**Assignment 2**

**Roll no: 31164 Date: 26/05/21**

**TITLE**: Design with CSS, HTML, XML

**PROBLEM STATEMENT:** Design & develop a web application using HTML , CSS , XML from the given list :

1. Online pizza order application
2. Student information system for training & placement department
3. Leave management application
4. Blogging platform
5. Meeting room booking application
6. Exam cell automation application

**OBJECTIVE :**

* To develop web pages using HTML
* To optimize page styles & layout with CSS
* To distinguish between HTML & XML

**S/W PACKAGES AND HARDWARE APPARATUS USED:** Operating System open source Fedora 20 or higher equivalent or Windows Networked computer with internet access

Editor : IDE , Eclipse or any simple equivalent editor ( i.e. text based & WYSIWYG based )

Web browser / Internet explorer 7

**THEORY:**

Files that travel across the largest network in the world , the Internet , & carry information from ‘ Server ‘ to ’Client ‘ that requested them are called ‘ **Web pages** / HTML documents ‘ . Individual who develops these web pages is called ‘ **Web Developer** ‘ . Web Pages are created using HTML syntax . The organization of web pages into directories & files stored on the HDD of a computer is called ‘ **Web Site** ‘ creation . As studied in previous assignment , the Server Computer runs special software called ‘ **Web Server** ‘ software that allows :

* Web Site Management
* Accept a client‘s request for information
* Respond to a client‘s request by providing the page with the required information

Computers that offer the facility to read information stored in web pages are called ‘ **Web Clients** ‘ . Web Clients run special software called a ‘ **Browser** ‘ that allows to :

* Connect to an appropriate Server
* Query the Server for the information to be read
* Provides an interface to read the information returned by the Server

## HTML :

The language used to develop web pages is called **H**yper**T**ext **M**arkup **L**anguage which is interpreted by a Browser . HTML is a set of special codes that can be embedded in text to add formatting & linking information . **HTML Tags** are instructions that are embedded directly into text of document . It is a signal to a browser that it should do something other than just throw text up on the screen . HTML tags can be of two types :

* Paired Tags
* Singular Tags

Some HTML tags require additional information to be supplied to them that are known as *Attributes* of a tag . Attribute(s) are written immediately following the tag , separated by a *space* . The creation of textual content of Web Site is done in any editor viz; Notepad / Eclipse / IDE ; et cetra & saved as *filename.****htm / .html*** file .

### CSS (Cascading Style Sheets) :

Style Sheets are powerful mechanism for adding styles to Web documents that enforces standards & uniformity throughout a web site & provide numerous attributes to create dynamic effects . Style information can be associated with the web page in several ways :

* by embedding the style information directly through a STYLE attribute
* by embedding the style information directly through a < STYLE > header
* by embedding the style information directly through < LINK > element

Order of importance for adding style sheets into the document :

1. Inline styles
2. Embedded styles
3. Linked styles
4. Imported styles
5. Default browser styles

### Advantages:

* ability to make global changes to all documents from a single location
* greater author control over appearance of text & its placement on the page
* reduced clutter of multiple opening & closing tags on individual text elements
* simplified modification of page design through style editing
* eliminating the need for clumsy HTML workarounds to achieve basic layout effects
* great improvement of the design potential for HTML pages without introducing a large no. of new proprietary tags or compromising ability of other browser to effectively display the document text.

**HTML vs XML:**

|  |  |
| --- | --- |
| **HyperText Markup Language** | **Extensible Markup Language** |
| used to display data | used to transport & store data |
| it is markup language | provides framework to define markup languages |
| not case sensitive | case sensitive |
| it is presentation language | neither presentation nor programming lang. |
| predefined tags | custom tag |
| no strict rules | strict rules |
| Static | dynamic |
| does not preserve white spaces | preserve white spaces |
| list out the limitations | list out the limitations |

**Algorithmic steps:**

1. Finalize the scope of given list of web application
2. Task distribution
3. Design the respective application in lab note book & get it verified by respective lab subject teacher
4. Write the code snippet in the editor ( HTML , CSS , XML ) & visualize the same in browser

**Testing:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test id** | **Test case** | **Expected o/p** | **Actual o/p** |
| 1. | All web pages must be properly interlinked | Web pages are properly interlinked | Web pages are properly interlinked |
| 2. | Every page must have back button, home page button & logout with appropriate navigation | Appropriate navigation occurs | Appropriate navigation occurs |
| 3. | After the click of final button , pop – up confirmation is required | pop – up for confirmation is displayed | pop – up for confirmation is displayed |
| 4. | Web document is expected to be user –friendly with formal design | User –friendly design | User –friendly design |
| 6. | Provide the alternate values to attributes of tags w.r.t. compatibility of browser, explorer | Compatible with various browser | Compatible with various browser |

**Conclusion:** We successfully designed a web application using the concepts of HTML, CSS and XML.