SUB: Design Pattern And Framework

TOPIC: CSS

What is CSS?

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files

HTML & CSS

An early goal of the WWW

- Easy to update many pages at once
- Easier to maintain consistency
- Extended the scope of the rule

Cont…

- CSS (Cascading Style Sheets) allows us to apply formatting and styling to the HTML that builds our web pages.

- CSS can control many elements of our web pages(styles): colors, fonts, alignment, borders, backgrounds, spacing, margins, and much more.

Purpose of CSS

- If HTML is the content and meaning then CSS helps to convey that meaning
- Allows developers to separate the content from layout and design
- Content and design inherently different in nature Change in content does not require change in design

How CSS works?

- CSS works in conjunction with HTML.
- An HTML file (or multiple files) links to a CSS file (or multiple CSS files) and when the web browser displays the page, it references the CSS file(s) to determine how to display the content.
- HTML elements are marked with “IDs” and “classes,” which are defined in the CSS file – this is how the browser knows which styles belong where. Each element type (<h1>, <img>, <p>, <li>, etc.) can also be styled with CSS.

Levels of Styles

- Inline — modify the appearance of a particular tag (lowest)
- Embedded — applied to an entire document Redefine appearance of all occurrences of tag (middle)
- Linked — external file of declarations specified for any number of documents in an entire site (highest)

Where Style Information can be Specified

- Inline - style attribute of any XHTML element (not really separate from structure/content)
- Embedded - In the <head> element of an HTML document
- Linked - In an ASCII file with an extension of .css external to (and shared by) XHTML documents

Inline Style

- Use the style attribute in the tag Syntax
  <tag style="attribute:value1; attribute:value2">
  Semi-colon separated list of property:value pairs
  e.g.
- Welcome to DDU!!!

- font-size is a property
- 1.5em is the value of font-size

- Examples

<h1 style="color:green; font-family:Arial"> Text </h1>
 Text

Inline Style

```
<html>
<head>
<title>HTML Test</title>
<body>
<h1 style="color: red;">Welcome to DDU!!.</h1>
<h1 style="color: aqua;font-family:Arial">I am Here!!.</h1>
</body>
</html>
```

Embedded Style

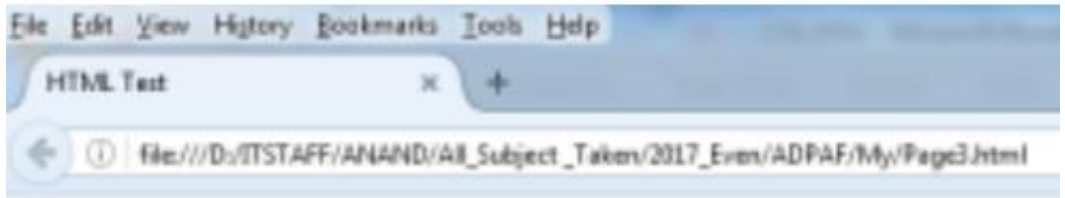
Syntax

selector {declarations}

```
  <head>
    <title>Untitled</title>
    <style type="text/css">
          h1 {color:green; font-family:sans-serif}
          b {color:yellow; background-color:green}
   </style>
 </head>
```

Embedded Style

```
<html>
    <head>
        <title>HTML Test</title>
            <style type="text/css">
            h1 {color: green; font-family:sans-serif}
            b {color: yellow; background-color:green}
            </style>
    </head>
    <body>
        <h1>Welcome to DDU!!.</h1>
        <b>I am Here!!.</b>
    </body>
</html>
```



Welcome to DDU!!.

I am Here!!

External Style Sheets

- Many documents can share a common style
- Put content of embedded style sheet into a text file but without <style> </style> tags
- Name the file with extension .css e.g. master.css
- Link style file to document in <head>:

```
<link rel = "stylesheet"
type = "text/css"
href = “master.css" />
```

How to Create CSS File & Test

- Open Notepad -> Type Content Below -> Select Save as Option from File Manu -> give name -> “master.css”-> Press Enter.

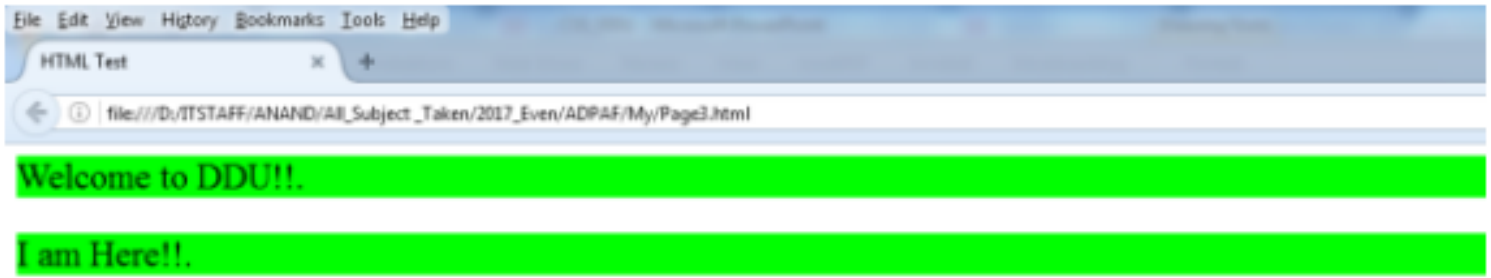
```
body {background-color: Yello}
p {font-size: x-large;background-color : lime}
```

- Create one HTML page as done earlier

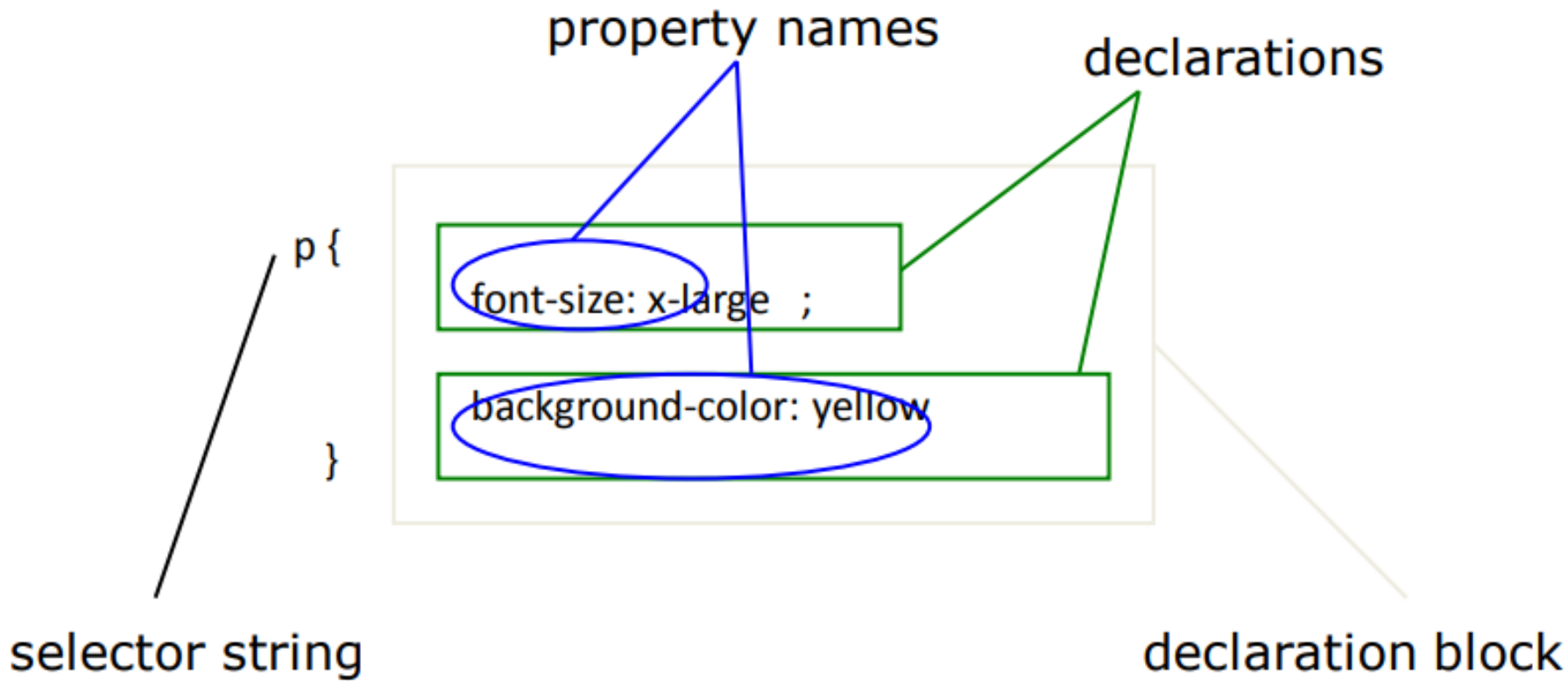
How to Create CSS File & Test

```
<html>
  <head>
      <title>HTML Test</title>
          <link rel = "stylesheet" type = "text/css"
      href = "master.css" />
  </head>
  <body>
      <p> Welcome to DDU!!.</p>
      <p>I am Here!!.</p>
  </body>
</html>
```

How to Create CSS File & Test



CSS Style Rule



Selector Types

- Simple Selector Forms
- Syntax: tag name or a list of tag names, separated by commas

Examples:

- p {color:blue;}
- h1, h3 {color:blue;}

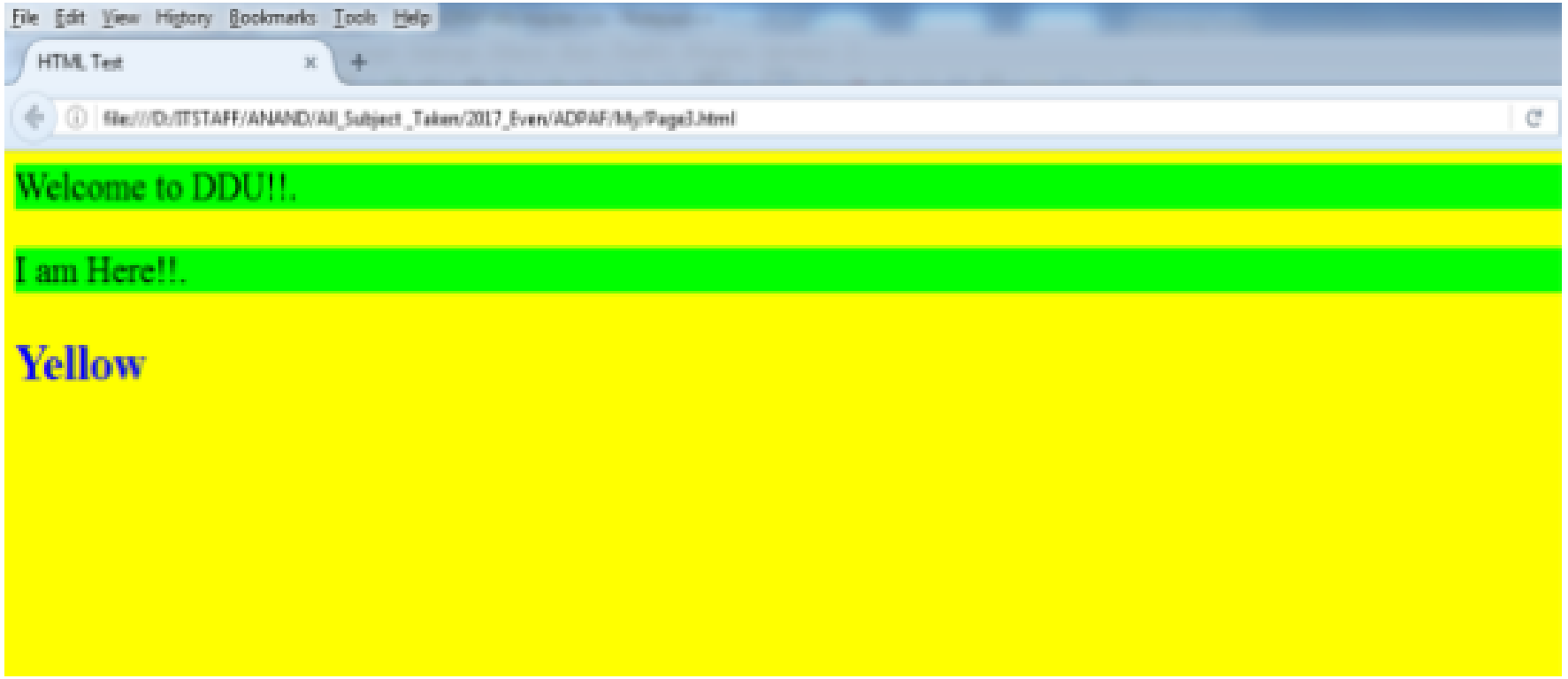
Simple Selector Forms (html file)

```
<html>
 <head>
  <title>HTML Test</title>
   <link rel = "stylesheet" type = "text/css" href = "master.css"
  />
  </head>
  <body>
        <p> Welcome to DDU!!.</p>
        <p>I am Here!!.</p>
        <h1>Yellow </h1>
  </body>
</html>
```

Simple Selector Forms (CSS File)

```
body {background-color: Yellow}
p {font-size: x-large;background-color : lime}
h1, h3 {color: blue}
```

Simple Selector Form (Output)



Context selector Form

Contextual selectors

- Syntax: tag names separated by space
- Example
- div p{color:green ;}
- Applied only to paragraph which comes under div tag

A **contextual selector** is defined as a selector which considers the context where the style is to be applied. In simple words, the specified style is applied to an element only if the element is in the *specified context.* Context can be defined as a parent/child relationship or ancestor/descendant relationship between different parts of the document. A contextual selector is made up of two or more simple selectors separated by white space. Class, any type, ID selector is considered as a simple selector.

```
<html>
<head>
        <title>Contextual Selectors</title>
        <style>
                div p { color: green;}
        </style>
</head>
<body>
<div>

<p>DDU IT Dept</p>
<p>A Computer Science portal for geeks.</p>

</div>

<p>What are Contextual Selectors in CSS?</p>
</body>
</html>
```

- ol ol li {color:blue;}
- Applied only to li elements which are descendants of ol elemets which are descendants of ol elements.

- <html>
- <head>
- <title>HTML Test</title>
- <link rel = "stylesheet"
- type = "text/css"
- href = "master.css" />
- </head>
- <body>
- Welcome to DDU!!.
- I am Here!!.
- <h1>Yellow </h1>
- <ol> <ol> <li> Hii</li> <ol>
- <ol>Bye </ol>
- </ol>
- </body>
- </html>

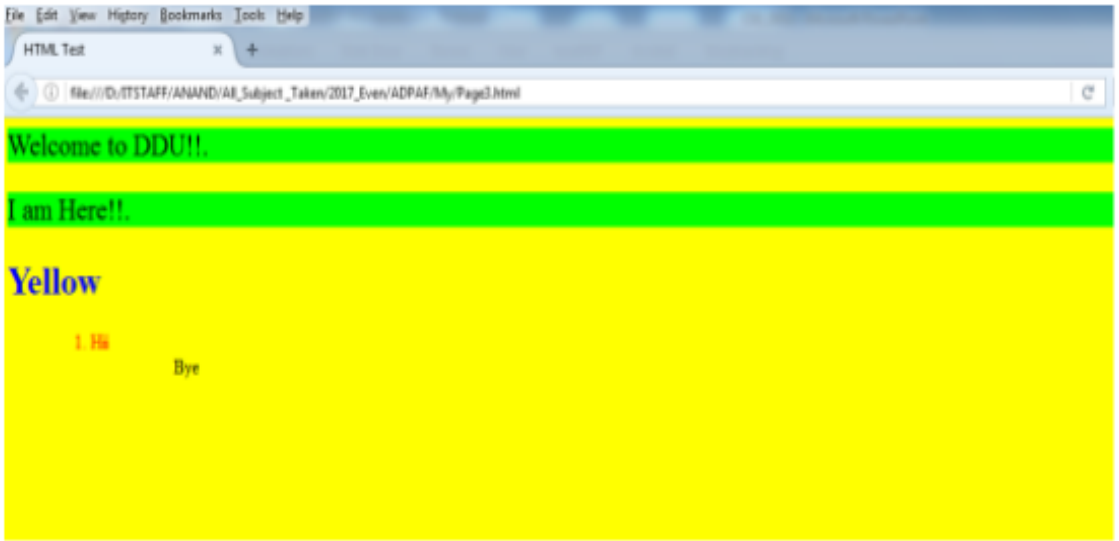
Context Selector
(CSS - file)

```
body {background-color: Yellow}
p {font-size: x-large;background-color : lime}
h1, h3 {color: blue}
ol ol li {color: Red;}
```

Context Selector
(CSS – file 2)

```
body {background-color: Yellow}
p {font-size: x-large;background-color : lime}
h1, h3 {color: blue}
ol ol li {color: Red;}
ol ol {color:  Aqua; font-size: x-large}
```

Context Selector (output – CSS file 1)



Context Selector (output – CSS file 2)