Web Essentials and Style Sheets

Module – 1 (Part 2)

Presentation By

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Web Components

- **Clients and Servers**
- **Internet Service Providers**
- **Web Site Hosting Services**
- **Domains Names, URL's and Ips**
- **Registrars**

Clients & Servers

Clients (Browser)
- Internet Explorer
- Google Chrome
- Firefox
- Mozilla
- Netscape
- Opera
- Amaya
- AOL
- MSN

Servers
- Apache
- Microsoft
- Netscape
- zeus
- AOLserver
- AV
- JavaWebServer
- Oracle

Web Components

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- **Web Site Hosting Services**
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- **Registrars**

Internet Service Providers

Connect Clients to the Internet

- Google Chrome
- Phone Company
- AOL
- Earthlink
- Verizone
- NetZero

- Basic internet connection
- Dialup/DSL/Cable/Sat
- Email

Web Components

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Web Hosting Services

Connects Web Sites to the Internet

- Computer (server) farm
- Web server software
- Firewall hardware and software
- IT services

    - (Backup, troubleshooting, hardware repair)
- Disk space
- Bandwidth / connection to internet
- Routers and switchers
- Email server / storage

Web Components

- **Clients and Servers**
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Domain's, URL's and IPs

- Domain name: The specific address of a computer on the Internet

  - microsoft.com
- Uniform Resource Locator (URL):

  - http://www.microsoft.com/faqs.html
- Internet protocol (IP) address

  - 192.168.1.1

Web Components

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Domain Registrars

- A company that provides domain name registration services for a fee.
- Maintain database which maps domain names to IP's
- Propagate new domain name/IP address information across the internet

How to Create a Web Site?

1. Choose a domain name
2. Register with a Registrar
3. Choose a hosting service
4. Tell Registrar the IP address
5. Create web content
6. Store (publish) onto hosting server (FTP)
7. Submit new site to search engines

12 Principles of good web design

1. Visitor-centric, clear purpose
2. Progressive disclosure
3. Displays quickly
4. Browser compatible
5. Intuitive navigation
6. Spelling, grammar, writing
7. Secure (eCommerce)
8. Attractive design, easy to read
9. Cultural bias? (Regional? Domestic? International?)
10. No technical problems (broken links, buggy scripts)
11. Maintainable (separate content from style)
12. Search Engine Accessible

Creating Your Web Site

Technologies & Tools

- Markup Languages

    - HTML, DHTML, XML, XSLT, etc....
- Cascading Style Sheets (CSS)
- Scripting languages

    - perl, javascript, php, etc....
- Web creation and editing software

    - Notepad, FrontPage, VS Code, Site Builder, Elementor, etc..

Fundamentals of Markup Languages - HTML

Derived from SGML
(Standard Generalized Markup Language)

- **H**yper**T**ext **M**arkup **L**anguage

HTML - **Fundamentals**

- Clear text, case insensitive
- Ignores white space
- Comprised of tags
- Open tags and closed tags

HTML - **Fundamentals**

- Open tags
  - <name attributes/>
  - <hr/>,
  -
- Closed tags
  - <name attributes> stuff </name>
  - text to be bolded
  - <h1>level 1 heading text</h1>
- Comments

HTML – Fundamentals

Document Structure

< HTML >

Header

Body

< / HTML>

HTML – **Fundamentals**
Basic Structure

```
<html>

    <head>

        <title> The title of your html page </title>

        <meta_tags/>

    </head>

    <body>


        <! - - your web page content and markup  - ->
```

Web Programming Workbench Setup

Code Editor
VS CODE: Download Link

Browser
Google Chrome : Download Link

Remote Support Tool
Anydesk: Download Link

Code Versioning & Collaboration Tool:
Git :   Download Link

HTML - **Fundamentals**

header

<body>

    Hello world

</body>

HTML - **Fundamentals**

header
<body>

Mike Tyler

PO Box 190387

Hungry Horse, Mt 59919

</body>

HTML - **Fundamentals**

header

<body>

    Mike Tyler

    PO Box 190387

    Hungry Horse, Mt 59919

</body>

HTML - **Fundamentals**

header

<body>

Mike Tyler

PO Box 190387

Hungry Horse, Mt 59919

</body>

HTML - **Fundamentals**

header

```
<body>
   <p align='center'>
   <font face="Arial,Lucida Sans"  color="red" size="3">

      <b>Mike Tyler</b><br>

      PO Box 190387<br>

      Hungry Horse, Mt 59919<br></font>

      </p>


</body>
```

HTML - **Fundamentals**

```
header
<body>
    <p align='center'>
    <font face="Arial,Lucida Sans"  color="red" size="3">

      <b>Mike Tyler</b><br>

      PO Box 190387<br>

      Hungry Horse, Mt 59919<br></font>

      </p>

      <img src='http://www.myserver.com/images/mike.jpg'/>


</body>
```

HTML - **Fundamentals**

```
header
<body>
    <p align='center'>
    <font face='Arial,Lucida Sans'  color='red' size=3>

      <b>Mike Tyler</b><br>

      PO Box 190387<br>

      Hungry Horse, Mt 59919<br></font>

      </p>

      <img src='http://www.domain.com/images/mike.jpg'>

      <a href='biopage.html'>Read my Bio</a>
</body>
```
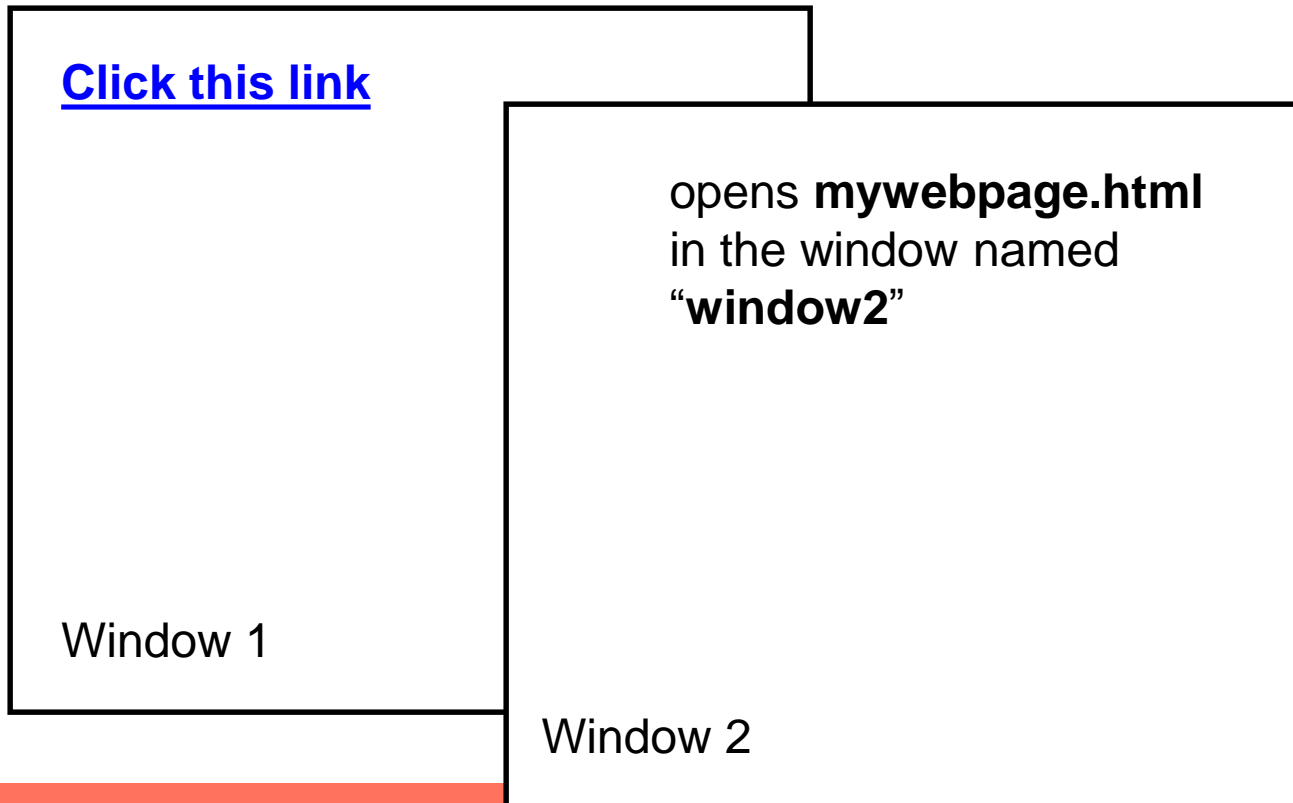
HTML - Fundamentals

Mike Tyler
PO Box 190387
Hungry Horse, Mt 59919

Read my Bio

HTML - **Fundamentals**

ANCHORS (Hypertext Link)

<A href="url" attributes>Displayed text </A>

Attributes
- NAME = "text"
- TITLE = "text"
- TARGET = "frame_name|window_name"

HTML – **Fundamentals**

Hypertext links
Click this link

Click this link

opens **mywebpage.html**
in the window named
"**window2**"

Window 1

Window 2

HTML – **Fundamentals**

Hyperlink Colors

<BODY LINK=*color*, VLINK=*color*, ALINK=*color* >

<BODY LINK=*"blue"*, VLINK=*"purple"*, ALINK=*"red"* >

<BODY LINK=*"#0000FF"*, VLINK=*"#FF00FF"*, ALINK=*"#FF0000"* >

HTML – **Fundamentals**

Colors

- Cathode Ray Tubes (CRT)
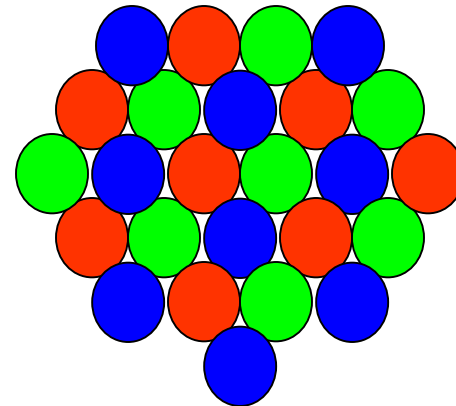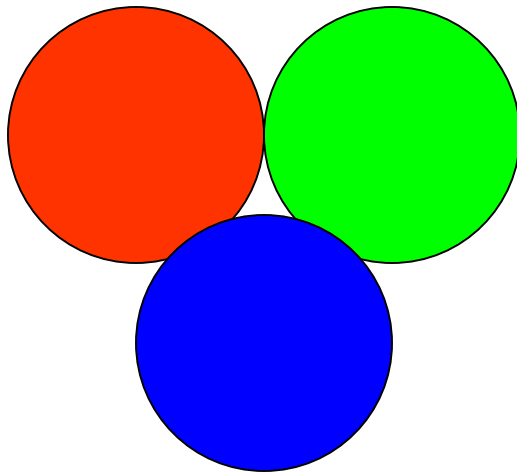
HTML – **Fundamentals**

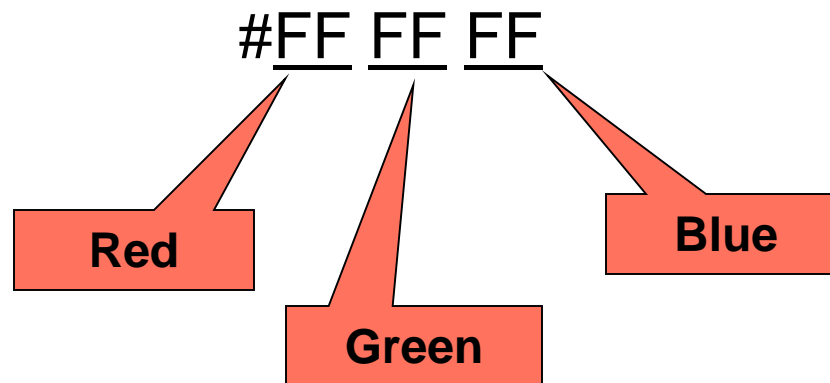## Colors

color = "red" (Browser compatibility issues)
color = "#FF0000"
values vary from 00 to FF (hexadecimal)
0,1,2,3,4,5,6,7,8,9,a,b,c,d,e,f

#FF FF FF

Red

Green

Blue

HTML – **Fundamentals**

Headings

- Renders text as a heading, the rendering depending on the level of heading selected. Headings should be automatically spaced from the body text.

    `<h1>Heading 1 level text</h1>`

    `<h2>Heading 2 level text</h2>`

    `<h3>Heading 3 level text</h3>`

    `<h4>Heading 4 level text</h4>`

    `<h5>Heading 5 level text</h5>`

    `<h6>Heading 6 level text</h6>`

HTML – **Fundamentals**

Lists

Unordered list

```
<ul>
    <li>apples</li>
    <li>bananas</li>
    <li>grapes</li>
    <li>strawberries</li>
</ul>
```

Ordered list

```
<ol type='i' start='2'>
    <li>apples</li>
    <li>bananas</li>
    <li>grapes</li>
    <li>strawberries</li>
</ol>
```

HTML – **Fundamentals**

Lists

Unordered list

- apples
- bananas
- grapes
- strawberries

Ordered list

II.   apples
III.   bananas
IV.   grapes
V.   strawberries

HTML – Fundamentals

Tables

```
<TABLE>
    <CAPTION ALIGN="bottom">Class Grades</CAPTION>
    <TR>
        <TH>Student</TH>
        <TH>Grade</TH>
    </TR>
    <TR>
        <TD>Tom</TD>
        <TD>B+</TD>
    </TR>
    <TR>
        <TD>Sue</TD>
        <TD>A-</TD>
    </TR>
</TABLE>
```

HTML – Fundamentals

Tables

Student	Grade
Tom	B+
Sue	A-

Class Grades

HTML – Fundamentals

Tables

- BORDER=*value*

- ALIGN = left|right|center

- CELLSPACING=*value*

- CELLPADDING=*value*

- WIDTH=*value|percent*

HTML – Fundamentals

Tables

```
<TABLE BORDER=1 WIDTH="50%" CELLPADDING="6"
    CELLSPACING="2" ALIGN="RIGHT">
    <CAPTION ALIGN="bottom">Class Grades</CAPTION>
    <TR>
        <TH>Student</TH>
        <TH>Grade</TH>
    </TR>
    <TR>
        <TD>Tom</TD>
        <TD>B+</TD>
    </TR>
    <TR>
        <TD>Sue</TD>
        <TD>A-</TD>
    </TR>
</TABLE>
```

Output

Student	Grade
Tom	B-
Sue	A+

Class Grades

HTML – **Fundamentals**

Tables

rowspan and colspan

HTML – **Fundamentals**

```
<TABLE BORDER=1 WIDTH="50%" CELLPADDING=5 ALIGN="center">
    <TR>
        <TD colspan=2 align='center'>
                <font color="red"><b>Student Grades</b></font>
        </TD>
    </TR>
    <TR>
        <TD><b>Student</b></TD>
        <TD><b>Grade</b></TD>
    </TR>
    <TR>
        <TD>Tom</TD>
        <TD rowspan=2>A</TD>
    </TR>
    <TR>
        <TD>Sue</TD>
    </TR>
</TABLE>
```
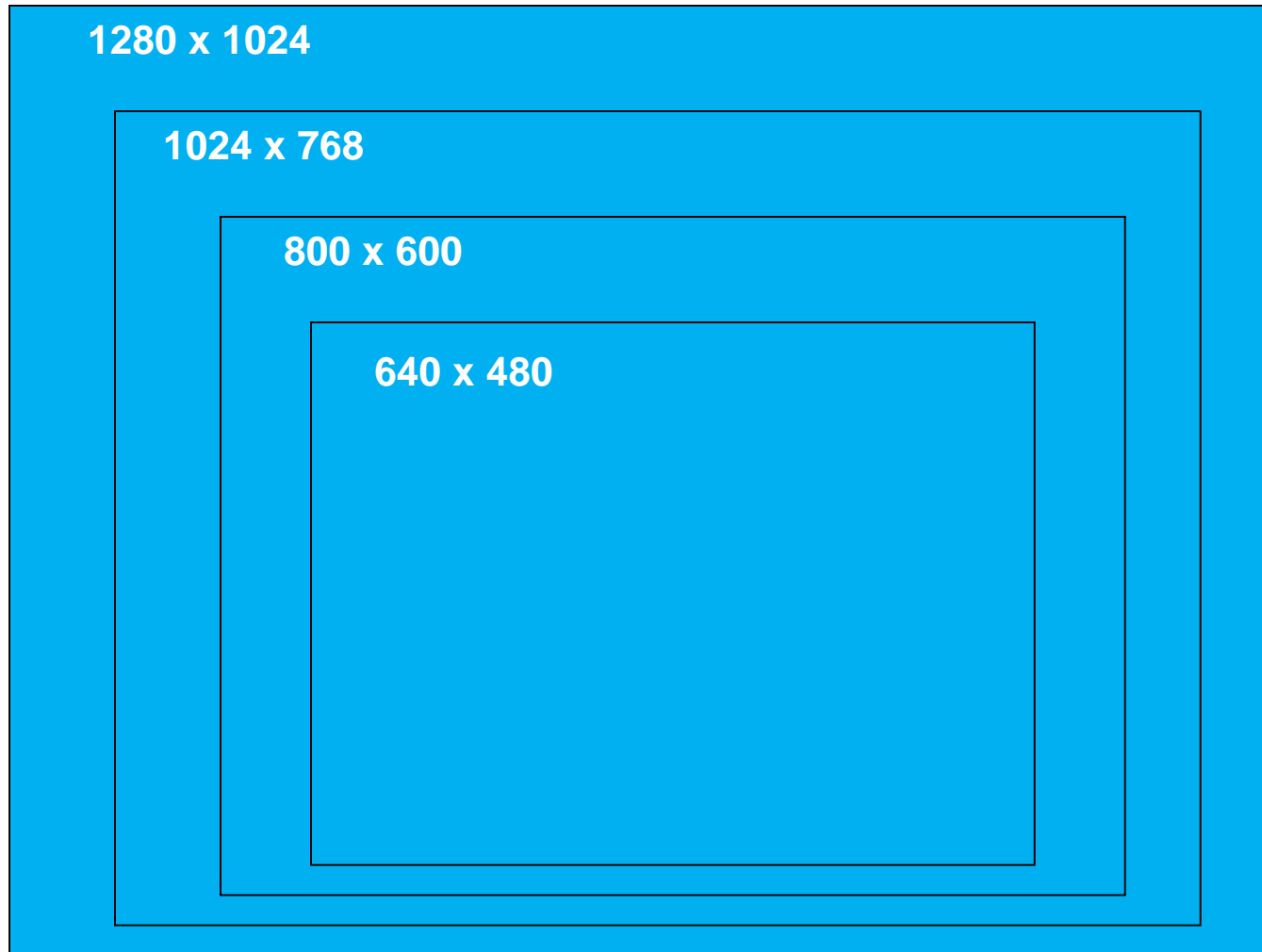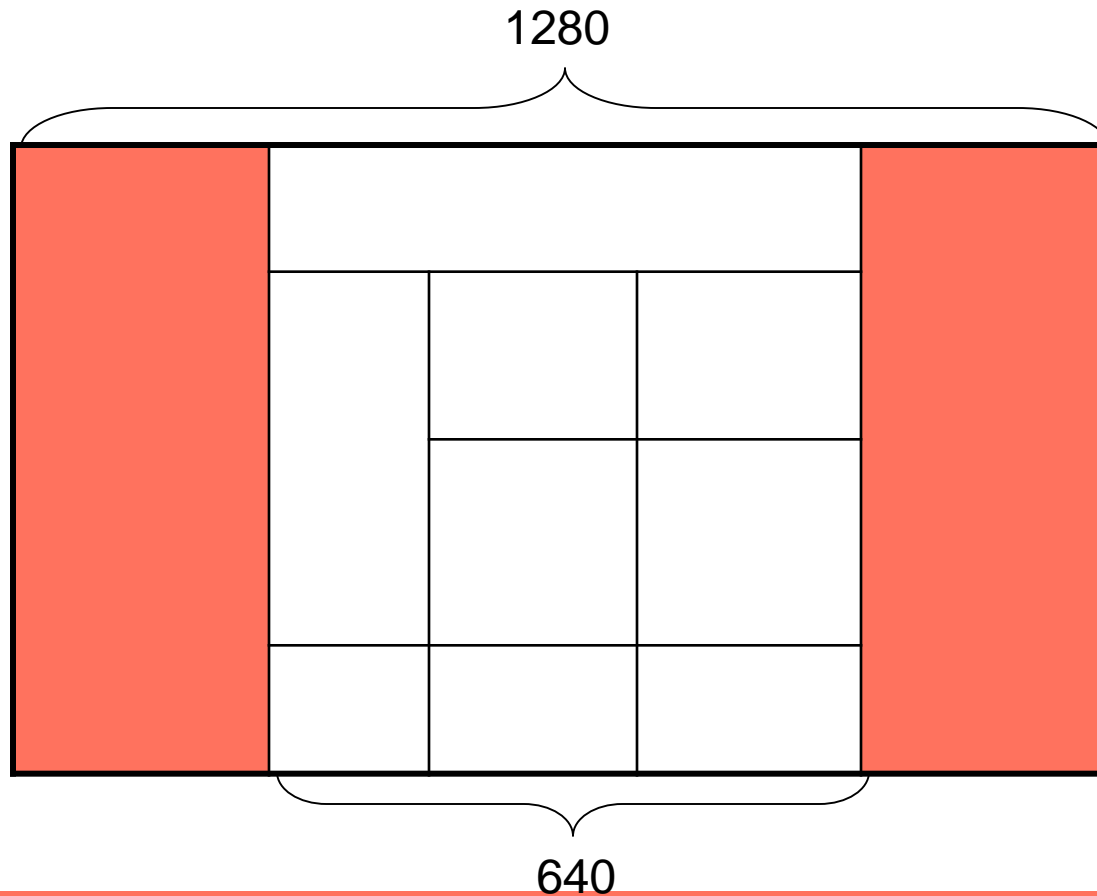
Output

Student Grades	
Student	Grade
Tom	A
Sue	

Screen Compatibility – Bootstrapping

1280 x 1024

1024 x 768

800 x 600

640 x 480

HTML – **Fundamentals**
Tables

- Tables are frequently used to layout the basic web page design.

HTML – **Fundamentals**

Hypertext links

Click this link

- ○ Creates new window for the page

Click this link

- ○ Opens page in the parent frame/wind of this frame/window

Click this link

- ○ Opens page in top most frame/window

HTML – **Fundamentals**

DIV

<div attributes> content </div>

attributes
- ID="name"
- STYLE = "style parameters re: CSS"

HTML – **Fundamentals**

DIV

< DIV ID="fred"
    STYLE = "POSITION:absolute|relative**;**
               VISIBILITY:visible:hidden**;**
               Z-INDEX:number**;**
               WIDTH:width in pixels**;**
               HEIGHT:height in pixels**;**
               TOP:pixels from top of page or block**;**
               LEFT:pixels from left edge of page or block**;**
               PADDING:margin in pixels**;**
               other style attributes**;** " **>**

    content
</DIV>

HTML – Fundamentals

DIV

HTML – **Fundamentals**

DIV

<div style="position:absolute; left:**100px**; top:**100px**; width:**100px**; height:**100px**; background-color:#ffffff; ">

Positions:
Absolute
Relative
Fixed

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)

- Styles enable you to define a consistent 'look' for your documents by describing **once** how headings, paragraphs, quotes, etc. should be displayed.

- Style sheet syntax is made up of three parts:

  selector {property: value}

  selector = element.Class

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)

H1 {text-align: center; color: blue}

A {color:green; font-familiy:arial,courier; font-weight:bold;}

td { align:center; background-color:grey; border-color:red;}

div {position:absolute; visibily:hidden; margin:10px }

font {color:navy; font-size:2pt; font-face:trebuchet; }

hr {color:#ff0000; width:80%; align:center; }

table {width:80%; align:center; border:2px; padding:5px; }

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)

H1 {text-align: center; color: blue}
H1.widget {text-align: center; color: red; font-size:80%; }

A {color:green; font-familiy:arial,courier; font-weight:bold;}
A.menu {color:cyan; font-familiy:arial,courier; font-style:italics;}

td { align:center; background-color:grey; border-color:red;}
td.figure { align:right; background-color:white; border-color:black;}

font {color:navy; font-size:2pt; font-face:trebuchet; }
font.fred {color:blue; font-size:2pt; font-face:trebuchet; font-
    weight:bold; }

element.class {property:value; }

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)
<u>Embedded</u>

```
<head>
    <title> My Page Title </title>

    <style TYPE="text/css >
    <! - -
    element.class { property:value; }
    element.class { property:value; }
    - - >
    </style>
</head>
```

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)
<u>Linked</u>

Styles can be defined in a separate file

mystyles.css
 text
 text

Ref: https://getbootstrap.com/docs/5.1/getting-started/introduction/

<head>
<LINK REL="stylesheet" HREF="mystyles.css" TYPE="text/css">
</head>

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)

/* Example style sheet file (note how this comment was created) */

BODY {background: #FFFFD8; margin-top: 20}

A:link {color: #400080; background: #FFFFD8}

H1   {font-weight: bold; text-align: center; color: #006000; background: #FFFFD8; font-family: Gill Sans, Arial, sans-serif; }

font.caption {font-family: Gill Sans, Arial, sans-serif; font-style: italic; }

/* End of example style sheet file */

HTML – Fundamentals

CASCADING STYLE SHEETS (CSS)
Inline

Styles can be placed within individual elements

<font style="color:red; font-face:ariel;" >

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)

Priority of Effect
Inline > Embedded > Linked

Defining the style of your text
- linked   -> font-family:arial,georgia;
- embedded -> color:navy;
- inline   -> font-size:2pt;

HTML – **Fundamentals**

CASCADING STYLE SHEETS (CSS)

Using IDs
- IDs enable you to define a unique style which you can apply to a number of elements.

```
<STYLE>
<!–
        #copyright {font-style:italic; font-size:smaller; }
-->
</STYLE>
<p ID="copyright"> Any textual content </p>
```
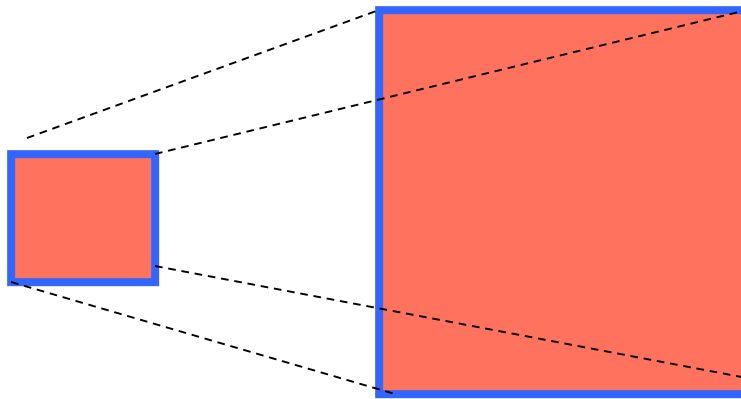
HTML – **Fundamentals**

Images

img.pics { width:75px; height:50px; border-width:3px }

HTML – **Fundamentals**

Using Images

- Images take longer to download than text
- The larger the image, the slower the page
- Use optimization software
- Use thumb nail images

HTML – **Fundamentals**

Other uses of Images

- Page background (not recommended)

  - <body background-image = "url" >

  - <body class="background">

    - body.background { background-image:$url; }
- Table background

  - <table background-image="url">

  - <table class="background">

    - table.background { backlground-image:url; }
- DIV background

  - <div style={ background-image:url; } >

Thank you