Introduction to HTML

What is HTML?

- HTML, otherwise known as HyperText Markup Language, is the language used to create Web pages
- Using HTML, you can create a Web page with text, graphics, sound, and video

Tags

- The essence of HTML programming is tags
- A tag is a keyword enclosed by angle brackets (Example: <I> < i>)
- There are opening and *closing* tags for many but not all tags; The affected text is between the two tags
- <I> closing</I>

More Tags...

- The opening and closing tags use the same command except the closing tag contains and additional forward slash /
- For example, the expression
 Warning would cause the word
 'Warning' to appear in bold face on a Web
 page Warning

Nested Tags

- Whenever you have HTML tags within other HTML tags, you must close the nearest tag first
- Example:

 <I> The Nation </I>

The Nation

Structure of a Web Page

</HTML>

- All Web pages share a common structure
- All Web pages should contain a pair of <HTML>, <HEAD>,
 <TITLE>, and
 <BODY> tags

```
<HTML>
<HEAD>
<TITLE> Example </TITLE>
</HEAD>
<BODY>

This is where you would include the text and images on your Web page.
</BODY>
```

The <TITLE> Tag

- Choose the title of your Web page carefully; The title of a Web page determines its ranking in certain search engines
- The title will also appear on Favorite lists, History lists, and Bookmark lists to identify your page

Text Formatting

- Manipulating text in HTML can be tricky;
 Oftentimes, what you see is NOT what you get
- For instance, special HTML tags are needed to create paragraphs, move to the next line, and create headings

Text Formatting Tags

- Bold Face
- <*I*> *Italics* </*I*>
- <U> Underline </U>
- <P> New Paragraph </P>
-
 Next Line

Changing the Font

- The expression
 ... can be used to change the font of the enclosed text
- To change the size of text use the expression where n is a number between 1 and 7

Changing the Font

- To change the color, use ; The color can also be defined using hexadecimal representation (Example: #ffffff)
- These attributes can be combined to change the font, size, and color of the text all at once; For example,

Headings

- Web pages are typically organized into sections with headings; To create a heading use the expression <Hn>....</Hn> where n is a number between 1 and 7
- In this case, the 1 corresponds to the largest size heading while the 7 corresponds to the smallest size

Aligning Text

- The ALIGN attribute can be inserted in the
 <P> and <Hn> tags to right justify, center,
 or left justify the text
- For example, <H1 ALIGN=CENTER> The New York Times </H1> would create a centered heading of the largest size

Comment Statements

- Comment statements are notes in the HTML code that explain the important features of the code
- The comments do not appear on the Web page itself but are a useful reference to the author of the page and other programmers
- To create a comment statement use the <!-- --> tags

The Infamous Blink Tag

- It is possible to make text blink using the <BLINK> ... </BLINK> tag
- However, it is best to use this feature at most sparingly or not at all; What seems like a good idea to a Web designer can become very annoying to a Web user
- The <BLINK> tag is not supported by Internet Explorer

Page Formatting

- To define the background color, use the BGCOLOR attribute in the <BODY> tag
- To define the text color, use the TEXT attribute in the <BODY> tag
- To define the size of the text, type
 <BASEFONT SIZE=n>

Example

```
<HTML>
<HEAD>
<TITLE> Example </TITLE>
</HEAD>
<BODY BGCOLOR="black" TEXT="white">
<BASEFONT SIZE=7>
   This is where you would include the text and images on your Web
  page.
</BODY>
</HTML>
```

Inserting Images

- Type , where image.ext indicates the location of the image file
- The WIDTH=n and HEIGHT=n attributes can be used to adjust the size of an image
- The attribute BORDER=n can be used to add a border n pixels thick around the image

Alternate Text

- Some browsers don't support images. In this case, the ALT attribute can be used to create text that appears instead of the image.
- Example:
 - <IMG SRC="satellite.jpg" ALT = "Picture
 of satellite">

Links

- A link lets you move from one page to another, play movies and sound, send email, download files, and more....
- A link has three parts: a **destination**, a **label**, and a **target**
- To create a link type
 label

Anatomy of a Link

 label

- In the above link, "page.html" is the destination. The destination specifies the address of the Web page or file the user will access when he/she clicks on the link.
- The label is the text that will appear underlined or highlighted on the page

Example: Links

To create a link to CNN, I would type:
 CNN

To create a link to MIT, I would type:
 MIT

Changing the Color of Links

- The LINK, VLINK, and ALINK attributes can be inserted in the <BODY> tag to define the color of a link
 - LINK defines the color of links that have not been visited
 - VLINK defines the color of links that have already been visited
 - ALINK defines the color of a link when a user clicks on it

Using Links to Send Email

- To create a link to an email address, type

 Label
- For example, to create a link to send email to myself, I would type: email Katie Dunn

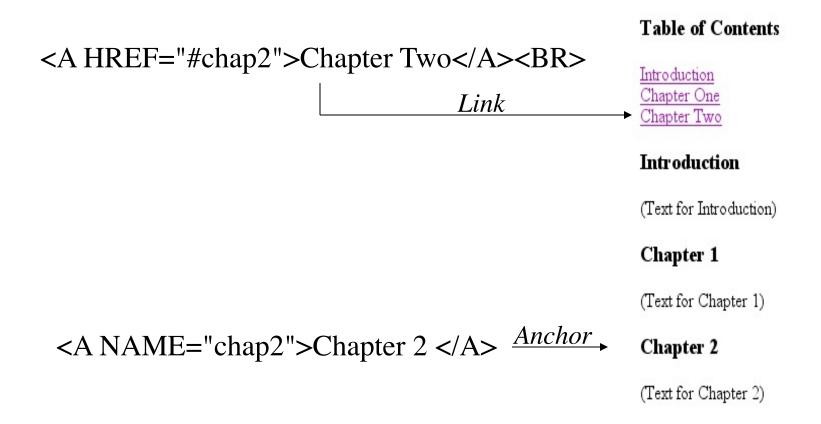
Anchors

- Anchors enable a user to jump to a specific place on a Web site
- Two steps are necessary to create an anchor. First you must create the anchor itself. Then you must create a link to the anchor from another point in the document.

Anchors

- To create the anchor itself, type label at the point in the Web page where you want the user to jump to
- To create the link, type label at the point in the text where you want the link to appear

Example: Anchor



Ordered Lists

- Ordered lists are a list of numbered items.
- To create an ordered list, type:

```
    <OL>
    <LI> This is step one.
    <LI> This is step two.
    <LI> This is step three.
```

Here's how it would look on the Web:

- This is step one.
- This is step two.
- This is step three.

More Ordered Lists....

- The TYPE=x attribute allows you to change the the kind of symbol that appears in the list.
 - A is for capital letters
 - a is for lowercase letters
 - I is for capital roman numerals
 - i is for lowercase roman numerals

Unordered Lists

- An unordered list is a list of bulleted items
- To create an unordered list, type:

```
<UL>
<UL>
<UL>
First item in list

<LI> Second item in list

<UL>
</UL>
```

Here's how it would look on the Web:

- First item in list
- Second item in list
- Third item in list

More Unordered Lists...

- The TYPE=shape attribute allows you to change the type of bullet that appears
 - circle corresponds to an empty round bullet
 - square corresponds to a square bullet
 - disc corresponds to a solid round bullet; this is the default value

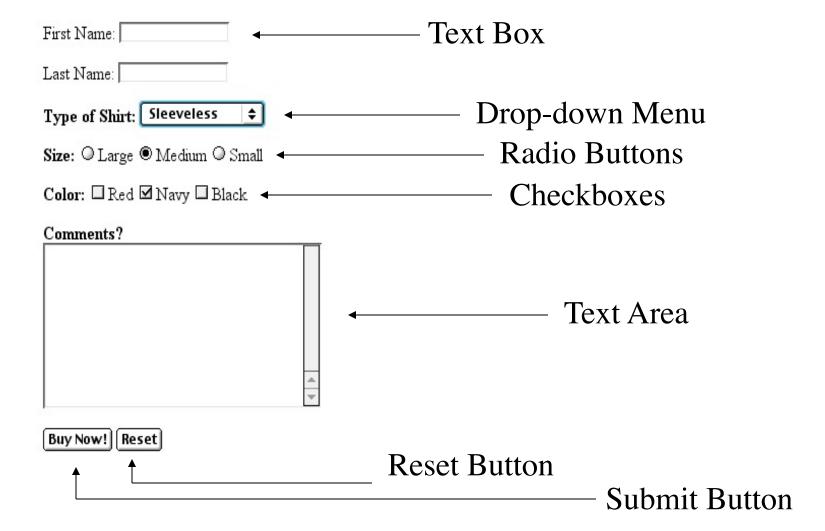
Forms

- What are forms?
 - An HTML form is an area of the document that allows users to enter information into fields.
 - A form may be used to collect personal information, opinions in polls, user preferences and other kinds of information.

Forms

- There are two basic components of a Web form: the shell, the part that the user fills out, and the script which processes the information
- HTML tags are used to create the form shell. Using HTML you can create text boxes, radio buttons, checkboxes, dropdown menus, and more...

Example: Form



The Form Shell

- A form shell has three important parts:
 - the <FORM> tag, which includes the address of the script which will process the form
 - the form elements, like text boxes and radio buttons
 - the submit button which triggers the script to send the entered information to the server

Creating the Shell

- To create a form shell, type <FORM METHOD=POST ACTION="script_url">
 where "script_url" is the address of the script
- Create the form elements
- End with a closing </FORM> tag

Creating Text Boxes

- To create a text box, type <INPUT
 TYPE="text" NAME="name"
 VALUE="value" SIZE=n
 MAXLENGTH=n>
- The NAME, VALUE, SIZE, and MAXLENGTH attributes are optional

Text Box Attributes

- The NAME attribute is used to identify the text box to the processing script
- The VALUE attribute is used to specify the text that will initially appear in the text box
- The SIZE attribute is used to define the size of the box in characters
- The MAXLENGTH attribute is used to define the maximum number of characters that can be typed in the box

Example: Text Box

First Name: <INPUT
TYPE="text"
NAME="FirstName"
VALUE="First Name"
SIZE=20>

<

Last Name: <INPUT
TYPE="text"
NAME="LastName"
VALUE="Last Name"
SIZE=20>

<

• Here's how it would look on the Web:

First Name: First Name

Last Name: Last Name

Creating Larger Text Areas

- To create larger text areas, type
 <TEXTAREA NAME="name" ROWS=n1
 COLS=n2 WRAP> Default Text
 </TEXTAREA>, where n1 is the height of the text box in rows and n2 is the width of the text box in characters
- The WRAP attribute causes the cursor to move automatically to the next line as the user types

Example: Text Area

```
<B>Comments?</B>
<BR>
<TEXTAREA NAME="Comments" ROWS=10
COLS=50 WRAP>
</TEXTAREA>
```

Creating Radio Buttons

• To create a radio button, type <INPUT TYPE="radio" NAME="name" VALUE="data">Label, where "data" is the text that will be sent to the server if the button is checked and "Label" is the text that identifies the button to the user

Example: Radio Buttons

```
<B> Size: </B>
<INPUT TYPE="radio" NAME="Size"
VALUE="Large">Large
<INPUT TYPE="radio" NAME="Size"
VALUE="Medium">Medium
<INPUT TYPE="radio" NAME="Size"
VALUE="Small">Small
```

Creating Checkboxes

- To create a checkbox, type <INPUT TYPE="checkbox" NAME="name" VALUE="value">Label
- If you give a group of radio buttons or checkboxes the same name, the user will only be able to select one button or box at a time

Example: Checkboxes

```
<B> Color: </B>
<INPUT TYPE="checkbox" NAME="Color"
    VALUE="Red">Red
<INPUT TYPE="checkbox" NAME="Color"
    VALUE="Navy">Navy
    <INPUT TYPE="checkbox" NAME="Color"
    VALUE="Black">Black
```

Creating Drop-down Menus

- To create a drop-down menu, type
 <SELECT NAME="name" SIZE=n
 MULTIPLE>
- Then type <OPTION VALUE= "value">Label
- In this case the SIZE attribute specifies the height of the menu in lines and MULTIPLE allows users to select more than one menu option

Example: Drop-down Menu

- WHICH IS FAVOURITE FRUIT:
- <SELECT>
- <OPTION VALUE="MANGOES">MANGOES
- <OPTION VALUE="PAPAYA">PAPAYA
- <OPTION VALUE="GUAVA">GUAVA
- <OPTION VALUE="BANANA"> BANANA
- <OPTION VALUE="PINEAPPLE">PINEAPPLE
- </SELECT>

Creating a Submit Button

- To create a submit button, type <INPUT TYPE="submit">
- If you would like the button to say something other than submit, use the VALUE attribute
- For example, <INPUT TYPE="submit" VALUE="Buy Now!"> would create a button that says "Buy Now!"

Creating a Reset Button

- To create a reset button, type <INPUT TYPE="reset">
- The VALUE attribute can be used in the same way to change the text that appears on the button

Tables

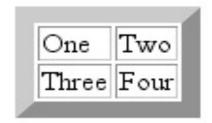
- Tables can be used to display rows and columns of data, create multi-column text, captions for images, and sidebars
- The <TABLE> tag is used to create a table; the <TR> tag defines the beginning of a row while the <TD> tag defines the beginning of a cell

Adding a Border

- The BORDER=n attribute allows you to add a border n pixels thick around the table
- To make a solid border color, use the BORDERCOLOR="color" attribute
- To make a shaded colored border, use BODERCOLORDARK="color" and BORDERCOLORLIGHT="color"

Creating Simple Table

• Here's how it would look on the Web:



Adjusting the Width

- When a Web browser displays a table, it often adds extra space. To eliminate this space use the WIDTH =n attribute in the <TABLE> and <TD> tags
- Keep in mind a cell cannot be smaller than its contents, and if you make a table wider than the browser window, users will not be able to see parts of it.

Centering a Table

- There are two ways to center a table
 - Type <TABLE ALIGN=CENTER>
 - Enclose the <TABLE> tags in opening and closing <CENTER> tags

Wrapping Text around a Table

- It is possible to wrap text around a table. This technique is often used to keep images and captions together within an article.
- To wrap text around a table, type <TABLE ALIGN = LEFT> to align the table to the left while the text flows to the right.
- Create the table using the <TR>, <TD>, and </TABLE> tags as you normally would

Adding Space around a Table

- To add space around a table, use the HSPACE=n and VSPACE=n attributes in the <TABLE> tag
- Example:

<TABLE HSPACE=20 VSPACE=20>

Spanning Cells Across Columns

- It is often necessary to span one cell across many columns. For example, you would use this technique to span a headline across the columns of a newspaper article.
- To span a cell across many columns, type
 TD COLSPAN=n>, where n is the number of columns to be spanned

Spanning Cells Across Rows

 To span a cell across many rows, type <TD ROWSPAN=n>, where n is the number of rows

Aligning Cell Content

- By default, a cell's content are aligned horizontally to the left and and vertically in the middle.
- Use VALIGN=direction to change the vertical alignment, where "direction" is top, middle, bottom, or baseline
- Use ALIGN=direction to change the horizontal alignment where "direction" is left, center, or right

Controlling Cell Spacing

- Cell spacing is the space *between* cells while cell padding is the space *around* the contents of a cell
- To control both types of spacing, use the CELLSPACING =n and CELLPADDING=n attributes in the <TABLE> tag

Nesting Tables

- Create the inner table
- Create the outer table and determine which cell of the outer table will hold the inner table
- Test both tables separately to make sure they work
- Copy the inner table into the cell of the outer table
- Don't nest too many tables. If you find yourself doing that, find an easier way to lay out your Web page

Changing a Cell's Color

- To change a cell's color, add the BGCOLOR="color" attribute to the <TD> tag
- Example:<TD BGCOLOR="blue">

Dividing Your Table into Column Groups

- You can divide your table into two kinds of column groups: structural and non-structural.
- Structural column groups control where dividing lines are drawn; Non-structural groups do not
- Both let you format an entire column of cells at once

Column Groups

- To create structural column groups, type
 <COLGROUP SPAN=n> after the <TABLE> tag,
 where n is the number of columns in the group
- To create non-structural column groups, type <COL SPAN=n>, where n is the number of columns in the group

Dividing Table into Horizontal Sections

- You can also create a horizontal section consisting of one or more rows. This allows you to format the rows all at once
- To create a horizontal section, type
 <THEAD>, <TBODY>, or <TFOOT>
 before the first <TR> tag of the section
- Netscape does not support these tags

Controlling Line Breaks

- Unless you specify otherwise a browser will divide the lines in a cell as it sees fit.
- The NOWRAP attribute placed within the
 <TD> tag forces the browser to keep all the text in a cell on one line
- Example:
 - <TD NOWRAP>Washington, D.C.

Parting Words....

- If you can imagine a way to lay out your page, chances are it is possible using HTML
- When in doubt, use an HTML reference

YOUR NAME (Heading 1, Italics, center)

Address 1

Address 2

Address 3

Description about you, which course, which semester, your future plans.(paragraph) -2

Write down a basic program to display Hello in HTML (Preserve)

HTML – ATTRIBUTES

We have seen few HTML tags and their usage like heading tags, , paragraph tag and other tags. We used them so far in their simplest form, but most of the HTML tags can also have attributes, which are extra bits of information.

An attribute is used to define the characteristics of an HTML element and is placed inside the element's opening tag. All attributes are made up of two parts: a name and a value:

☐ The name is the property you want to set. For example, the paragraph element in the example carries an attribute whose name is align, which you can use to indicate the alignment of paragraph on the page.

☐ The value is what you want the value of the property to be set and always put within quotations. The below example shows three possible values of align attribute: left, center and right

Core Attributes The four core attributes that can be used on the majority of HTML elements (although not all) are:

 \square Id

☐ Title

□ Class

□ Style

The id attribute of an HTML tag can be used to uniquely identify any element within an HTML page. There are two primary reasons that you might want to use an id attribute on an element:

☐ If an element carries an id attribute as a unique identifier, it is possible to identify just that element and its content.

☐ If you have two elements of the same name within a Web page (or style sheet), you can use the id attribute to distinguish between elements that have the same name.

The title Attribute

The title attribute gives a suggested title for the element. They syntax for the title attribute is similar as explained for id attribute:

The behavior of this attribute will depend upon the element that carries it, although it is often displayed as a tooltip when cursor comes over the element or while the element is loading.

Underlined Text Anything that appears within <u>.....</u> element, is displayed with underline

Anything that appears within <strike></strike> element is displayed with strikethrough, which is a thin line through the text

Monospaced Font The content of a ... element is written in monospaced font. Most of the fonts are known as variable-width fonts because different letters are of different widths (for example, the letter 'm' is wider than the letter 'i'). In a monospaced font, however, each letter has the same width.

Superscript Text The content of a ^{......}element is written in superscript; the font size used is the same size as the characters surrounding it but is displayed half a character's height above the other characters.

Subscript Text The content of a ___ element is written in subscript; the font size used is the same as the characters surrounding it, but is displayed half a character's height beneath the other characters.

Larger Text The content of the <big>....</big> element is displayed one font size larger than the rest of the text surrounding it

The content of the <small>....</small> element is displayed one font size smaller than the rest of the text surrounding it

Cellpadding and Cellspacing Attributes

There are two attributes called cellpadding and cellspacing which you will use to adjust the white space in your table cells. The cellspacing attribute defines the width of the border, while cellpadding represents the distance between cell borders and the content within a cell.

Colspan and Rowspan Attributes You will use colspan attribute if you want to merge two or more columns into a single column. Similar way you will use rowspan if you want to merge two or more rows.

Tables Backgrounds

You can set table background using one of the following two ways:

□ bgcolor attribute - You can set background color for whole table or just for one cell.

□ background attribute - You can set background image for whole table or just for one cell. You can also set border color also using border color attribute.

Table Height and Width You can set a table width and height using width and height attributes. You can specify table width or height in terms of pixels or in terms of percentage of available screen area.

Table Caption The caption tag will serve as a title or explanation for the table and it shows up at the top of the table. This tag is deprecated in newer version of HTML/XHTML.

Name	SUB1	SUB2
Your name	Marks	Marks

Table Header, Body, and Footer Tables can be divided into three portions: a header, a body, and a foot. The head and foot are rather similar to headers and footers in a wordprocessed document that remain the same for every page, while the body is the main content holder of the table. The three elements for separating the head, body, and foot of a table are:

- \Box to create a separate table header.
- \Box to indicate the main body of the table.
- \Box to create a separate table footer.

A table may contain several elements to indicate different pages or groups of data. But it is notable that and tags should appear before Nested Tables You can use one table inside another table. Not only tables you can use almost all the tags inside table data tag.

HTML offers web authors three ways for specifying lists of information. All lists must contain one or more list elements. Lists may contain:

- An unordered list. This will list items using plain bullets.
- An ordered list. This will use different schemes of numbers to list your items.
- A definition list. This arranges your items in the same way as they are arranged in a dictionary.

HTML Unordered Lists An unordered list is a collection of related items that have no special order or sequence. This list is created by using HTML tag. Each item in the list is marked with a bullet.

The type Attribute You can use type attribute for tag to specify the type of bullet you like. By default, it is a disc.

HTML Ordered Lists If you are required to put your items in a numbered list instead of bulleted, then HTML ordered list will be used. This list is created by using tag. The numbering starts at one and is incremented by one for each successive ordered list element tagged with .

The type Attribute You can use type attribute for tag to specify the type of numbering you like. By default, it is a number

- Default-Case Numerals.
- Upper-Case Numerals.
- Lower-Case Numerals.
- Lower-Case Letters.
- Upper-Case Letters

- Coffee
- Tea
 - Black Tea
 - Green Tea
 - China
 - Africa
- Cold Drink
- Name

Linking Documents A link is specified using HTML tag. This tag is called anchor tag and anything between the opening tag and the closing tag becomes part of the link and a user can click that part to reach to the linked document.

We have used target attribute in our previous example. This attribute is used to specify the location where linked document is opened. Following are the possible options:

Use of Base Path When you link HTML documents related to the same website, it is not required to give a complete URL for every link. You can get rid of it if you use tag in your HTML document header. This tag is used to give a base path for all the links. So your browser will concatenate given relative path to this base path and will make a complete URL

You can define an inline frame with HTML tag. The tag is not somehow related to tag, instead, it can appear anywhere in your document. The tag defines a rectangular region within the document in which the browser can display a separate document, including scrollbars and borders. The src attribute is used to specify the URL of the document that occupies the inline frame.

Attribute

Description

src

name

This attribute is used to give the file name that should be loaded in the frame. Its value can be any URL. For example, src="/html/top_frame.htm" will load an HTML file available in html directory. This attribute allows you to give a name to a frame. It is used to indicate which frame a document should be loaded into. This is especially important when you want to create links in one frame that load pages into an another frame, in which case the second frame needs a name to identify itself as the target of the link.

frameborder

This attribute specifies whether or not the borders of that frame are shown; it overrides the value given in the frameborder attribute on the and this can take values either 1 (yes) or 0 (no).

marginwidth

marginheight

This attribute allows you to specify the width of the space between the left and right of the frame's borders and the frame's content. The value is given in pixels. For example marginwidth="10". This attribute allows you to specify the height of the space between the top and bottom of the frame's borders and its contents. The value is given in pixels. For example marginheight="10". noresize By default, you can resize any frame by clicking and dragging on the borders of a frame.

The noresize attribute

prevents a user from being able to resize the frame. For example noresize="noresize".

scrolling

This attribute controls the appearance of the scrollbars that appear on the frame. This takes values either "yes", "no" or "auto". For example scrolling="no" means it should not have scroll bars.

Basic	Standard	Premium
\$99	\$99	\$99
Option	Option	Option
Option	Option	Option
Option	Option	Option
Option	Dptiso	Option
Option	Option	Option
Option	Option	Option

Category	JIO "NEW ALL-IN-ONE" PLANS			
		Plan Benefits		
	MRP	Data	Unlimited Voice (FUP for offnet in mins)	Validity (Days)
1-month	199	1.5 GB/day	1000	28
	249	2 GB/day	1000	28
	349	3 GB/day	1000	28

HTML Tag Description The HTML tag is used for grouping related options within your select list. This makes it easier for users to comprehend their choices when looking at a large list.

parameter and convert it into an integer. The radix parameter is used to specify which numeral system to be used, for example, a radix of 16 (hexadecimal) indicates that the number in the string should be parsed from a hexadecimal number to a decimal number.

HTML Forms are required, when you want to collect some data from the site visitor. For example, during user registration you would like to collect information such as name, email address, credit card, etc.

Attribute Description

action Backend script ready to process your

passed data.

method Method to be used to upload data. The

most frequently used are GET and POST

methods.

target Specify the target window or frame

where the result of the script will be

displayed. It takes values like _blank,

_self, _parent etc.

Single-line text input controls This control is used for items that require only one line of user input, such as search boxes or names. They are created using HTML tag.

Attribute	Description
type	Indicates the type of input control and for text
	input control it will be set to text.
name	Used to give a name to the control which is sent
	to the server to be recognized and get the value.
value	This can be used to provide an initial value inside
	the control.
size	Allows to specify the width of the text-input
	control in terms of characters.
maxlength	Allows to specify the maximum number of
	characters a user can enter into the text box.

Password Input controls This is also a single-line text input but it masks the character as soon as a user enters it. They are also created using HTML tag but type attribute is set to password.

Multiple-Line Text Input Controls This is used when the user is required to give details that may be longer than a single sentence. Multi-line input controls are created using HTML

Attribute	Description
name	Used to give a name to the control which is
	sent to the server to be recognized and get
	the value.
rows	Indicates the number of rows of text area
	box.
cols	Indicates the number of columns of text area
	box

Radio Button Control Radio buttons are used when out of many options, just one option is required to be selected. They are also created using HTML tag but type attribute is set to radio.

Attribute	Description
type	Indicates the type of input control and for
	checkbox input control it will be set to radio.
name	Used to give a name to the control which is sent
	to the server to be recognized and get the value.
value	The value that will be used if the radio box is
	selected.

What is CSS?

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

CSS handles the look and feel part of a web page. 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, what background images or colors are used, as well as a variety of other effects.

CSS is easy to learn and understand but it provides a powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML

Advantages of CSS

- □ CSS saves time You can write CSS once and then reuse the same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many web pages as you want.
- □ Pages load faster If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So, less code means faster download times.

☐ Easy maintenance - To make a global change, simply change the style, and all the elements in all the web pages will be updated automatically.
☐ Superior styles to HTML - CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.

To create a personal portfolio page, you need to be proficient in HTML. In this project, you will create a web page containing the standard information for a work portfolio, including your name and image, projects, skills, and interests

The portfolio page should have a header and footer section. The header section include your personal information, contact information, and work. You can place your photo at the top part of the page and include a short description of your professional career and interests. Below this description, you can add a few work samples. The footer section can contain your social media handles.