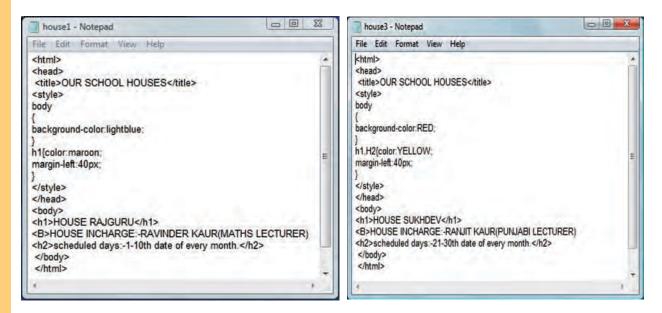


Fig 4.10(a) Fig 4.10(b)

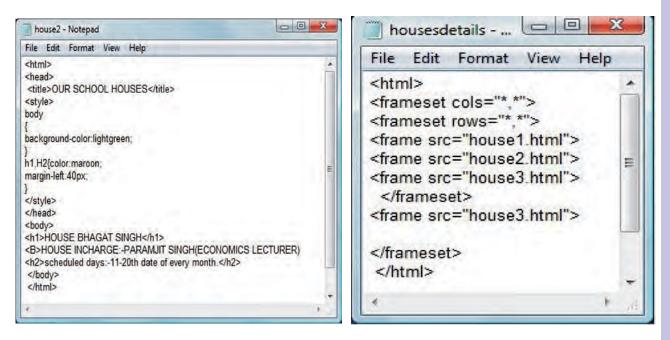


Fig 4.11 Fig. 4.12

The next available link is photo gallery as shown in figure 4.13 and the output and code for this webpage as shown in fig 4.14.

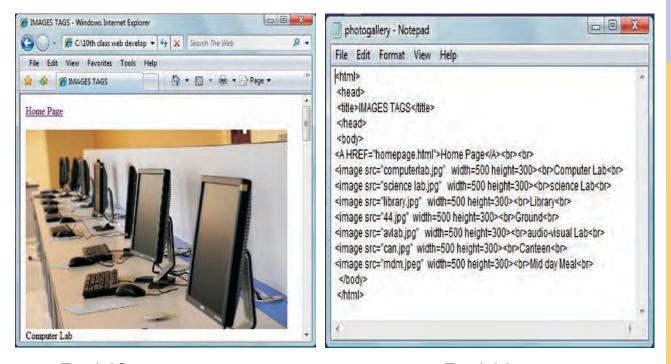


Fig 4.13 Fig 4.14
The next available link is Other helpful websites the output as shown in figure 4.15 and code for this webpage is as shown in fig.4.16

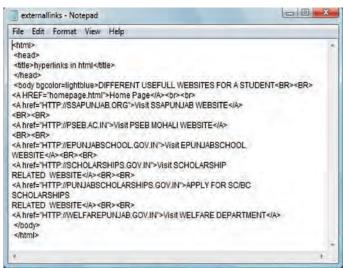




Fig 4.15 Fig 4.16 The next available link is query/suggestion form the output and code for this webpage is as shown in fig. 4.17, 4.18.



Fig.4.17

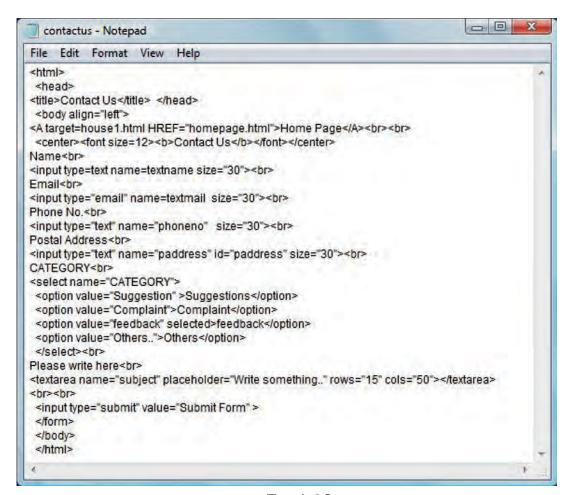


Fig 4.18

The next and last available link is locate us the output as shown in figure 4.19 and code for this webpage is as fig. 4.20:-



Fig. 4.19

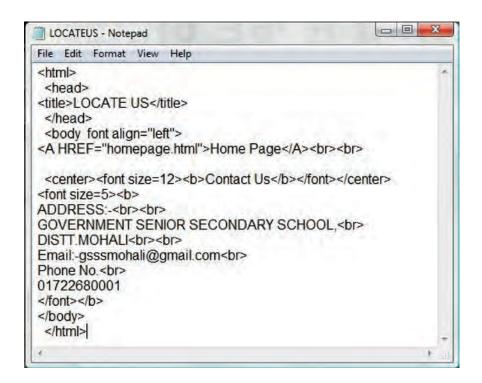


Fig 4.20



- 1. Before deciding about the server we should register the domain name.
- 2. The needs of viewers should be kept in mind while designing a website.
- 3. You can establish your own server or can hire a space for it from any company or organization.
- 4. After designing all pages they are tested off line.
- 5. Site is uploaded with the help of FTP (File Transfer Protocol).
- 6. After successful uploading, site in tested online.
- 7. First page of a site is the home page, all other pages of site are linked with home
- 8. Bandwidth is the amount of data transfer you are allowed within a given time period.
- 9. Test your website in a variety of web browsers.
- 10. Search engine optimization is a methodology of strategies, techniques and tactics used to increase the amount of visitors to a website

Exercise

1. Multiple Choice Questions:

- 1. There are four stages of planning a website.
 - a. Goal of a site.
 - b. Designing for viewers.
 - c. Work strategy. And development of subject matter.
 - d. All of the above.
- 2. A good look of a webpage depends upon
 - a. Font size/colour.
 - b. background colour
 - c. Table and graphics.
 - d. All of the above.
- 3. No internet connection is needed in
 - a. Offline testing.
 - b. Online testing.
 - c. Both of the above.
 - d. None of these.
- 4. **SEO** means
 - a. **Search e**ngine **o**ptimization.
 - b. System engine optimization.
 - c. Syncronized engine optimization.
 - d. None of the above.
- 5. SMM Stands for
 - a. Social media marketing.
 - b. Science media marketing.
 - c. System macro media.
 - d. None of the above.

2. Fill in the Blanks:

- 1. While planning to build a site, decision about...... site is taken at the end.
- $2. \quad is the address of your site.$
- 3. After deciding about domain name next step isthe domain name.
- 4.test can be done without the internet.
- 5. The very first page of any website is called as.....

3. True or False:

- 1. There is no link of other pages with the home page
- 2. Address of site ends with .com, .org, .net etc.
- 3. Off line testing of a site should be done on a single browser only.
- 4. To send the webpages to host, we need FTP client.
- 5. During online testing of a site your computer should be connected to the internet.

Give the full names of

1. IP 2. FTP 3. URL

4. Very Short Answer type Questions:

- 1. Which is the address of your site.
- 2. The copy of the website on computer is called the _____ version, and the copy on the web host is called the ____ version.
- 3. What helps a company get direct feedback from customers.
- 4. What is necessary to check all of the different features on the website.
- 5. How can Designer prevent loss of data and protect against malware and other damages.

5. Short Answer type Questions:

- 1. Describe the important points to fix the purpose of a site.
- 2. What do you mean by Domain Name?
- 3. What is role of server in world of internet?
- 4. What points are to be taken care of while designing a webpage?
- 5. What do you mean by offline testing?

6. Long Answer type Questions:

- 1. Write the different steps for planning a website?
- 2. Describe the necessary direction for implementing a website.
- 3. What is difference between offline and online testing.
- 4. What is SEO?
- 5. What is SMM?

Answers Key

| Questions | Multiple Choice | Fill in the Blanks | True or False | Very Short Answer |
|-----------|-----------------|--------------------|------------------|--|
| 1 | d | 1. Publishing. | FALSE. | Domain Name. |
| 2 | d | 2. Domain Name. | TRUE. | Local ,productionExternal Link. |
| 3 | a | 3. Registration | FALSE. | SMM. |
| 4 | a | 4. Offline. | TRUE. | Test and Validate. |
| 5 | a | 5. Homepage. | TRUE. | By taking regular backup and preventive security measures. |