MODULE 3

WEB TECHNOLOGIES

CSS

CSS ADVAN

SELECTORS

BOOTSTRAP

MISC FUNCTIONS

BASICS POSITIONING LINKS

LISTS

OVERFLOW

ICONS

POSITIONING ELEME

CONTENTS

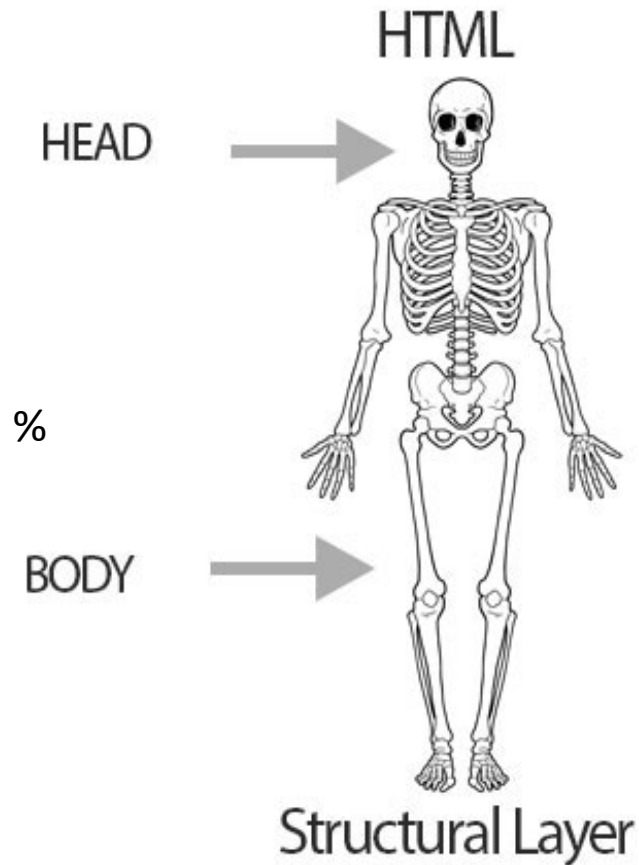**HOURS – 8 MARKS - 15% (9)**

What is CSS?

- CSS stands for **C**ascading **S**tyle **S**heets
  - Styles define how to display HTML elements
  - Styles are normally stored in Style Sheets
  - Styles were added to HTML 4.0 to solve a problem
  - External style sheets can save a lot of work
  - External style sheets are stored in CSS files
  - Multiple style definitions will cascade into one

Introduction

- HTML is concerned primarily with content rather than the details of how that content is presented by browsers.

- Some of those elements—for example, code—specify presentation details or style.

- these presentation specifications can be more precisely and more consistently described with style sheets.

- A style sheet is a syntactic mechanism for specifying style information.

- The first style-sheet specification for use in HTML documents, dubbed Cascading Style Sheets (CSS1), was developed in 1996 by the World Wide Web Consortium (W3C). In mid-1998, the second standard, CSS2, was released. CSS2 added many properties and property values to CSS1.

- CSS style sheets are called *cascading* style sheets because they can be defined at three different levels to specify the style of a document. Lower-level style sheets can override higher- level style sheets, so the style of the content of an element is determined, in effect, through a cascade of style-sheet applications.

Need for CSS

HTML
Structural Layer

HEAD
BODY

%

HTML with CSS
Presentation Layer

APPEARANCE
LOOK

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Need for CSS

- Describes the appearance, layout, and presentation of information on a web page
  - HTML describes **the content** of the page
- Describes *how* information is to be displayed, not *what* is being displayed
- Can be embedded in HTML document or placed into separate .css file

Cascading Style Sheets

- A simple design language intended to simplify the process of making webpages presentable.

- CSS handles look and feel part of a webpage.

- Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, and a variety of other effects.

- It is easy to learn and understand but it provides a powerful control over the presentation on an HTML document.

- CSS is combined with the markup languages HTML and XHTML.

Syntax of CSS

A CSS comprise of style rules that are interpreted by the browser and then applied to corresponding elements in your document.
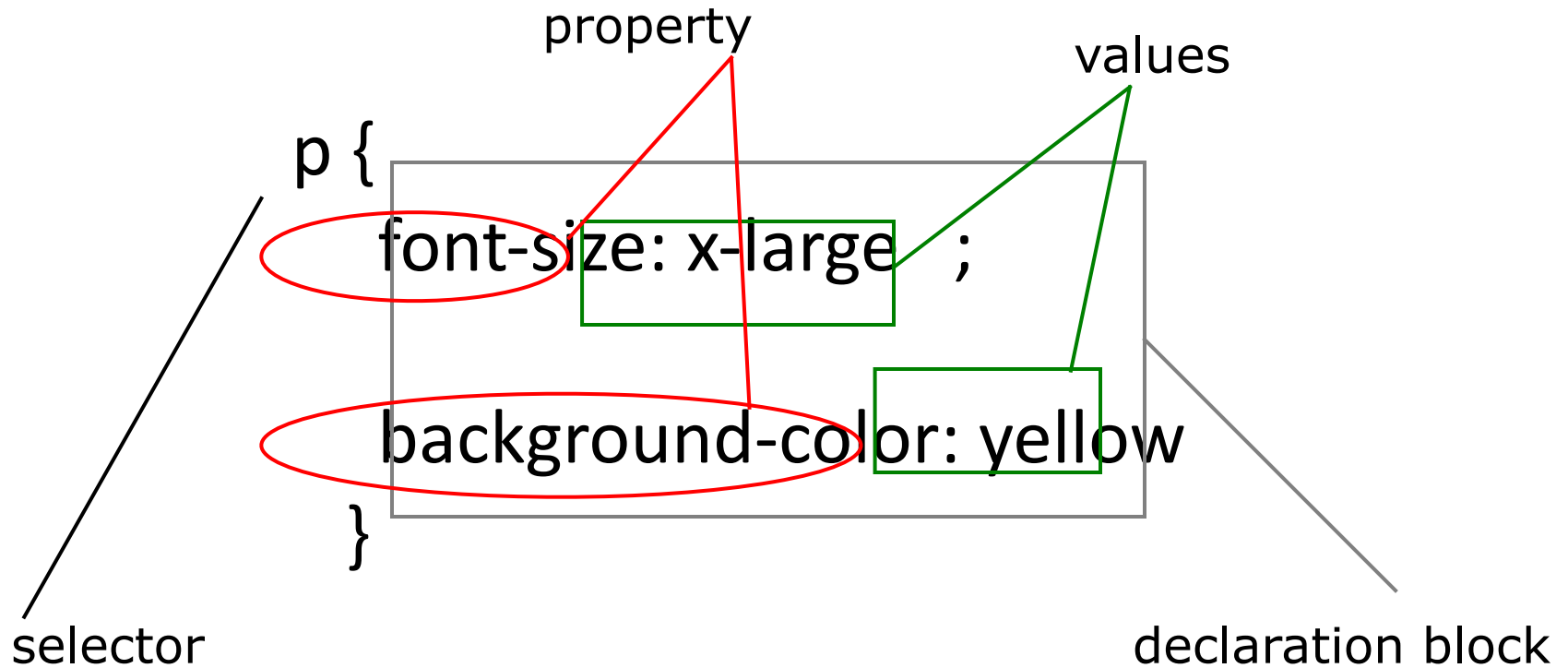
A style rule is made of 3 parts:

1. **Selectors**: It is an HTML element at which a style is applied. This could be any tag like <h1> or <table> etc.

2. **Property**: A property is a type of attribute of HTML tag. All HTML attributes are converted into CSS properties, they could be color, boarder etc.

3. **Value**: Values are assigned to properties.

Eg: color property can have the value either red or #ff0000 etc.

CSS Style Rule

property   values

p {

     font-size: x-large   ;

     background-color: yellow

}

selector   declaration block

Styles

- XHTML style sheets are called cascading style sheets because they can be defined at three different levels to specify the style of a document.

- Lower level style sheets can override higher level style sheets

- A style is a set of formatting instructions that can be applied to a piece of text.

Styles

Styles can be defined at three different levels

- Within a single HTML tag – I**nline styles**

- In the `<head>` section, and applied to the whole document – Global styles(**document level/internal).**

- In external files, and can be applied to any document by including the URI of the file – Stylesheets**(External)**

Inline styles: the style attribute

○ Every tag has a style attribute

○ This can be assigned a style definition

○ A style definition is a list of property-value pairs

- a property is separated from its value by a colon

- property-value pairs are separated by semi-colons

- the list is delimited by quotation marks

○ A property-value pair is also called a declaration

○ Inline styles only affect the text contained in the tag

Inline styles: the style attribute

```
<p style="font-family:verdana; color: red;">
This is a paragraph</p>
```
HTML

This is a paragraph

output

- Higher precedence than embedded or linked styles
- Used for one-time overrides and styling a particular element
- B*ad style* and should be avoided when possible (why?)

Example

```
<html>
<head>
<title>
     <!-- an example of an inline style sheet -->
     Inline Styles
</head>
</title>

<body>
     <h3 style="color.0000ff; font-family: comic sans ms;"> Style example </h3>
     <p style= "color:ff0033; font-family:courier; font-size:12"> </p>
</body>
</html>
```

Internal Styles

- These are placed at the top of each web page document, before any of the content is listed.

- This is the next best thing to external style, because these are easy to find, yet allow you to override an external style sheet.

- You can define the style at the top of the page in the <head> section

o A style can be defined in the head of the document using the `<style>` tag

o The style declaration is placed inside a comment so that it can be ignored by older browsers

o Each style rule consists of the name of an element (selector) followed by a list of property-value pairs enclosed in curly brackets

Example

```html
<html>
<head>
        <!-- an example of an internal style sheet -->
<style>
h1{
color:red;
Font-size:28px;
}
p{
 font-color:#3400ff;
Font-size:20px;
}
</style>
</head>
<body>
        <!-- Large headings are labelled h1 -->
        <h1> John Adam </h1>
        <p> Fisat</p>
</body>
</html>
```

External Style Sheets

- Provides uniform look and feel.

- These are seperate files full of CSS instructions, with the file extension **.css**

- When any webpage includes an external stylesheet, its look and feel will be controlled by this CSS file (unless you decided to override a style using one of the other two types).

External Style Sheets

- Styles can be declared in separate files called stylesheets.
- A stylesheet is linked to a web document by including the following line in the head section

```
<link rel="StyleSheet" type="text/css"
                href="URL">
```

- **rel** specifies the type of link being used
- **href** specifies a hyperlink to the stylesheet file
- **type** specifies the MIME type of the data
- **text/css** describes the "cascading style sheets" type

Embedding style sheets: <style>

```
<head>
<style type="text/css">
p { font-family: sans-serif; color: red; }
h2 { background-color: yellow; }
</style>
</head>
```

HTML

- CSS code can be embedded within the head of an HTML page
- B*ad style* and should be avoided when possible (why?)

Example – stylish.css

/* CSS Document */

```
p {
font-family: sans-serif;
color: red;
}

h2 {
background-color: yellow;
}


File Name::::    CSS_sample.css
```

Including stylish.css

- To include the external CSS_sample.css file, we have to include a link for it within the <head> section of our blank webpage:

<html>

<head>

    <link rel="stylesheet" type="text/css" href="CSS_sample.css">

</head>

<body>

    <h2> Johm Adam </h2>

    <p> Fisat: Federal …. Technology </p>

</body>

</html>

Multiple Styles Cascade Into One

- What style will be used when there is more than one style?

  – Browser default

  – External style sheets are included

  – Embedded styles (inside the <head> tag) override external styles

  – Inline styles (inside an HTML element) override both embedded and external styles

  – Styles modified with JavaScript override all other styles

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○ Multiple stylesheets can be included in a document

○ Styles defined in the first stylesheet are overridden by corresponding styles defined in the second stylesheet

- the stylesheets are said to cascade

○ Example

– **`mainstyles.css`** **–** the company's stylesheet

– **`deptstyles.css`** **–** the department's stylesheet

– **`mystyles.css`** **–** the user's stylesheet

○ If the stylesheets are included in this order, the user's style definitions will override the department styles, which in turn will override the company styles

- Different stylesheets for different media, platforms and systems
  - Font size in CSS does not yield sam results on different screens. On Print Media 10pt size fonts are always the same size because the size of a pt is well defined. The conversion of pt to px (pixel) is different on Windows, Linux or Mac OS X platforms.
  - Browser allow to customize layout and fonts