CC - I - WEB DESIGN

OBJECTIVES

1. Able to explain the fundamental concepts of internet
2. Able to explain the various tags of HTML

UNIT I : Introduction to the Internet : Computers in Business – Networking – Internet – Email – Resource Sharing – Gopher – WWW – Usenet – Telnet – Bulletin Board Service – Wide Area Information Service

UNIT II : Introduction to HTML: Head and Body Section – Header Section – Prologue – Body Section : Colorful webpage – Heading - Printing – Aligning – Horizontal Ruler – Anchor tag – Hyperlink – Comment .

UNIT III : Paragraph – Tab Setting : Formatting Characters – Physical Style Format – Colorful Web Pages - Font tag – Base Font – Pre Formatting Text – Special Characters.

UNIT IV : Images and Pictures – List : Ordered List – Unordered List – Nested List – Table handling : Table Creation – Width of tables and Cells – Cell's Spanning - Coloring Cells – Column Specification

UNIT V : Frames : Frame set Definition – Frame Definition – Nested Frame Sets – Forms – Form Elements.

Unit:I

Internet

Internet is defined as an Information super Highway, to access information over the web. However, It can be defined in many ways as follows:

- Internet is a world-wide global system of **interconnected computer networks**.
- Internet uses the standard Internet Protocol (TCP/IP).
- Every computer in internet is identified by a unique IP address.
- IP Address is a unique set of numbers **(such as 110.22.33.114)** which identifies a computer location.

- A special computer DNS (Domain Name Server) is used to give name to the IP Address so that user can locate a computer by a name.

- For example, a DNS server will resolve a name **http://www.tutorialspoint.com** to a particular IP address to uniquely identify the computer on which this website is hosted.

- Internet is accessible to every user all over the world.
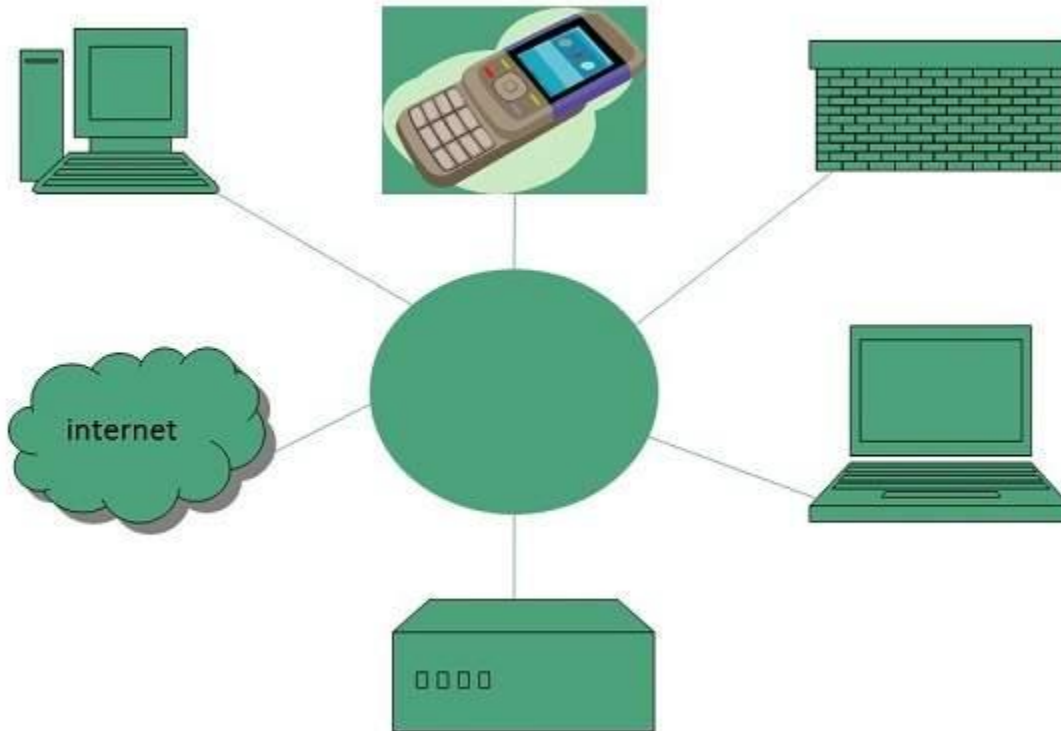

Evolution

The concept of Internet was originated in 1969 and has undergone several technological & Infrastructural changes as discussed below:

- The origin of Internet devised from the concept of **Advanced Research Project Agency Network (ARPANET).**

- **ARPANET** was developed by United States Department of Defense.

- Basic purpose of ARPANET was to provide communication among the various bodies of government.

- Initially, there were only four nodes, formally called **Hosts.**

- In 1972, the **ARPANET** spread over the globe with 23 nodes located at different countries and thus became known as **Internet.**

- By the time, with invention of new technologies such as TCP/IP protocols, DNS, WWW, browsers, scripting languages etc.,Internet provided a medium to publish and access information over the web.

Advantages

Internet covers almost every aspect of life, one can think of. Here, we will discuss some of the advantages of Internet:
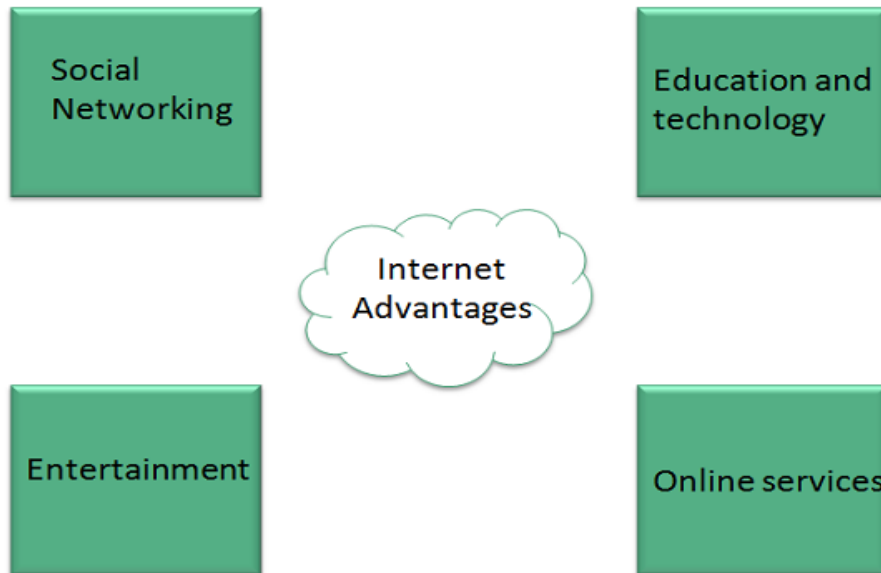

- Internet allows us to communicate with the people sitting at remote locations. There are various apps available on the web that uses Internet as a medium for communication. One can find various social networking sites such as:
  - Facebook
  - Twitter
- Apart from communication and source of information, internet also serves a medium for entertainment. Following are the various modes for entertainment over internet.
  - Online Television
  - Online Games
  - Songs
  - Videos
  - Social Networking Apps
- Internet allows us to use many services like:
  - Internet Banking

- o Matrimonial Services
- o Online Shopping
- o Online Ticket Booking
- o Online Bill Payment
- o Data Sharing
- o E-mail

Disadvantages

However, Internet has prooved to be a powerful source of information in almost every field, yet there exists many disadvanatges discussed below:
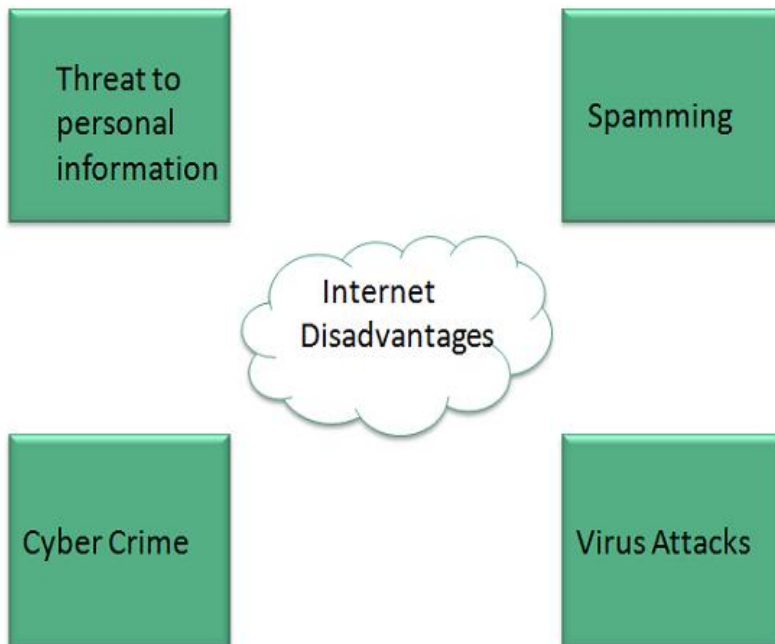
- There are always chances to loose personal information such as name, address, credit card number. Therefore, one should be very careful while sharing such information. One should use credit cards only through authenticated sites.

- Another disadvantage is the **Spamming**.Spamming corresponds to the unwanted e-mails in bulk. These e-mails serve no purpose and lead to obstruction of entire system.

- **Virus** can easily be spread to the computers connected to internet. Such virus attacks may cause your system to crash or your important data may get deleted.

- There are various websites that do not provide the authenticated information. This leads to misconception among many people.

Networking :is the exchange of information and ideas among people with a common profession or special interest, usually in an informal social setting. ... (The term computer **networking refers to linking multiple devices so that they can readily share information and software resources.)**

Computer Network Types

A computer network is a group of computers linked to each other that enables the computer to communicate with another computer and share their resources, data, and applications.

A computer network can be categorized by their size. A **computer network** is mainly of **four types**:
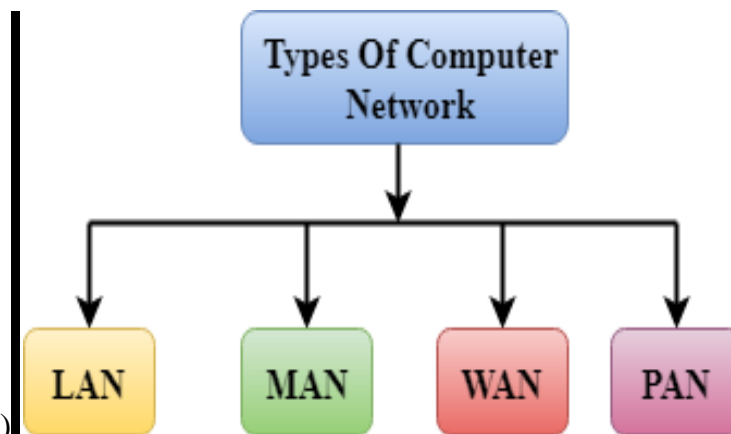
- o   LAN(Local Area Network)
- o   PAN(Personal Area Network)
- o   MAN(Metropolitan Area Network)
- o   WAN(Wide Area Network)

LAN(Local Area Network)

- Local Area Network is a group of computers connected to each other in a small area such as building, office.
- LAN is used for connecting two or more personal computers(PC) through a communication medium such as twisted pair, coaxial cable, etc.
- It is less costly as it is built with inexpensive hardware such as hubs, network adapters, and ethernet cables.
- The data is transferred at an extremely faster rate in Local Area Network.
- Local Area Network provides higher security.

PAN(Personal Area Network)

- Personal Area Network is a network arranged within an individual person, typically within a range of 10 meters.
- Personal Area Network is used for connecting the computer devices of personal use is known as Personal Area Network.
- Thomas Zimmerman was the first research scientist to bring the idea of the Personal Area Network.
- Personal Area Network covers an area of 30 feet.

MAN(Metropolitan Area Network)

- o A metropolitan area network is a network that covers a larger geographic area by interconnecting a different LAN to form a larger network.
- o Government agencies use MAN to connect to the citizens and private industries.
- o In MAN, various LANs are connected to each other through a telephone exchange line.
- o It has a higher range than Local Area Network(LAN).
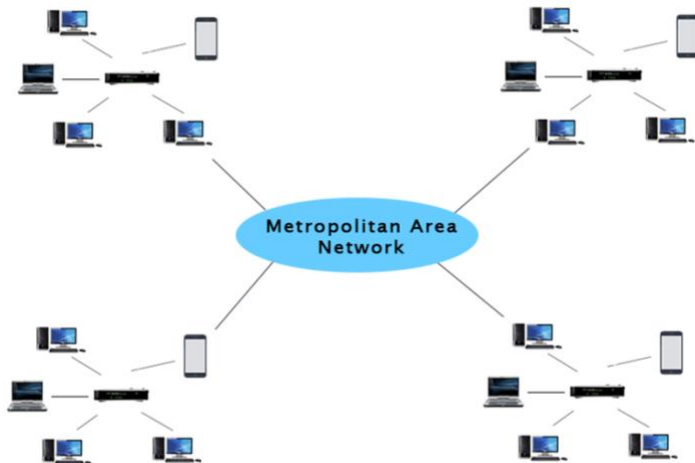
WAN(Wide Area Network)

- o A Wide Area Network is a network that extends over a large geographical area such as states or countries.
- o A Wide Area Network is quite bigger network than the LAN.
- o A Wide Area Network is not limited to a single location, but it spans over a large geographical area through a telephone line, fibre optic cable or satellite links.
- o The internet is one of the biggest WAN in the world.
- o A Wide Area Network is widely used in the field of Business, government, and education.

The importance of Computers in Business:-

- • Computers speed up the business processes and systems with top quality. Today's world computer is important to use to start an online and offline business. A computer is important to use in business to automate the manufacturing, marketing, and, distribution process.
- • Computers help in research, production, distribution, marketing, banking, team management, business automation, data storage, employee management, and very helpful to increase

productivity at a lower cost, less time with high quality. That's why the use of the computer is important in business. And the computer is the 1st and main tool in business that generates and manages profits.

- Computers help businesses to collect manages, calculate, arrange, and visualize customer data and information by us computer applications such as Microsoft word, excel, lower PowerPoint, and tally. A computer helps to communicate faster with the customer by using the internet, online communication tools, and internet phone system. It's really important for the administration of the big or small organization and each field that manages resources and Opportunites.
- Computer help creates marketing and advertising materials by using adobe photoshop, Corel draw, online designing tools. The computer is used in business to create websites for business. The computer is important in business to automate business transactions by using onlinebanking, paymentGateway.

Advantages of computers in business

- A lot of small businesses keep & store important business documents on their computers , Since these computers have big storage hard-drives , they can store many files & the discovery or retrieval of these files is very easy , The data can be accessed via the internal or external network within the company .
- Some data can be made private by use of password protected folders , For medium size growing companies , they invest in the centralized powerful computers which store all business data , This process creates efficiency within the business & it helps in the transfer of data & information .
- The computers can be used to transfer the information within the organization / business , They can be used to store the data , so , this data can be moved across the company using the computer , The users will access the data stored on the company database , The companies set up the websites that require the users to login to access this data .

Disadvantages of computers in business

- Small business owners don't know how to use the computer for business purposes , so , they have to hire the experts to teach them & their employees how to use the computers to accomplish specific business tasks , but this process is costly & it takes time .
- The computers give you many efficient ways for the employees to share the information , but at the same time , the employees with malicious intentions can use this opportunity to hack into the system to access private business information , This information can be sold to business rivals , that is harmful to the business
- You will spend a lot of money in the computer maintenance contracts with the experts who will service your computers every month to ensure that they operate efficiently , It can be costly & some small businesses can't afford them .
- The computer replaces the human labor , If the business decides to use the computers to complete most difficult tasks , The humans will not be much needed & this will cause job loss & unemployment , It is a good technology for the business , because it will guarantee efficiency & quality , but it will cut off so many people .

E-Mail

Electronic mail, or email, is a very popular application in computer networks such as the Internet. Email appeared in the early 1970s and allows users to exchange text based messages. Initially, it was mainly used to exchange short messages, but over the years its usage has grown.

Email is a service which allows us to send the message in electronic mode over the internet. It offers an efficient, inexpensive and real time mean of distributing information among people.

E-Mail Address

Each user of email is assigned a unique name for his email account. This name is known as E-mail address. Different users can send and receive messages according to the e-mail address.

E-mail is generally of the form username@domainname. For example, webmaster@tutorialspoint.com is an e-mail address where webmaster is username and tutorialspoint.com is domain name.

- The username and the domain name are separated by @ (at) symbol.
- E-mail addresses are not case sensitive.
- Spaces are not allowed in e-mail address.

E-mail Message Components

E-mail message comprises of different components: E-mail Header, Greeting, Text, and Signature. These components are described in the following diagram:

E-mail Header

The first five lines of an E-mail message is called E-mail header. The header part comprises of following fields:

- From
- Date
- To
- Subject
- CC
- BCC

From

The **From** field indicates the sender's address i.e. who sent the e-mail.

Date

The **Date** field indicates the date when the e-mail was sent.

To

The **To** field indicates the recipient's address i.e. to whom the e-mail is sent.

Subject

The **Subject** field indicates the purpose of e-mail. It should be precise and to the point.

CC

CC stands for Carbon copy. It includes those recipient addresses whom we want to keep informed but not exactly the intended recipient.

BCC

BCC stands for Black Carbon Copy. It is used when we do not want one or more of the recipients to know that someone else was copied on the message.

Greeting

Greeting is the opening of the actual message. Eg. Hi Sir or Hi Guys etc.

Text

It represents the actual content of the message.

Signature

This is the final part of an e-mail message. It includes Name of Sender, Address, and Contact Number.

Advantages

E-mail has prooved to be powerful and reliable medium of commmunication. Here are the benefits of **E-mail:**

- Reliable
- Convenience
- Speed
- Inexpensive
- Printable
- Global
- Generality

Reliable

Many of the mail systems notify the sender if e-mail message was undeliverable.

Convenience

There is no requirement of stationary and stamps. One does not have to go to post office. But all these things are not required for sending or receiving an mail.

Speed

E-mail is very fast. However, the speed also depends upon the underlying network.

Inexpensive

The cost of sending e-mail is very low.

Printable

It is easy to obtain a hardcopy of an e-mail. Also an electronic copy of an e-mail can also be saved for records.

Global

E-mail can be sent and received by a person sitting across the globe.

Generality

It is also possible to send graphics, programs and sounds with an e-mail.

Disadvantages

Apart from several benefits of E-mail, there also exists some disadvantages as discussed below:

- Forgery
- Overload
- Misdirection
- Junk
- No response

Forgery

E-mail doesn't prevent from forgery, that is, someone impersonating the sender, since sender is usually not authenticated in any way.

Overload

Convenience of E-mail may result in a flood of mail.

Misdirection

It is possible that you may send e-mail to an unintended recipient.

Junk

Junk emails are undesirable and inappropriate emails. Junk emails are sometimes referred to as spam.

No Response

It may be frustrating when the recipient does not read the e-mail and respond on a regular basis.

Gopher

The Gopher technology was invented at the University of Minnesota, whose mascot is, not surprisingly, the Golden Gopher. The gopher system allows people to search for and retrieve information using a text interface. The technology is based on a client-server structure, where a gopher client program is used to search gopher servers. These servers can store documents, articles, programs, and other information. Instead of hyperlinks, the gopher interface uses menus of links to other documents and programs.

The University of Minnesota began a licensing program for the gopher technology in 1993 as the use of gopher was spreading rapidly over the Internet. However, this was around the same time that the World Wide Web was introduced. Because the Web used hypertext and images, it soon became the preferred way to search and browse for information. While there are still servers and client programs that use gopher technology, their use is not nearly as widespread as the Web.

Shared resource

In computing, a **shared resource**, or **network share**, is a computer resource made available from one host to other hosts on a computer network.[1] It is a device or piece of information on a computer that can be remotely accessed from another computer transparently as if it were a resource in the local machine. Network sharing is made possible by inter-process communication over the network.[2][3]

Some examples of shareable resources are computer programs, data, storage devices, and printers. E.g. **shared file access** (also known as **disk sharing** and **folder sharing**), shared printer access, shared scanner access, etc. The shared resource is called a **shared disk**, **shared folder** or **shared document**

What is World Wide Web?

World Wide Web, which is also known as a Web, is a collection of websites or web pages stored in web servers and connected to local computers through the internet. These websites contain text pages, digital images, audios, videos, etc. Users can access the content of these sites from any part

of the world over the internet using their devices such as computers, laptops, cell phones, etc. The WWW, along with internet, enables the retrieval and display of text and media to your device.

The building blocks of the Web are web pages which are formatted in HTML and connected by links called "hypertext" or hyperlinks and accessed by HTTP. These links are electronic connections that link related pieces of information so that users can access the desired information quickly. Hypertext offers the advantage to select a word or phrase from text and thus to access other pages that provide additional information related to that word or phrase.

A web page is given an online address called a Uniform Resource Locator (URL). A particular collection of web pages that belong to a specific URL is called a website, e.g., *www.facebook.com*, *www.google.com*, etc. So, the World Wide Web is like a huge electronic book whose pages are stored on multiple servers across the world.

Small websites store all of their WebPages on a single server, but big websites or organizations place their WebPages on different servers in different countries so that when users of a country search their site they could get the information quickly from the nearest server.

So, the web provides a communication platform for users to retrieve and exchange information over the internet. Unlike a book, where we move from one page to another in a sequence, on World Wide Web we follow a web of hypertext links to visit a web page and from that web page to move to other web pages. You need a browser, which is installed on your computer, to access the Web.
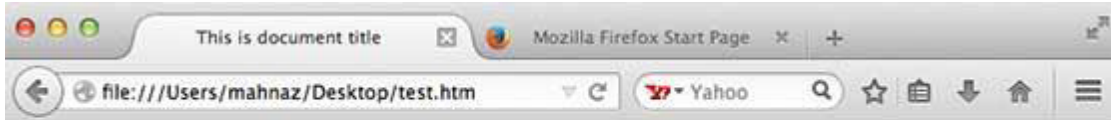
<u>**UNIT II : Introduction to HTML**</u>:

HTML stands for **H**yper**t**ext **M**arkup **L**anguage, and it is the most widely used language to write Web Pages.

- **Hypertext** refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext.

- As its name suggests, HTML is a **Markup Language** which means you use HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

- Originally, HTML was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers.
- Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

<u>Basic HTML Document</u>
<u>In its simplest form, following is an example of an HTML document:</u>
<!DOCTYPE html>//introduction
<html>
<head>
<title>This is document title</title>
</head>
<body>
<h1>This is a heading</h1>
<p>Document content goes here.....</p>
</body>
</html>

HTML Tags

HTML is a markup language and makes use of various tags to format the content. These tags are enclosed within angle braces **<Tag Name>**. Except few tags, most of the tags have their corresponding closing tags. For example, **<html>** has its closing tag**</html>** and **<body>** tag has its closing tag **</body>** tag etc.

Above example of HTML document uses

Tag	Description
<!DOCTYPE...>	This tag defines the document type and HTML version.
<html>	**Within the <html> tag, the basic structure of a document reveals two primary sections: the "head" and the "body". This tag encloses the complete HTML** document and mainly comprises of document header which is represented by <head>...</head> and document body which is represented by <body>...</body> tags.

<head>	This tag represents the document's header which can keep other HTML tags like <title>, <link> etc.
<title>	The <title> tag is used inside the <head> tag to mention the document title.
<body>	This tag represents the document's body which keeps other HTML tags like <h1>, <div>, <p> etc.
<h1>	This tag represents the heading.
<p>	This tag represents a paragraph.

****

HTML Document Structure

A typical HTML document will have the following structure:

```
Document declaration tag

<html>

   <head>
     Document header related tags
   </head>

   <body>
        Document body related tags
   </body>

</html>
```

The <!DOCTYPE> Declaration

The <!DOCTYPE> declaration tag is used by the web browser to understand the version of the HTML used in the document. Current version of HTML is 5 and it makes use of the following declaration:

    <!DOCTYPE html>

****
******

The HTML <head> Element(Head Section)

The <head> element is a container for metadata (data about data) and is placed between the <html> tag and the <body> tag.

HTML metadata is data about the HTML document. Metadata is not displayed.

Metadata typically define the document title, character set, styles, scripts, and other meta information.

The HTML <head> element is a container for the following elements: <title>, <style>, <meta>, <link>, <script>, and <base>.

The HTML <title> Element

The <title> element defines the title of the document. The title must be text-only, and it is shown in the browser's title bar or in the page's tab.

The <title> tag is required in HTML documents!

The contents of a page title is very important for search engine optimization (SEO)! The page title is used by search engine algorithms to decide the order when listing pages in search results.

The <title> element:

- defines a title in the browser toolbar
- provides a title for the page when it is added to favorites
- displays a title for the page in search engine-results

A simple HTML document:

```
<!DOCTYPE html>
<html>
<head>
 <title>A Meaningful Page Title</title>
</head>
<body>

<h1>This is the example for head tag(title tag) </h1>

<p>The content of the body element is displayed in the browser window.</p>

<p>The content of the title element is displayed in the browser tab, in favorites and
in search-engine results.</p>
</body>
</html>
```

HTML <style> Tag

The <style> tag is used to define style information (CSS) for a document.

Inside the <style> element you specify how HTML elements should render in a browser.

EXAMPLE:

```
<!DOCTYPE html>
<html>
<body>

<p>I am normal</p>
<p style="color:red;">I am red</p>
<p style="color:blue;">I am blue</p>
<p style="font-size:50px;">I am
big</p>

</body>
</html>
```

I am normal

I am red

I am blue

I am big

- The HTML style attribute is used to add styles to an element, such as color, font, size, and more.

The HTML Style Attribute

- Setting the style of an HTML element, can be done with the style attribute.

The HTML style attribute has the following syntax:

<tagname **style =**"*property:value;*"**>**

The *property* is a CSS property. The *value* is a CSS value.

Background Color

The CSS **background-color** property defines the background color for an HTML element.

Example

```
<!DOCTYPE html>
<html>
<body style="background-color:powderblue;">

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

This is a heading

This is a paragraph.

HTML | Style Tag

The <style> tag in HTML helps us to modify our text, viewed in the page. This modification includes changing font size, font family, font color etc. Not only the texts but also we can change the style of a body are part of a page.

```
<tagname style="property:value;">
```

- The tagname includes <p>, <body>, from <h1> to <h6> etc.
- The property is borrowed from CSS like color, font-size, font-family etc.
- The value is also borrowed from CSS.(**cascading style sheet**)

HTML Font Family: The font family changes the font style of a text and can be used in any text writing tag like <p> or heading tag. These font families include all the names that you find in Microsoft Office or any other writing-based software.
Example:
<html>

```
<head>
    <title>Font Family</title>
</head>
<body>
    <h1 style="font-family:arial;">Hello GeeksforGeeks.</h1>
    <h2 style="font-family:times new roman;">Hello GeeksforGeeks.</h2>
    <h3 style="font-family:algerian;">Hello GeeksforGeeks.</h3>
    <p style="font-family:arial black;">Hello GeeksforGeeks.</p>
</body>
</html>
```
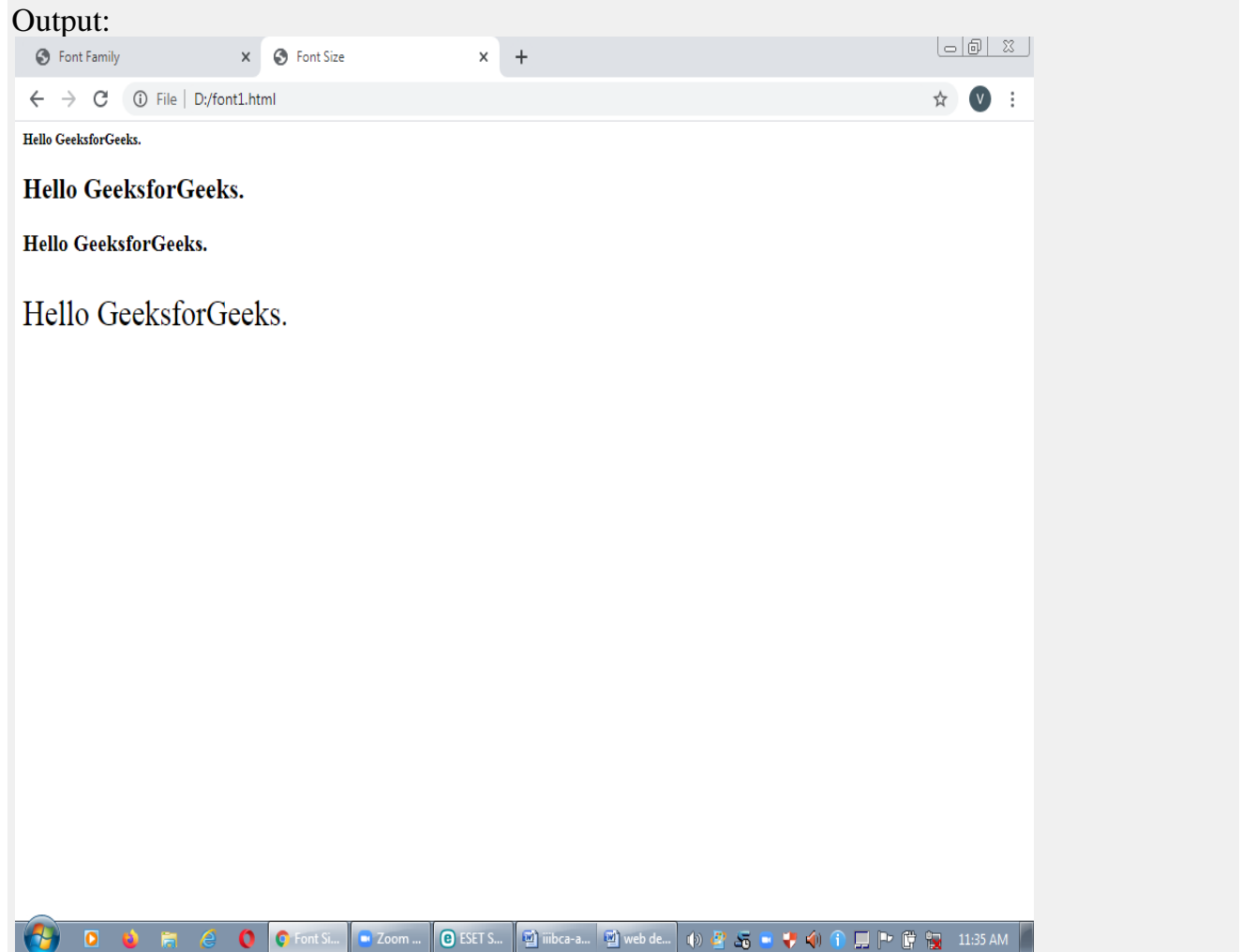
Output:
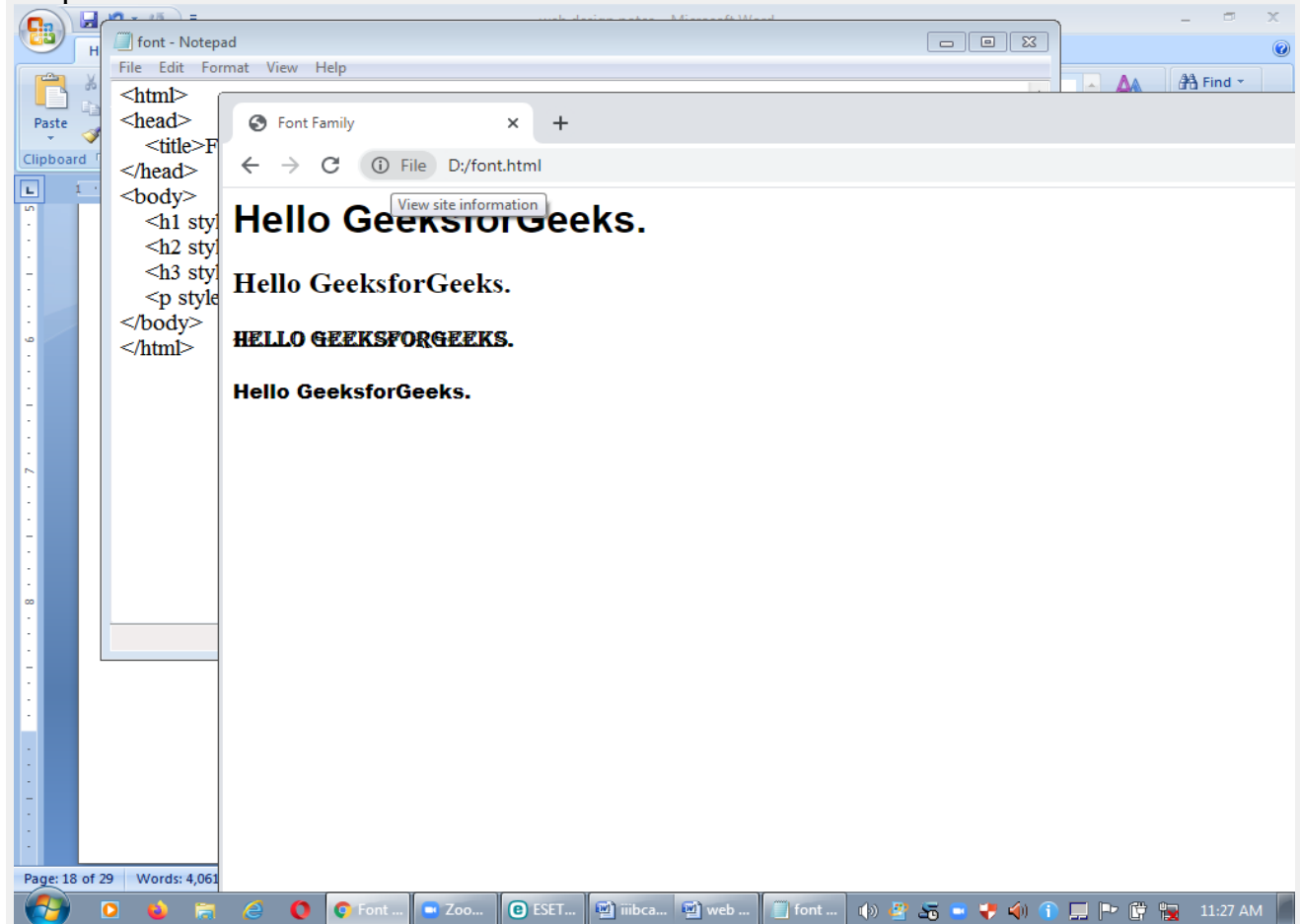
1. **HTML Font Size:** The font size changes the size of a text and this can also be used in any text writing tag like <p> or heading tag. The units can be given in "%" or pixels (px)or other units can also be included.
Example

```
<html>
<head>
```

```
        <title>Font Size</title>
    </head>
    <body>
        <h1 style="font-size:80%;">Hello GeeksforGeeks.</h1>
        <h2 style="font-size:150%;">Hello GeeksforGeeks.</h2>
        <h3 style="font-size:20px;">Hello GeeksforGeeks.</h3>
        <p style="font-size:30px;">Hello GeeksforGeeks.</p>
    </body>
</html>
```

Output:

HTML Font Color: The font color tag changes the color of a text and can be used in any text writing tag like <p> or heading tag. We can use both name of the colors or also the color codes that is mainly used in Photoshop. For various color codes or to pick from various color ranges refer HTML Color Codes.

Example:
```
    <html>
    <head>
```

```
        <title>Font Color</title>
    </head>
    <body>
        <h1 style="color:red;">Hello GeeksforGeeks.</h1>
        <h2 style="color:#8CCEF9;">Hello GeeksforGeeks.</h2>
        <h3 style="color:green;">Hello GeeksforGeeks.</h3>
        <p style="color:#810CA6;">Hello GeeksforGeeks.</p>
    </body>
    </html>
```

Output:

****
****

HTML | body Tag

The <body> tag in HTML is used to define the main content present inside an HTML page. It is always enclosed within <html>tag. The <body> tag is the last child of <html> tag. A body tag contains starting as well as an ending tag.

Syntax:

The <body> tag defines the document's body.

The <body> element contains all the contents of an HTML document, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

Note: There can only be one <body> element in an HTML document.

<body> Body Contents... </body>

```
<!DOCTYPE html>
<html>
<head>
 <title>Body Tag</title>
</head>
<body>
 <h2>Example of body tag</h2>
 <p>This paragraph is written between the body tag</p>
</body>
</html>
```


****
******
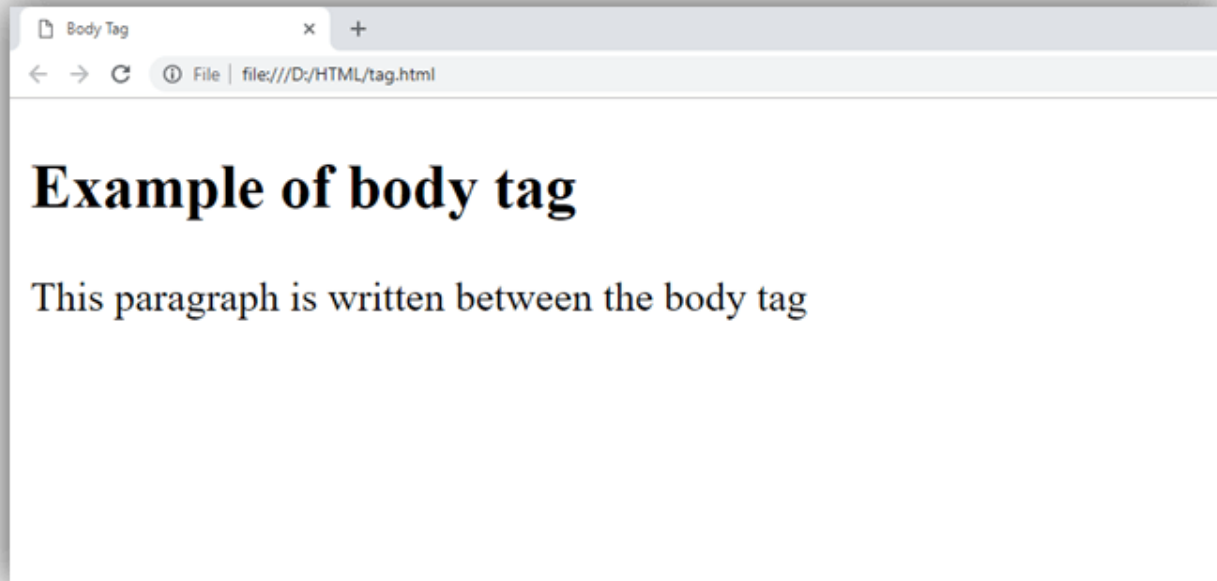
HTML Headings

HTML headings are titles or subtitles that you want to display on a webpage.
HTML headings are defined with the <h1> to <h6> tags.
<h1> defines the most important heading. <h6> defines the least important heading.

```
<!DOCTYPE html>

<html>
<body>
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
</body>
</html>
```

OUTPUT:

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

Headings Are Important:

Search engines use the headings to index the structure and content of your web pages.
<h1> headings should be used for main headings, followed by <h2> headings, then the less important <h3>, and so on.

Note: Use HTML headings for headings only. Don't use headings to make text **BIG** or **bold**.

Bigger Headings

Each HTML heading has a default size. However, you can specify the size for any heading with the style attribute, using the CSS font-size property:

Example

```
<!DOCTYPE html>
<html>
<body>
<h1 style="font-size:60px;">Heading 1</h1>

<p>You can change the size of a heading with the style attribute, using the font-size property.</p>

</body>
</html>
```

Heading 1

You can change the size of a heading with the style attribute, using the font-size property.

****

HTML <header> Tag

The <header> element represents a container for introductory content or a set of navigational links.

A <header> element typically contains:

- one or more heading elements (<h1> - <h6>)
- logo or icon
- authorship information

  Note: You can have several <header> elements in one HTML document. However, <header> cannot be placed within a <footer>, <address> or another <header> element.

Example:

```
<!DOCTYPE html>
<html>
<body>
<article>
```

```
<header>*********12/10/2020**********
  <h1>A heading here</h1>
  <p>Posted by John Doe</p>
  <p>Some additional information here</p>
 </header>
 <p>Lorem Ipsum dolor set amet....</p>
</article>
</body>
</html>
```

A heading here

Posted by John Doe

Some additional information here

Lorem Ipsum dolor set amet....

Head", "Header", "Heading": three similar names for three very different things.

"\<head\>" appears *before* the "\<body\>" of a web page.
It contains metadata that provides the the browser with information about the page.

"\<header\>" appears *within* the body of the web page. Typically as:

It contains introductory material, such as the title, date, author, or summary.

"Headings" are \<h1\>, \<h2\>, … tags.
They provide the titles and subtitles that describe the content and structure of the web page.

Body Section : Colorful webpage

By default, your webpage background is white in color. You may not like it, but no worries. HTML provides you following two good ways to decorate your webpage background.

- **HTML Background with Colors**
- **HTML Background with Images**

Now let's see both the approaches one by one using appropriate examples.

Html Background with Colors

The **bgcolor** attribute is used to control the background of an HTML element, specifically page body and table backgrounds.

Note − The *bgcolor* attribute deprecated in HTML5. Do not use this attribute.

Following is the syntax to use bgcolor attribute with any HTML tag.

```
<tagname bgcolor =
"color_value"...>
```

This color_value can be given in any of the following formats −

```
1.<!-- Format 1 - Use color name -->
<table bgcolor = "lime" >
```

```
2.<!-- Format 2 - Use hex value -->
<table bgcolor = "#f1f1f1" >
```

```
3.<!-- Format 3 - Use color value in RGB terms
-->
<table bgcolor = "rgb(0,0,120)" >
```

Example

Here are the examples to set background of an HTML tag

```
-!DOCTYPE html>
<html>
  <head>
    <title>HTML Background Colors</title>
  </head>
  <body>
    <!-- Format 1 - Use color name -->
    <table bgcolor = "yellow" width = "100%">
      <tr>
        <td>
          This background is yellow
        </td>
      </tr>
    </table>

    <!-- Format 1 - Use color CODE-->
    <table bgcolor = "#6666FF" width = "100%">
      <tr>
        <td>
          This background is sky blue
        </td>
      </tr>
    </table>

    <!-- Format 3 - Use color value in RGB terms -->
    <table bgcolor = "rgb(255,0,255)" width = "100%">
      <tr>
        <td>
          This background is green
        </td>
      </tr>
    </table>
  </body>

</html>
```

This will produce the following result −

This background is yellow

This background is sky blue

This background is green

Html Background with Images

The **background** attribute can also be used to control the background of an HTML element, specifically page body and table backgrounds. You can specify an image to set background of your HTML page or table.

Note − The *background* attribute deprecated in HTML5. Do not use this attribute.

Note − The *background* attribute is deprecated and it is recommended to use Style Sheet for background setting.

Following is the syntax to use background attribute with any HTML tag.

<tagname background = "Image URL"...>

The most frequently used image formats are JPEG, GIF and PNG images.

Example

Here are the examples to set background images .

```
<!DOCTYPE html>
<html>
  <head>
    <title>HTML Background Images</title>
  </head>
  <body>
    <!-- Set  background IMAGE -->
    <table background = "C:\Users\Administrator\Pictures\amri.gif"" width = "100%" height =
"100">
      <tr>
      <td>
         This background is filled up with HTML image.
      </td>
     </tr>
     </table>
  </body>
  </html>
```

This will produce the following result –
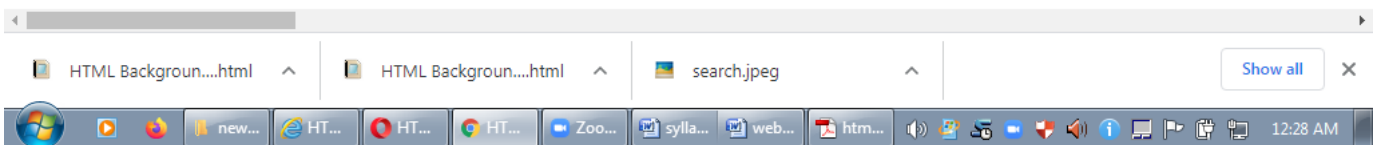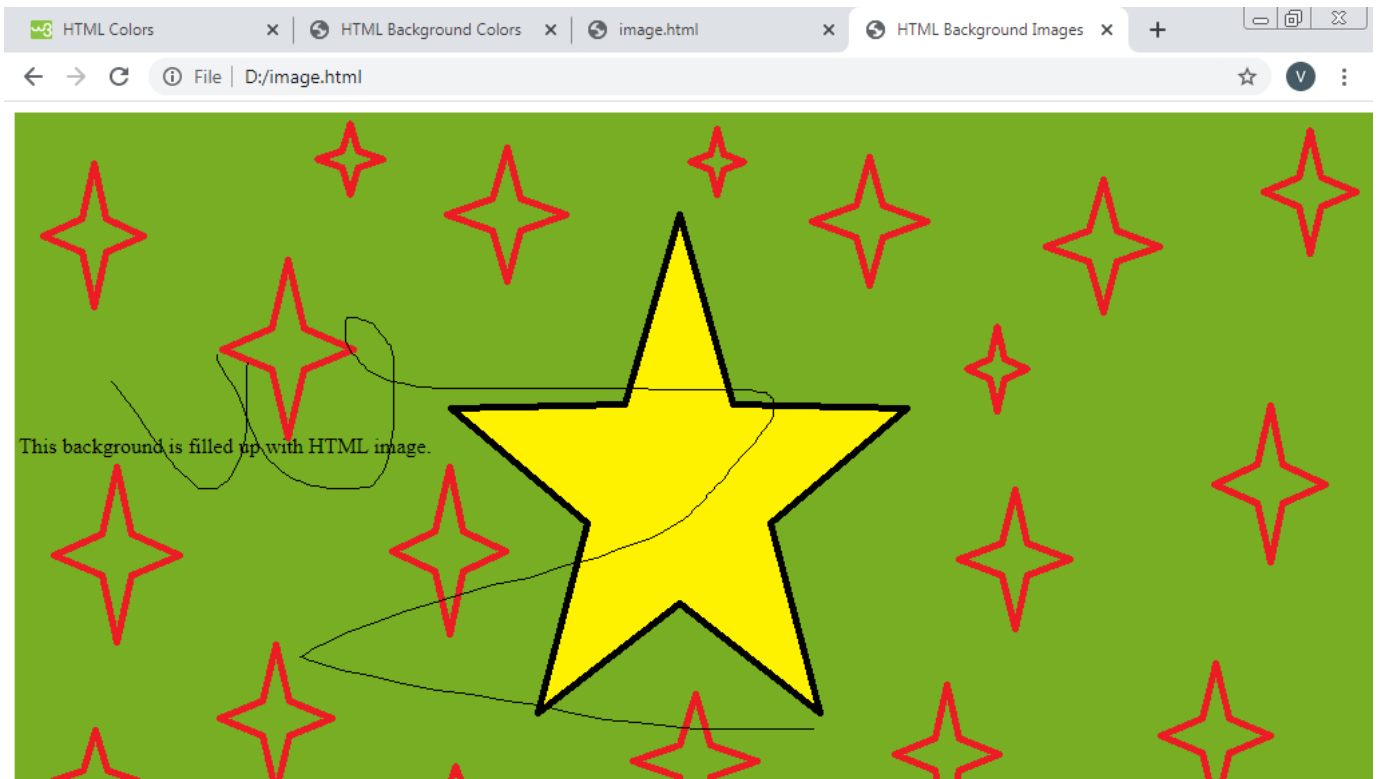
Printing

The **print**() method **prints** the contents of the current window. The **print**() method opens the **Print** Dialog Box, which lets the user to select preferred **printing** options.

Printing an HTML Document

To print a document

1. Open a document in the HTML editor.
2. Do one of the following:
   - On the main menu, click **File > Print**.

- Press CTRL+P.

The document prints as it appears in the HTML editor, NOT as it appears in a browser.

To see a print preview

1. Open a document in the HTML editor.
2. On the main menu, click **File > Print Preview**. The **Preview** dialog box appears.
3. Do one or more of the following

   - To increase/decrease magnification, click **Zoom In/Zoom Out.**
   - To display two pages at a time, click **Two Page**.
   - To scroll through multiple pages, click **Next page** and **Prev Page**.
   - To send the document to the printer, in the preview dialog box, click **Print**.
   - Click **Close** to close the dialog box.

To change the printer setup (such as the printer, paper size or orientation)

1. Open a document in the HTML editor.
2. On the main menu, click **File > Print Setup**. The **Print Setup** dialog box appears.
3. Specify the printer, printer properties, paper size, paper source, and orientation, then click **OK** to accept, or **Cancel** to abort changes.

While a document is printing, a printer icon appears next to the clock on the task bar. When this icon disappears, your entire document has been sent to the printer.

Definition and Usage

The print() method prints the contents of the current window.

The print() method opens the Print Dialog Box, which lets the user to select preferred printing options.

Syntax

window.print()

Example

Print the current page:

```
<!DOCTYPE html>
<html>
<body>

<h2>The window.print() Method</h2>

<p>Click the button to print the current page.</p>

<button onclick="window.print()">Print this
page</button>

</body>
</html>
```

Output:

The window.print()Method

Click the button to print the current page.

```
Print this page
```
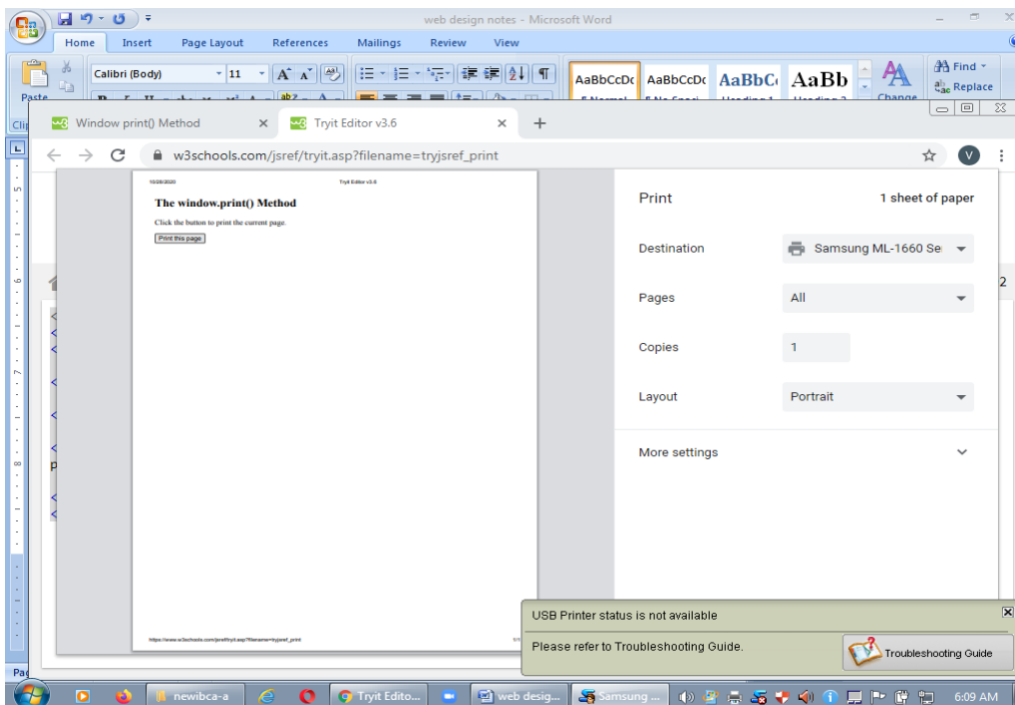
Aligning

The purpose of the HTML align attribute is to specify the alignment(movement) of data and the justification of text in a cell of a table.

Supported elements

HTML align attribute supports col, colgroup, tbody, td, tfoot, th, thead, tr elements.

Usage of align attribute for any other HTML elements is deprecated. You must use CSS for those.

Syntax

```
<ElementName align="value" >.....</ElementName>
```

Where Element Name is any supported element.

Type of value

Type of value of HTML align attribute is **predefined.**

Values

Name	Description
left	Left align data, left justify text.
center	Center align data, center justify text.
right	Right align data, right justify text.
justify	Double justify text.
char	If used, text is aligned around a specific character.

Default value

The default value of HTML align attribute is left.

```
<!DOCTYPE html>
<html>
  <head>
    <title>
       HTML table align Attribute
    </title>
</head>
  <body>
    <h1 style=color:green>GeeksforGeeks</h1>
      <h2>HTML table align Attribute</h2>
      <table border="1"
          align="right">
       <caption>Author Details</caption>
        <tr>
          <th>NAME</th>
          <th>AGE</th>
          <th>BRANCH</th>
        </tr>
        <tr>
          <td>BITTU</td>
          <td>22</td>
          <td>CSE</td>
        </tr>
        <tr>
          <td>RAM</td>
          <td>21</td>
          <td>ECE</td>
        </tr>
      </table>
</body>
```

</html>
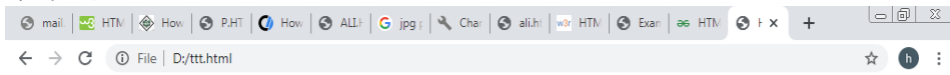
GeeksforGeeks

HTML table align Attribute

Author Details

NAME	AGE	BRANCH
BITTU	22	CSE
RAM	21	ECE

table13.jpg   example.jpeg

Example

```
<!DOCTYPE html>
<html>
 <head>
   <title>
     HTML the align Attribute
  </title>
</head>
 <body>
   <h1>GeeksforGeeks</h1>
     <h2>HTML the align Attribute</h2>
     <table width="300" border="1">
      <tr>
         <th align="left">NAME</th>
         <th align="center">AGE</th>
         <th align="right">BRANCH</th>
      </tr>
       <tr>
         <td>BITTU</td>
         <td>22</td>
         <td>CSE</td>
```

```
        </tr>
         <tr>
          <td>RAKESH</td>
          <td>25</td>
          <td>EC</td>
         </tr>
      </table>
</body>
  </html>
```

GeeksforGeeks

HTML th align Attribute

NAME	AGE	BRANCH
BITTU	22	CSE
RAKESH	25	EC

How to align text on a web page in HTML or CSS

Any text can be aligned to the left, center, or right on a web page. Images can also be aligned on a web page the same way as text.

Left-aligned example

By default, English and other languages align the text to the left.

However, if you need to change an elements alignment, the below

code can be added to the element or into CSS.

HTML code

```
<p style="text-align: left;">Left-aligned</p>
<p style="text-align: left;"><img src="example.jpg"></p>
```

Tab aligned example

Although there's not a "tab" text-alignment, adding a left-margin

gives the appearance of a tab alignment, as shown below.

Center-aligned example

Using the text-align attribute, you can center any text or image in

an element, as shown in the example below.

< Right-aligned example

Using the text-align attribute, you can center any text or image in

an element, as shown in the example below.

```
<HTML>
<BODY>
<p style="text-align: left;">Left-aligned</p>
<p style="text-align: left;"><img src="C:\Users\Public\Pictures\example.jpeg"></p>
<p style="margin-left:2.5em;">Tab aligned</p>
<p style="margin-left:2.5em;"><img src="C:\Users\Public\Pictures\example.jpeg"></p>
<p style="text-align: center;">Center-aligned</p>
<p style="text-align: center;"><img src="C:\Users\Public\Pictures\example.jpeg"></p>
<p style="text-align: right;">Right-aligned</p>
<p style="text-align: right;"><img src="C:\Users\Public\Pictures\example.jpeg"></p>
</BODY>
<html>
```


</HTML>

HTML | <hr> Tag(Horizontal Ruler)

The <hr> tag in HTML stands for **horizontal rule** and is used to insert a horizontal rule or a **thematic break** in an HTML page to divide or separate document sections. The <hr> tag is an empty tag and it does not require an end tag.

Tag Attributes: The table given below describe the <hr> tag atributes:

ATTRIBUTE	VALUE	DESCRIPTION
Align	left center right	Used to specify the alignment of the horizontal rule.
noshade	noshade	Used to specify the bar without shading effect.
size	pixels	Used to specify the height of the horizontal rule.
width	pixels	Used to specify the width of the horizontal rule.

Syntax :

```
<hr> ...
```

Example 1:

```
<!DOCTYPE html>
<html>
   <head>
     <title>HTML hr tag</title>
   </head>
   <body>
     <p>There is a horizontal rule below this paragraph.</p>
     <hr>
     <p>This is a horizontal rule above this paragraph.</p>
   </body>
</html>
```

Output:

There is a horizontal rule below this paragraph.

This is a horizontal rule above this paragraph.

Example 2:
```
<!DOCTYPE html>
<html>
   <head>
     <title>hr tag with attributes</title>
   </head>
   <body>
     <p>Normal horizontal line.</p>
     <hr>
     <p>Horizontal line with height of 30 pixels</p>
     <hr size="30">

     <p>Horizontal line with height of 30 pixels
                      and noshade.</p>
     <hr size="30" noshade>
   </body>
</html>
```

Normal horizontal line.

Horizontal line with height of 30 pixels

Horizontal line with height of 30 pixels and noshade.

HTML Anchor

The **HTML anchor tag** defines ***a hyperlink that links one page to another page***. It can create hyperlink to other web page as well as files, location, or any URL. The "**href"(hypertext reference)** attribute is the most important attribute of the HTML a tag. and which links to destination page or URL.

The most important attribute of the <a> element is the href attribute, which indicates the link's destination.

The *link text* is the part that will be visible to the reader.

Clicking on the link text, will send the reader to the specified URL address.

href attribute of HTML anchor tag

The href attribute is used to define the address of the file to be linked. In other words, it points out the destination page.

The syntax of HTML anchor tag is given below.

 Link Text

Let's see an example of HTML anchor tag.

```
<!DOCTYPE>
<html>
<body>
<a href="yy.html">Click for Second Page</a>
</body>
</html>
```
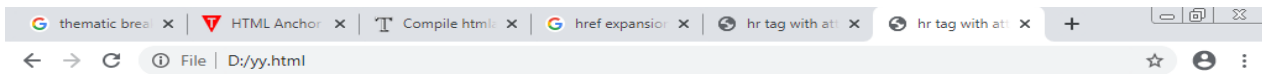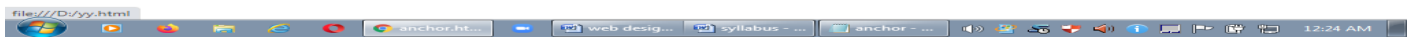
Appearance of HTML anchor tag

- An **unvisited link** is displayed underlined and blue.
- A **visited link** displayed underlined and purple.
- An **active link** is underlined and red.

Specify a location for Link using target attribute

By default, the linked page will be displayed in the current browser window. To change this, you must specify another target for the link.

The target attribute specifies where to open the linked document.

The target attribute can have one of the following values:

- _self - Default. Opens the document in the same window/tab as it was clicked
- _blank - Opens the document in a new window or tab
- _parent - Opens the document in the parent frame
- _top - Opens the document in the full body of the window

```
<!DOCTYPE html>
<html>
<body>

<h2>The target Attribute</h2>

<a href="https://www.w3schools.com/" target="_blank">Visit
W3Schools!</a>

<p>If target="_blank", the link will open in a new browser window or
tab.</p>

</body>
</html>
```

Run »

Result Size: 497 x 461

```
<!DOCTYPE html>
<html>
<body>

<h2>The target Attribute</h2>

<a href="https://www.w3schools.com/" target="_blank">Visit
W3Schools!</a>

<p>If target="_blank", the link will open in a new browser
window or tab.</p>

</body>
</html>
```

The target Attribute

Visit W3Schools!

If target="_blank", the link will open in a new browser window or tab.

Anchor_Tag.htm

Show all
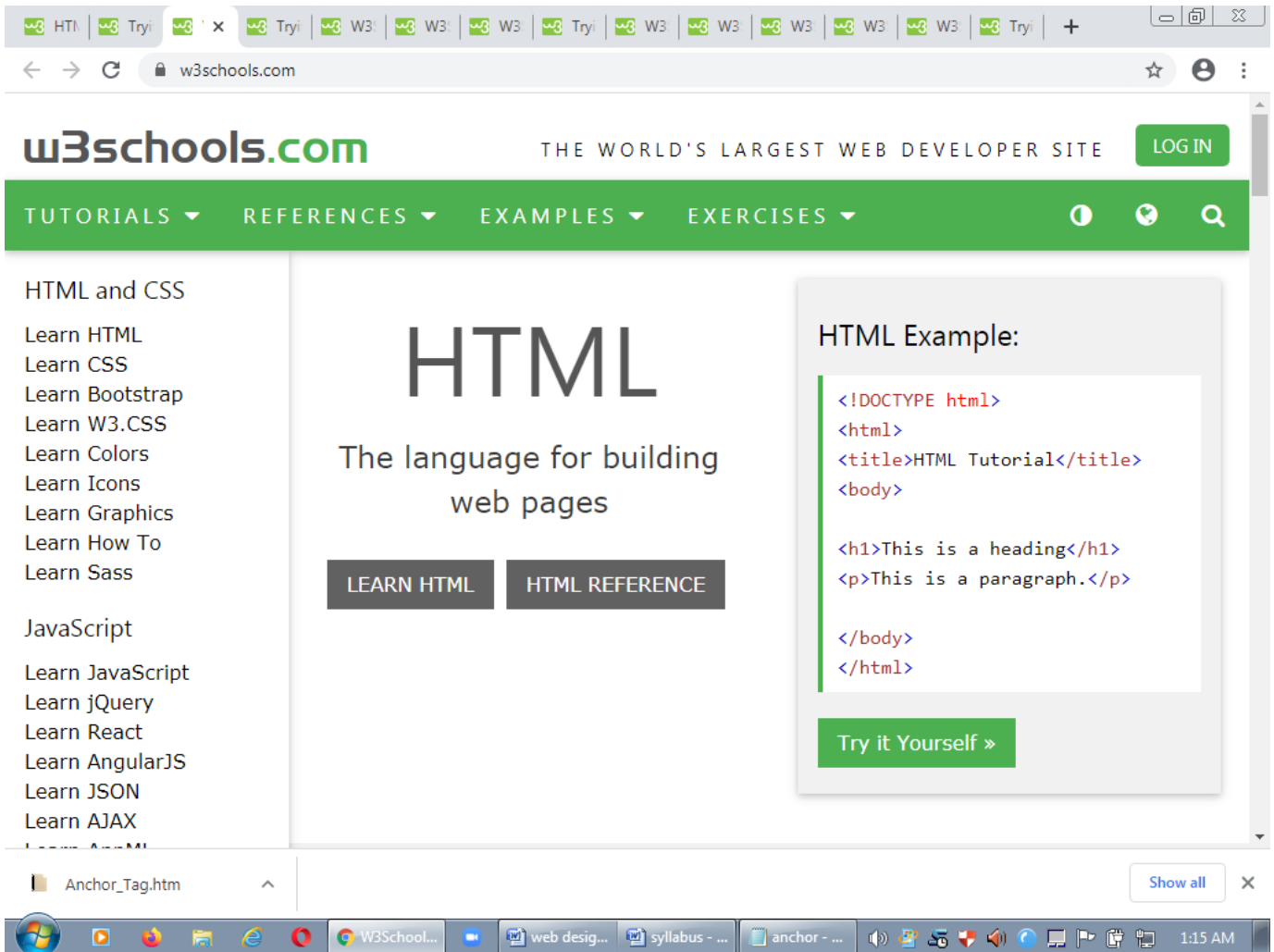
Absolute URLs vs. Relative URLs

Both examples above are using an **absolute URL** (a full web address) in the href attribute.

A local link (a link to a page within the same website) is specified with a **relative URL** (without the "https://www" part):

Example

```
<h2>Absolute URLs</h2>
<p><a href="https://www.w3.org/">W3C</a></p>
<p><a href="https://www.google.com/">Google</a></p>

<h2>Relative URLs</h2>
<p><a href="html_images.asp">HTML Images</a></p>
<p><a href="/css/default.asp">CSS Tutorial</a></p>
```

w3schools.com/html/tryit.asp?filename=tryhtml_links

Result Size: 497 x 461

```
<!DOCTYPE html>
<html>
<body>

<h2>Absolute URLs</h2>
<p><a href="https://www.w3.org/">W3C</a></p>
<p><a href="https://www.google.com/">Google</a></p>

<h2>Relative URLs</h2>
<p><a href="html_images.asp">HTML Images</a></p>
<p><a href="/css/default.asp">CSS Tutorial</a></p>

</body>
</html>
```

Absolute URLs

W3C

Google

Relative URLs

HTML Images

CSS Tutorial

```html
<!DOCTYPE html>
<html>
<body>

<h2>Absolute URLs</h2>
<p><a href="https://www.w3.org/">W3C</a></p>
<p><a href="https://www.google.com/">Google</a></p>

<h2>Relative URLs</h2>
<p><a href="html_images.asp">HTML Images</a></p>
<p><a href="/css/default.asp">CSS Tutorial</a></p>

</body>
</html>
```

HTML Links - Hyperlinks

HTML links are hyperlinks.

You can click on a link and jump to another document.

When you move the mouse over a link, the mouse arrow will turn into a little hand.

HTML Links - Use an Image as a Link

To use an image as a link, just put the <img> tag inside the <a> tag:

HTML Comments

- Comments are some text or code written in your code to give an explanation about the code, and not visible to the user. Comments which are used for HTML file are known as HTML comments. Anything written between these tags will be ignored by the browser, so comments will not be visible on the webpage.
- Comments of any code make code easy to understand and increase readability of code.
- Comments are also part of the code, which gives an explanation of the code.

How to add comment In HTML

Syntax
```
<! -- Write commented text here -->
```

```
<!DOCTYPE html>
<html>

  <head>  <!-- Document Header Starts -->
    <title>This is document title</title>
  </head> <!-- Document Header Ends -->

  <body>
    <p>Document content goes here.....</p>
  </body>

</html>
```

Multiline Comment

In HTML code, we can also comments multiple lines at a time. In multiline comment we can use any description about code or multiple line code to debug, etc.

Syntax
```
<!---
Your code is commented.
Write description of code.
It will not display at webpage.
-->
```

🏠 ⬇ 🖨 ▤ **Run ▶**

```html
<!DOCTYPE html>
<html>
<head>
        <style>
                body{
                        text-align: center;
                        background-color: #98f5ff;
                }
        </style>
  </head>
    <body>
      <h2>Cake Gallery</h2>
        <!-- This is image for a yummy cake
 you can see it on your web-page
 of your favorite browser -->
 <img
src="https://static.javatpoint.com/htmlpages/images/cake.j
pg" alt="cake image" height="300px" width="300px">
  </body>
</html>
```
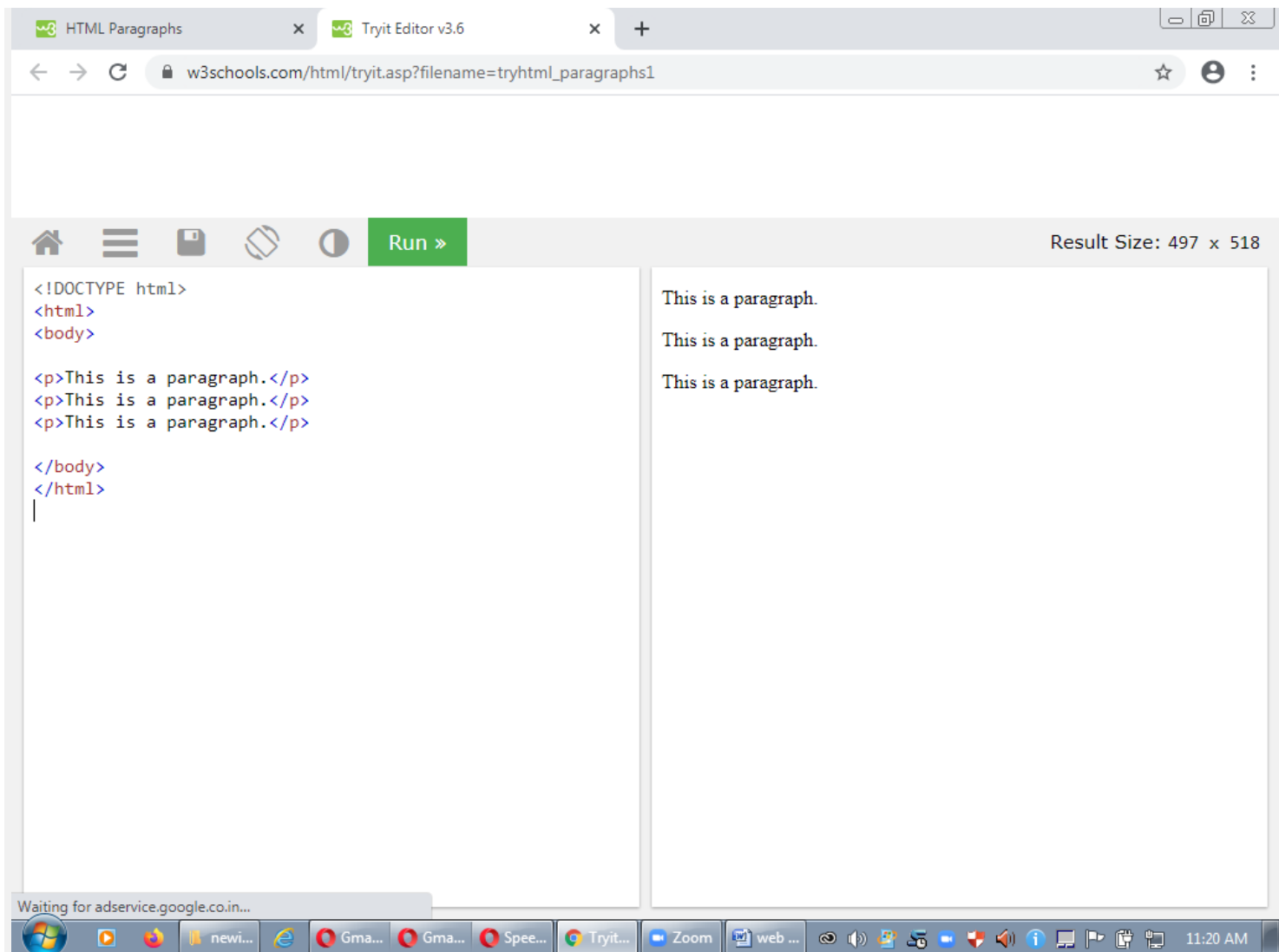
Cake Gallery

UNIT:3

HTML Paragraphs

- The HTML <p> element defines a paragraph.

- A paragraph always starts on a new line, and browsers automatically add some white space (a margin) before and after a paragraph.

Example

<p>This is a paragraph.</p>
<p>This is another paragraph.</p>

__HTML Display__

- You cannot be sure how HTML will be displayed.

- Large or small screens, and resized windows will create different results.

- With HTML, you cannot change the display by adding extra spaces or extra lines in your HTML code.

- The browser will automatically remove any extra spaces and lines when the page is displayed:
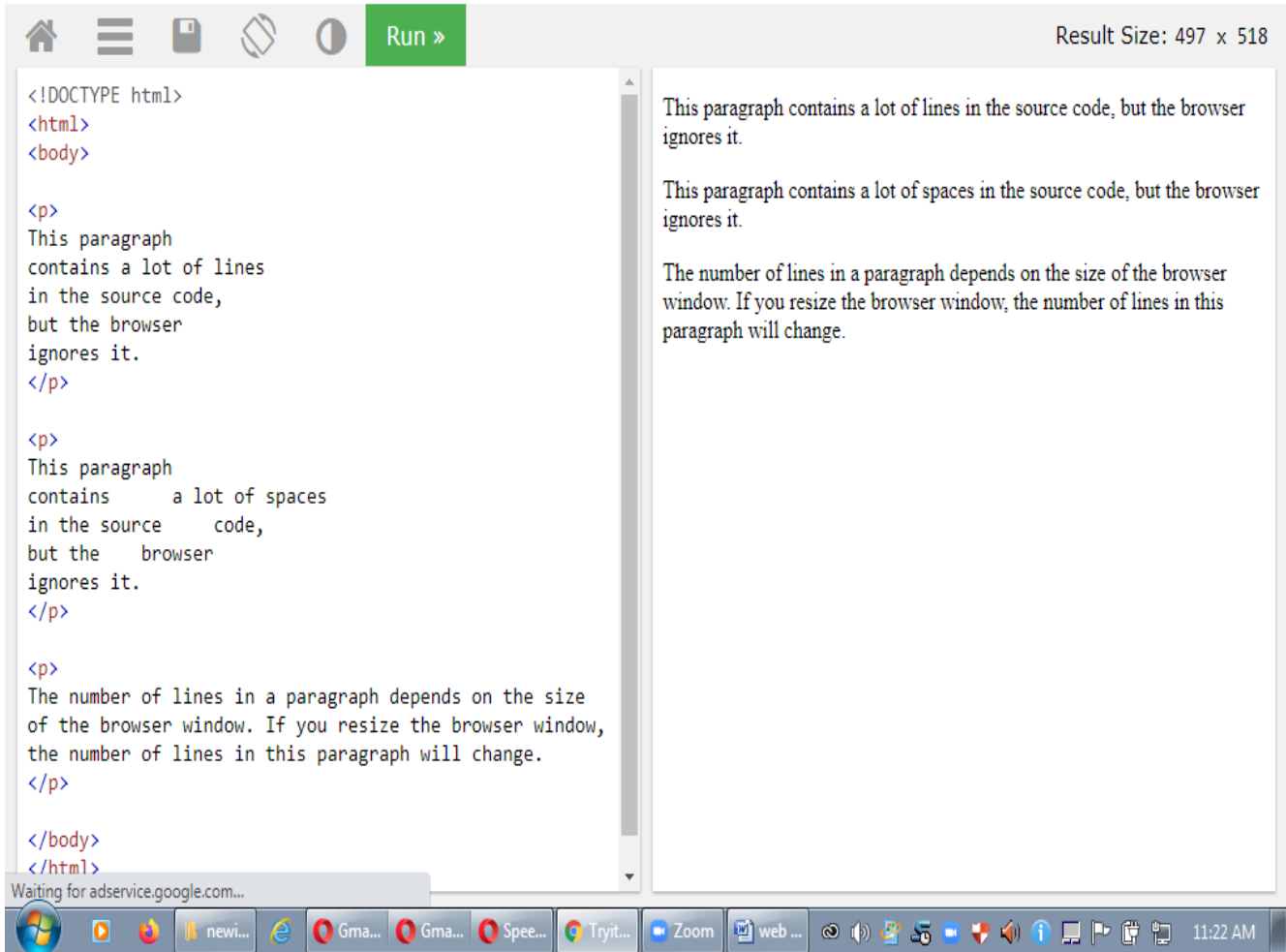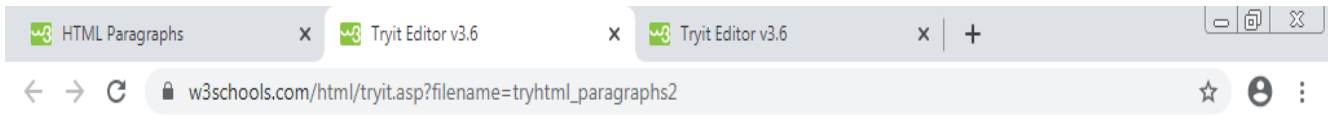
HTML Horizontal Rules

- The `<hr>` tag defines a thematic break in an HTML page, and is most often displayed as a horizontal rule.

- The `<hr>` element is used to separate content (or define a change) in an HTML page:

- The `<hr>` tag is an empty tag, which means that it has no end tag.

HTML Line Breaks

- The HTML <br> element defines a line break.

- Use <br> if you want a line break (a new line) without starting a new paragraph:

- The <br> tag is an empty tag, which means that it has no end tag.

Example


```
<!DOCTYPE html>
<html>
<head>
<style>
p {
  color: navy;
  text-indent: 30px;
```

```
  text-transform: uppercase;
}
</style>
</head>
<body>

<h1>Style paragraphs with CSS</h1>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

</body>
</html>
```

Style paragraphs with CSS

LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT, SED DO EIUSMOD TEMPOR INCIDIDUNT UT LABORE ET DOLORE MAGNA ALIQUA. UT ENIM AD MINIM VENIAM, QUIS NOSTRUD EXERCITATION ULLAMCO LABORIS NISI UT ALIQUIP EX EA COMMODO CONSEQUAT. DUIS AUTE IRURE DOLOR IN REPREHENDERIT IN VOLUPTATE VELIT ESSE CILLUM DOLORE EU FUGIAT NULLA PARIATUR. EXCEPTEUR SINT OCCAECAT CUPIDATAT NON PROIDENT, SUNT IN CULPA QUI OFFICIA DESERUNT MOLLIT ANIM ID EST LABORUM.

LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT, SED DO EIUSMOD TEMPOR INCIDIDUNT UT LABORE ET DOLORE MAGNA ALIQUA. UT ENIM AD MINIM VENIAM, QUIS NOSTRUD EXERCITATION ULLAMCO LABORIS NISI UT ALIQUIP EX EA COMMODO CONSEQUAT. DUIS AUTE IRURE DOLOR IN REPREHENDERIT IN VOLUPTATE VELIT ESSE CILLUM DOLORE EU FUGIAT NULLA PARIATUR. EXCEPTEUR SINT OCCAECAT CUPIDATAT NON PROIDENT, SUNT IN CULPA QUI OFFICIA DESERUNT MOLLIT ANIM ID EST LABORUM.
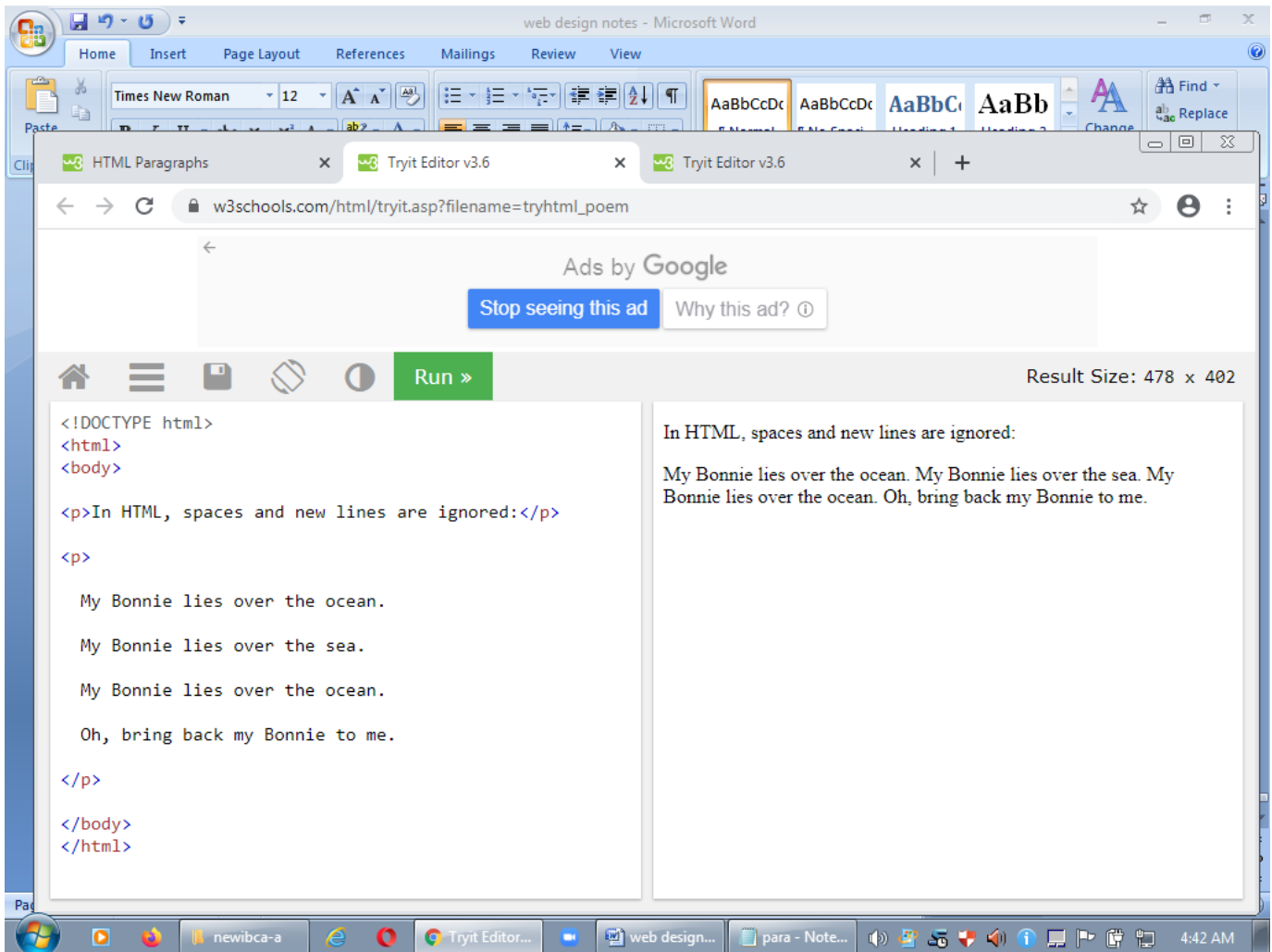
The HTML <pre> Element

- The HTML <pre> element defines preformatted text.

- The text inside a <pre> element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks:

Example

```
<pre>
 My Bonnie lies over the ocean.


 My Bonnie lies over the sea.


 My Bonnie lies over the ocean.
```

Oh, bring back my Bonnie to me.
</pre>

Formatting Characters

HTML Formatting is a process of formatting text for better look and feel. HTML provides us ability to format text without using CSS. There are many formatting tags in HTML. These tags are used to make text bold, italicized, or underlined. There are almost 14 options available that how text appears in HTML .

In HTML the formatting tags are divided into two categories:

- o Physical tag: These tags are used to provide the visual appearance to the text.
- o Logical tag: These tags are used to add some logical or semantic value to the text.

Here, we are going to learn 14 HTML formatting tags. Following is the list of HTML formatting text.

Element name	Description
	This is a physical tag, which is used to bold the text written between it.
<strong>	This is a logical tag, which tells the browser that the text is important.
<i>	This is a physical tag which is used to make text italic.
<em>	This is a logical tag which is used to display content in italic.
<mark>	This tag is used to highlight text.
<u>	This tag is used to underline text written between it.
<tt>	This tag is used to appear a text in teletype. (not supported in HTML5)
<strike>	This tag is used to draw a strikethrough on a section of text. (Not supported in HTML5)
<sup>	It displays the content slightly above the normal line.
<sub>	It displays the content slightly below the normal line.
<del>	This tag is used to display the deleted content.

<ins>	This tag displays the content which is added
<big>	This tag is used to increase the font size by one conventional unit.
<small>	This tag is used to decrease the font size by one unit from base font size.

1) Bold Text

HTML and <strong> formatting elements

The HTML element is a physical tag which display text in bold font, without any logical importance. If you write anything within .... element, is shown in bold letters.

```
<!DOCTYPE>
<html>
<body>
<p> <b>Write Your First Paragraph in bold text.</b></p>
</body>
</html>
```

Output:

Write Your First Paragraph in bold text.

The HTML tag is a logical tag, which displays the content in bold font and informs the browser about its logical importance. If you write anything between **???????. ,** is shown important text.

Example: <p>This is an important content, and this is normal content</p>

Output:

This is an important content, and this is normal content

2) Italic Text

HTML <i> and formatting elements

The HTML <i> element is physical element, which display the enclosed content in italic font, without any added importance. If you write anything within <i>............</i> element, is shown in italic letters.

Example:**<p> <i>**Write Your First Paragraph in italic text.**</i></p>**

Output:

Write Your First Paragraph in italic text.

The HTML tag is a logical element, which will display the enclosed content in italic font, with added semantics importance.

 example:

<p>This is an important content****, which displayed in italic font.**</p>**

Output:

This is an important content, which displayed in italic font.

3) HTML Marked formatting

If you want to mark or highlight a text, you should write the content within
<mark>.........</mark>.

Example

<!DOCTYPE>
<html>
<body>
<h2> I want to put a <mark> Mark</mark> on your face</h2>
</body>
</html>

Output:I want to put a <mark>Mark</mark> on your face

4) Underlined Text

If you write anything within <u>.........</u> element, is shown in underlined text.

<p> <u>Write Your First Paragraph in underlined text.</u></p>

Output: Write Your First Paragraph in underlined text.

5) Strike Text

Anything written within **<strike>......................</strike>** element is displayed with strikethrough. It is a thin line which cross the statement.

example:

<p> <strike>Write Your First Paragraph with strikethrough</strike>.</p>

Output: ~~Write Your First Paragraph with strikethrough~~.

Teletype Text element (<**tt**>) creates inline text which is presented using the user agent's default monospace font face.

6) Monospaced Font

If you want that each letter has the same width then you should write the content within <tt>.............</tt> element**.(Teletype Text element (<tt>) creates inline text which is presented using the user agent's default monospace font face.**)

Note: We know that most of the fonts are known as variable-width fonts because different letters have different width. (for example: 'w' is wider than 'i'). Monospaced Font provides similar space among every letter.

example:

<!DOCTYPE>
<html>
<body>
<p>Hello <tt>Write Your First Paragraph in monospaced font.</tt></p>
</body>
</html>

> **Output:**Hello Write Your First Paragraph in monospaced font.

7) Superscript Text

If you put the content within ^{..............} element, is shown in superscript; means it is displayed half a character's height above the other characters.

 example:

<p>Hello ^{Write Your First Paragraph in superscript.}</p>

> **Output:** Hello $^{\text{Write Your First Paragraph in}}$
> $^{\text{superscript.}}$

8) Subscript Text

If you put the content within _{..............} element, is shown in subscript ; means it is displayed half a character's height below the other characters.

example:

<p>Hello _{Write Your First Paragraph in subscript.}</p>

> Output: Hello $_{\text{Write Your First Paragraph in}}$
> $_{\text{subscript.}}$

9) Deleted Text

Anything that puts within ~~..........~~ is displayed as deleted text.

example:

<p>Hello ~~Delete your first paragraph.~~</p>

> Output: Hello

10) Inserted Text

Anything that puts within <ins>..........</ins> is displayed as inserted text.

 example:

<p> ~~Delete your first paragraph.**~~<ins>**Write another paragraph.**</ins></p>**

> output: <u>**Write another paragraph.**</u>

11) Larger Text

If you want to put your font size larger than the rest of the text then put the content within <big>.........</big>. It increase one font size larger than the previous one.

example:

<p>Hello <big>Write the paragraph in larger font.</big></p>
> Output: Hello Write the paragraph in larger
> font.

12) Smaller Text

If you want to put your font size smaller than the rest of the text then put the content within <small>.........</small>tag. It reduces one font size than the previous one.

example:

<p>Hello <small>Write the paragraph in smaller font.</small></p>
> **Output:**Hello Write the paragraph in smaller font.

Physical Style Format

<div align="center">

Character Tags

</div>

- A tag that you apply to an individual character is referred to as a character tag. There are two types of character tags, physical and logical.

Physical Tags
Physical tags are used to indicate exactly how specific characters are to be formatted.
<u>The syntax or format for using a PHYSICAL TAG is as follows:</u>

| <Tag Name> Characters to be formatted. </Tag Name> |

Examples of Physical Character Tags

<B>	Indicates that the text should be bold.	</B>
<I>	Indicates that the text should be italic.	</I>
<TT>	Indicates that the text should be used with a font such as Courier that allots the same width to each character.	</TT>
<BIG>	Indicates that the text should be displayed in a big font. Available in HTML 3.0 or higher.	</BIG>
<SMALL>	Indicates that the text should be displayed in a small font. Available in HTML 3.0 or higher.	</SMALL>
_{	Indicates that the text should be displayed as a $_{subscript}$, in a smaller font if possible. Available in HTML 3.0 or higher.	}
^{	Indicates that the text should be displayed as a ^{superscript}, in a smaller font if possible. Available in HTML 3.0 or higher.	}

<U>	Indicates that the text should be displayed underlined. Not all browsers support this tag.	</U>

Logical Tags

Logical tags are used to indicate to the visually impaired that there is some emphasizes on the text. Each browser has its own technique as to how to indicate to its viewer that the text between the tags are different.

The syntax or format for using a LOGICAL TAG is as follows:

<Tag Name> Character/s to be formatted. </Tag Name>

Examples of Logical Character Tags

<EM>	Indicates that characters should be emphasized in some way. Usually displayed in italics.	</EM>
<STRONG>	Emphasizes characters more strongly than <EM>. Usually displayed in a bold font	</STRONG>
<CODE>	Indicates a sample of code. Usually displayed in a Courier font or a similiar font that allots the same width to each character.	</CODE>
<KBD>	Used to offset text that the user should enter. Often displayed in a Courier font or a similar font that allots the same width to each character.	</KBD>

<VAR>	Indicates a variable. Often displayed in italics or underlined.	</VAR>
<CITE>	Indicates short quotes or citations. Often italized by browsers.	</CITE>

Colorful Web Pages

Colors are very important to give a good look and feel to your website. You can specify colors on page level using <body> tag or you can set colors for individual tags using **bgcolor** attribute.

The <body> tag has following attributes which can be used to set different colors −

- **bgcolor** − sets a color for the background of the page.(<body style="background-color:powderblue;">)

- **text** − sets a color for the body text.

- **alink** − sets a color for active links or selected links.

- **link** − sets a color for linked text.

- **vlink** − sets a color for *visited links* − that is, for linked text that you have already clicked on.

HTML Color Coding Methods

There are following three different methods to set colors in your web page −

- **Color names** − You can specify color names directly like green, blue or red.

- **Hex codes** − A six-digit code representing the amount of red, green, and blue that makes up the color.

- **Color decimal or percentage values** − This value is specified using the rgb( ) property.

```
<!DOCTYPE html>
<html>

   <head>
      <title>HTML Colors by Name</title>
   </head>

   <body text = "blue" >
```

-        <p>Use different color names for for bgcolor =color:green
- body and table and see the result.</p>
-
-      <table bgcolor = "black">
-       <tr>
-        <td>
-         This text will appear white on black background.
-        </td>
-       </tr>
-      </table>
-    </body>
-
-   </html>
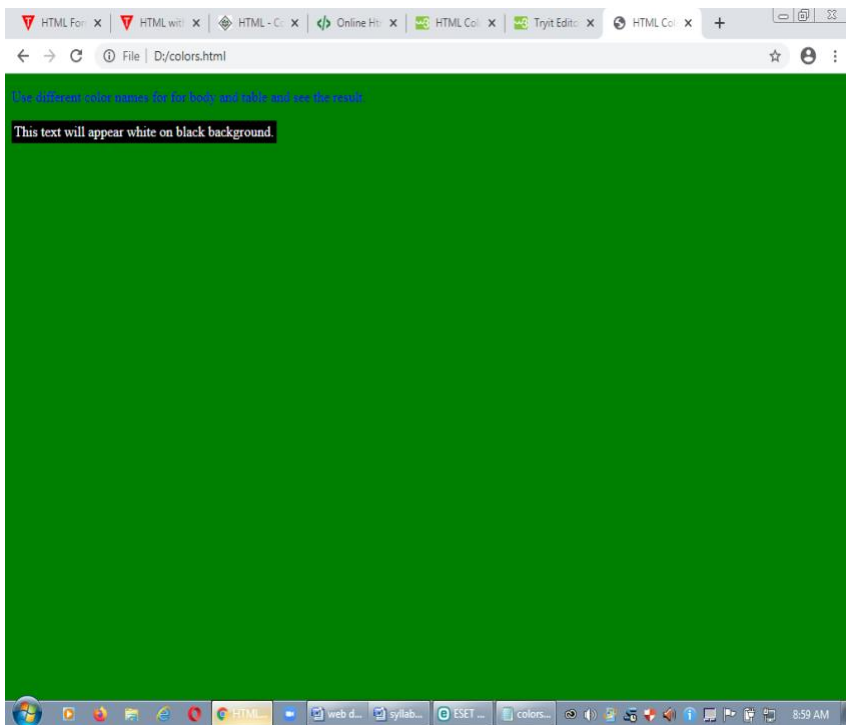
HTML Link Colors

By default, a link will appear like this (in all browsers):

- An unvisited link is underlined and blue
- A visited link is underlined and purple
- An active link is underlined and red

You can change the link state colors, by using CSS:

Example

Here, an unvisited link will be green with no underline. A visited link will be pink with no underline. An active link will be yellow and underlined. In addition, when mousing over a link (a:hover) it will become red and underlined

```
<!DOCTYPE html>
<html>
<head>
<style>
a:link {
  color: green;
  background-color: transparent;
  text-decoration: none;
}
a:visited {
  color: pink;
  background-color: transparent;
  text-decoration: none;
}
a:hover {
  color: red;
  background-color: transparent;
  text-decoration: underline;
}
a:active {
  color: yellow;
  background-color: transparent;
  text-decoration: underline;
}
</style>
</head>
<body>

<h2>Link Colors</h2>

<p>You can change the default colors of links</p>

<a href="html_images.asp" target="_blank">HTML Images</a>

</body>
```

</html>
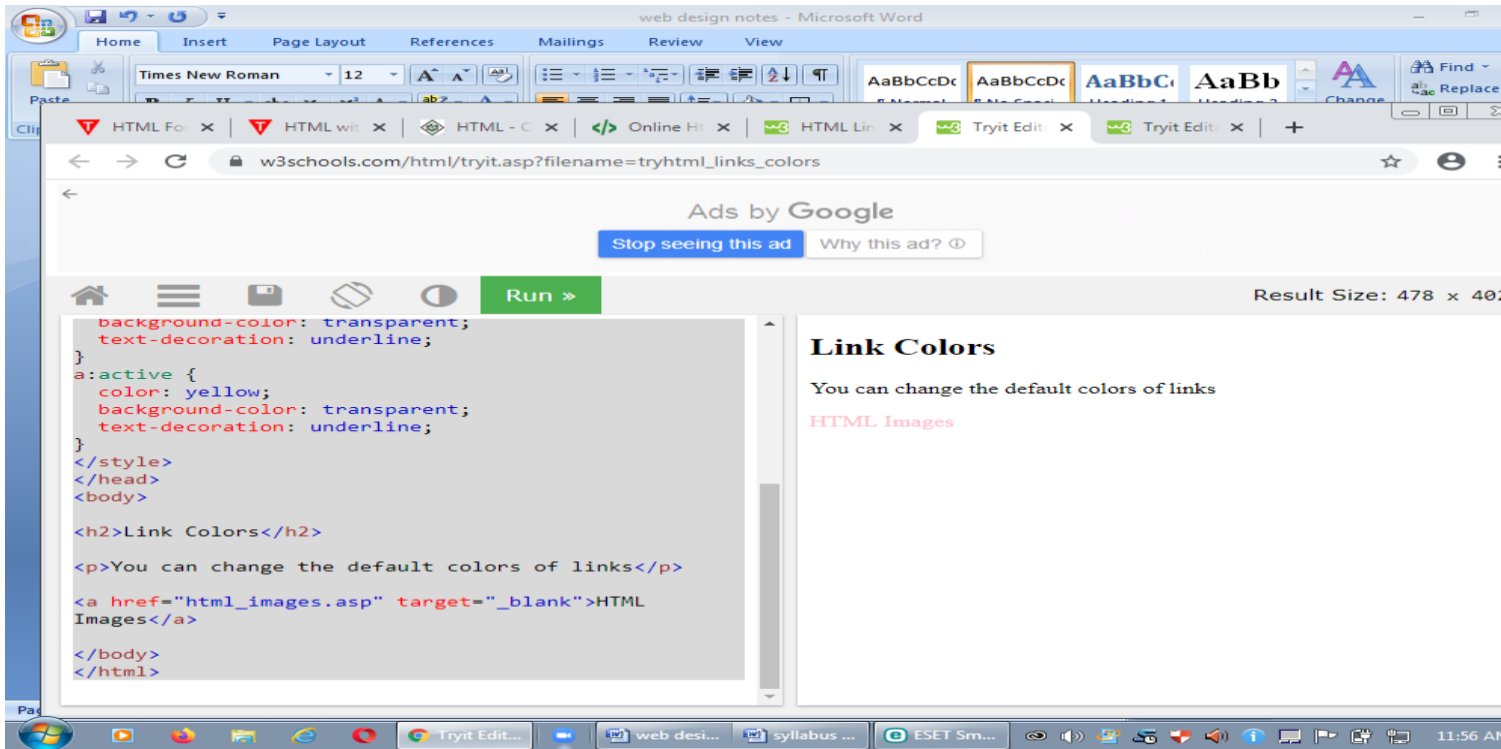
HTML \<font\> tag

HTML \<font\> tag is used to define the font style for the text contained within it. It defines the font size, color, and face or the text in an HTML document.

Syntax

\<font size=" " color=" " face=" "\> Content....\</font\>

\<!DOCTYPE html\>
\<html\>
\<head\>
\<title\>Font Tag\</title\>
\</head\>
\<body\>
\<h2\>Example of font tag\</h2\>
\<p\>This is normal text without any font styling\</p\>
\<p\>
    \<font color="blue"\>Text with normal size and default face\</font\>
\</p\>
\<p\>
    \<font size="5" color="green"\>Text with Increased size and default face\</font\>
\</p\>
\<p\>

```
        <font color="red" face="cursive">Text with Changed face</font>
  </p>
</body>
</html>
```
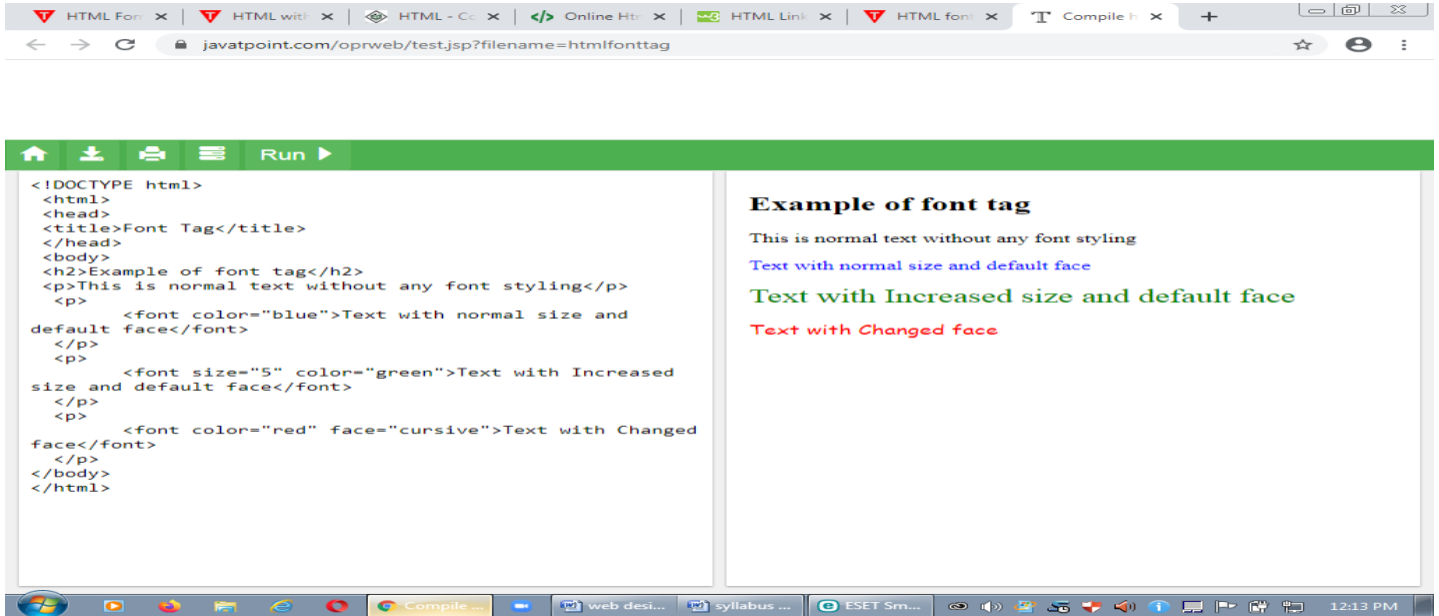

HTML Font Size

The **Size** is an attribute of **<font>** tag, which specifies the text size.

Syntax

1. **<font** size="number">

In the above syntax, the number is a value of the **Size** attribute, which denotes the text size. The number for the font size is lies between the 1 and 7. By default, the font size of a text on a web page is 3.

Note: The size attribute of <font> tag is not supported in HTML5. We can use CSS instead of it.

Example 1: The following example uses the different numbers from 1 to 7 as the size of a text:

```
<!DOCTYPE html>
<html>
<title>
Example of Size attribute
</title>
<body>
<Center>
<font size="1">
JavaTpoint Size = "1"
</font>
<br>
<font size="2">
JavaTpoint Size = "2"
</font>
<br>
<font size="3">
JavaTpoint Size = "3"
</font>
<br>
<font size="4">
JavaTpoint Size = "4"
</font>
<br>
<font size="5">
JavaTpoint Size = "5"
</font>
<br>
```

```
<font size="6">
```

JavaTpoint Size = "6"

```
</font>
```

Output:

avaTpoint Size = "1"

JavaTpoint Size = "2"

JavaTpoint Size = "3"

JavaTpoint Size = "4"

JavaTpoint Size = "5"

JavaTpoint Size = "6"

JavaTpoint Size = "7"

HTML <basefont> Tag

The <basefont> tag was used in HTML4 to specify a default text-color, font-size or font-family for all the text in an HTML document.

The HTML <basefont> tag is used to specify a base font for the document to use. This base font is applied to complete document. This tag is depreciated now.

```
<!DOCTYPE html>
<html>
  <head>
    <title>HTML basefont Tag</title>
  </head>
  <body>
    <basefont face = "cursive,serif" color = "#ff9900" size = "4"/>
   <p>The HTML basefont tag is now deprecated. You should use CSS font
      to set font properties instead.</p>
  </body>
</html>
```

Output:

The HTML basefont tag is now deprecated. You should use CSS font to set font properties instead.

Special characters in HTML

In HTML, special characters are typically those that can't be easily typed into a keyboard or may cause display issues if typed or pasted into a web page.

If you plan to use any of the special characters on this page, you should use either the HTML entity name or the HTML entity number. This will ensure that it displays correctly in most/all browsers.

HTML Reserved Characters

character	Entity Number	Entity Name	Description
"	"	"	quotation mark
'	'	'	apostrophe
&	&	&	ampersand
<	<	<	less-than
>	>	>	greater-than

General HTML Symbols

<!DOCTYPE html>

<html>

<body>

<p>I will display €</p>

<p>I will display €</p>

</body>

</html>

Output:

I will display €
I will display €

UNIT-IV

Images and Pictures

Images can improve the design and the appearance of a web page.

HTML Images Syntax

The HTML <img> tag is used to embed an image in a web page.

Images are not technically inserted into a web page; images are linked to web pages.
The <img> tag creates a holding space for the referenced image.

The <img> tag is empty, it contains attributes only, and does not have a closing tag.

The <img> tag has two required attributes:

- src - Specifies the path to the image
- alt - Specifies an alternate text for the image

Syntax

```
<img src="url" alt="alternatetext">
```

The src Attribute

The required src attribute specifies the path (URL) to the image.

```
<!DOCTYPE html>
<html>
<body>
<h2>Alternative text</h2>
<p>The alt attribute should reflect the image content, so users who cannot see the image gets an understanding of what the image contains:</p>
<img src="C:\Users\Administrator\Desktop\images.jpg" alt="Flowers in Chania" width="460" height="345">
</body>
</html>
```

Output:

Alternative text

The alt attribute should reflect the image content, so users who cannot see the image gets an understanding of what the image contains:

The alt Attribute

The required alt attribute provides an alternate text for an image, if the user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).

The value of the alt attribute should describe the image:

```
<!DOCTYPE html>
<html>
<body>
<p>If a browser cannot find the image, it will display the alternate text:</p>
<img src="wrongname.gif" alt="Flowers in Chania

">
</body>
</html>
```

 Output:

If a browser cannot find the image, it will display the alternate text:

Flowers in Chania

Image Size - Width and Height

You can use the style attribute to specify the width and height of an image.

```
<!DOCTYPE html>
<html>
<body>
<h2>Image Size</h2>
<p>Here we use the style attribute to specify the width and height of an image:</p>
<img src="img_girl.jpg" alt="Girl in a jacket" style="width:500px;height:600px;">
```

```
</body>
</html>
```

Image Size

Here we use the style attribute to specify the width and height of an image:

- Alternatively, you can use the width and height attributes
- The width and height attributes always define the width and height of the image in pixels.
- **Note:** Always specify the width and height of an image. If width and height are not specified, the web page might flicker while the image loads.
- The width, height, and style attributes are all valid in HTML.
- However, we suggest using the style attribute. It prevents styles sheets from changing the size of images:

HTML <picture> tag

The **HTML <picture>** element allows you to display different pictures for different devices or screen sizes.

HTML <picture> tag is used in responsive web designing where we need to load the different images based on their viewport, height, width, orientation, and pixel density.

The <picture> tag contains one or more <source> elements and one <img> elements.

According to the viewport, the matching image will be loaded from different <source> tag, and if no source contains the matching image, then the default image present in <img> tag will be displayed on the browser.

Syntax

```
<picture>
   <source srcset="" media="">
   <img src="">
</picture>
```

Attribute:

Tag-specific attributes:

| Attribute	Value	Description
Media	media_query	It defines and accept any media query which can be defined in CSS
srcset	URL	It defines the URL of the image which can be used for different sit
Type	video/ogg video/mp4 video/webM audio/ogg audio/mpeg	It determines the MIME type
Src	URL	It specifies the location of the image.

<!DOCTYPE html>

```
<html>
<head>
   <title>Picture Tag</title>
   <style>
   body{
      text-align: center;
               }
     p{
       font-size: bold;
       font-size: 20px;
       color: green;
               }
   </style>
</head>
<body>
<h2>Example of picture tag</h2>
<p>Resize the page to see the different versions of the images at different viewports, and as per
viewport image will be automatically changed.</p>
<picture>
      <source srcset="C:\Users\Administrator\Desktop\pexels-photo-2058498.jpeg" media="(min-
width: 500px)">
   <img srcset="rose.jpg" alt="default image" style="width: auto;">
</picture>
</body>
</html>
```
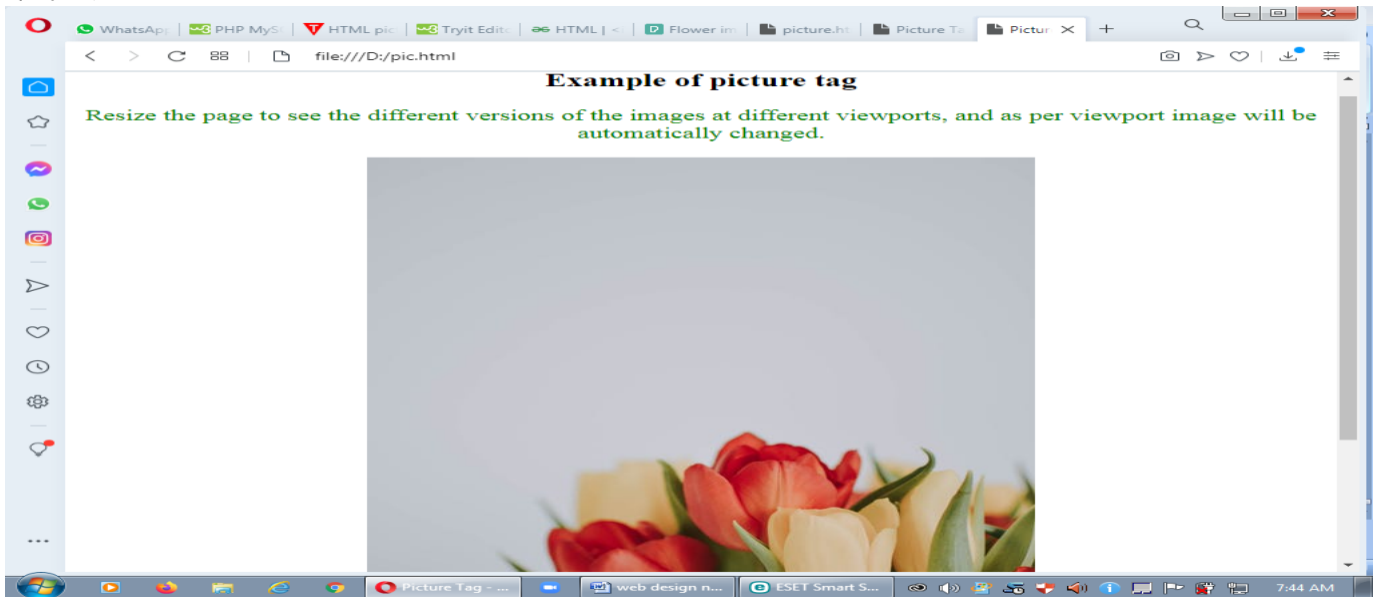

How to add Background Image in Html

In HTML, we can easily add the background Image in the Html document which is to be displayed on a web page using the following different two methods:

1. Using the Background attribute (Html Tag)
2. Using an Internal Style Sheet

Using the Background attribute

If we want to add the background image in the Html document using the Background attribute then we have to follow the steps which are given below. Using these steps, we can easily view an image on a web page:

```
<! Doctype Html>
<Html>
<Head>
<Title>
Add the Background image using background attribute
</Title>
</Head>
<Body background="C:\Users\Administrator\Desktop\pexels-photo-2058498.jpeg">
JavaTpoint   <br>
Html Tutorial   <br>
This page helps us to understand how to show the background image of a web page. <br>
<br>
And, this section helps you to understand how to add the background image in an Html page using the background attribute.
</Body>
</Html>
```

Using Internal Style Sheet

If we want to add the background image in the Html document using the Internal CSS.

```
<!Doctype Html>
<Html>
<Head>
<Title>
Add the Background image using Internal Style sheet
</Title>
<style>
body
{
background-image:url("https://1.bp.blogspot.com/-
sTxAHAxirGM/WVbAe2098nI/AAAAAAAABENs/_I5sYMYgLOUzaIE7FfF4qdGX-
hoAkq9SgCLcBGAs/s1600/Blog_20170624_113552.jpg");
}
</style>
```

</Head>
<Body>
JavaTpoint
Html Tutorial
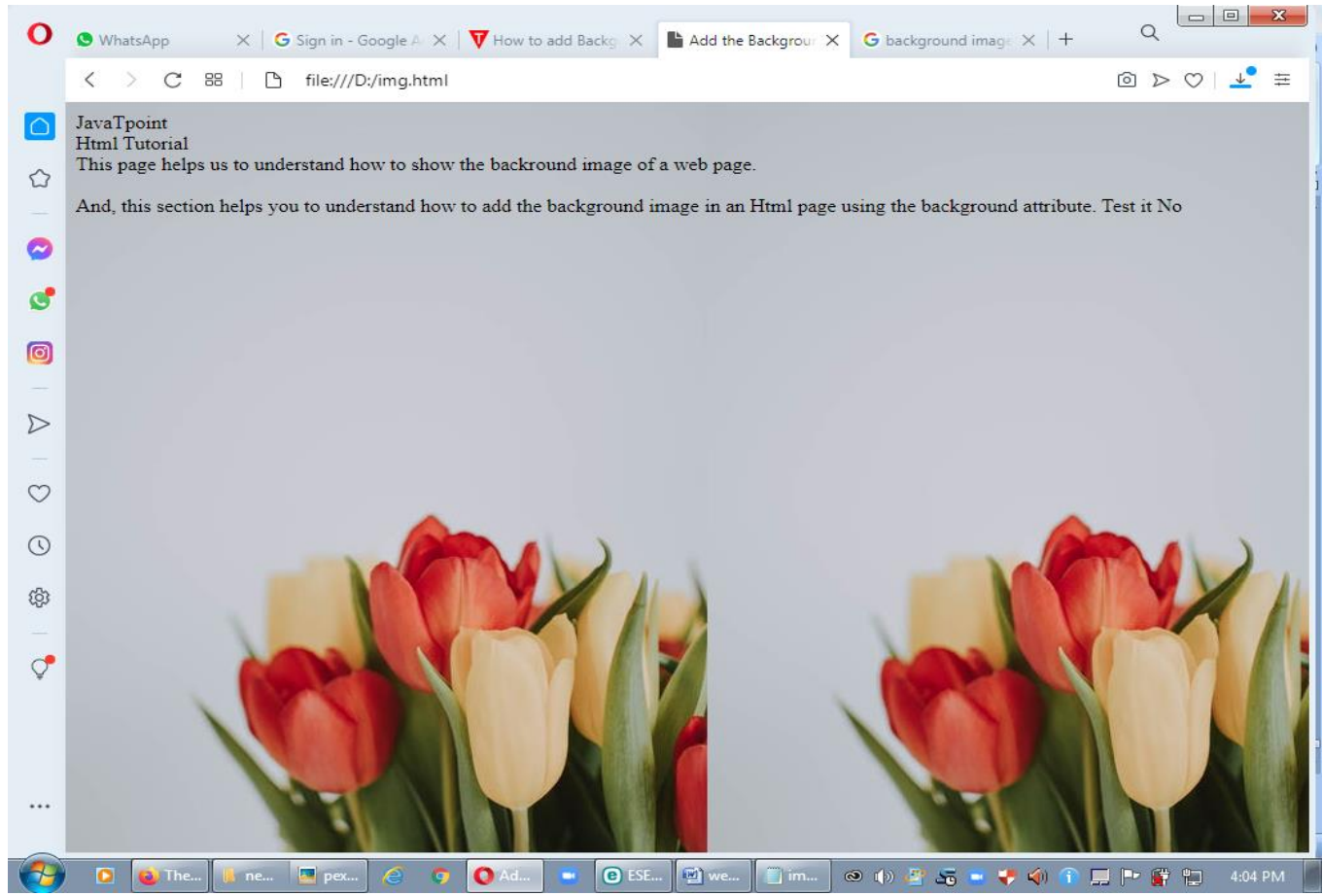This page helps us to understand how to show the backround image of a web page.

And, this section helps you to understand how to add the background image in an Html page using
 the Internal CSS.
</Body>
</Html>
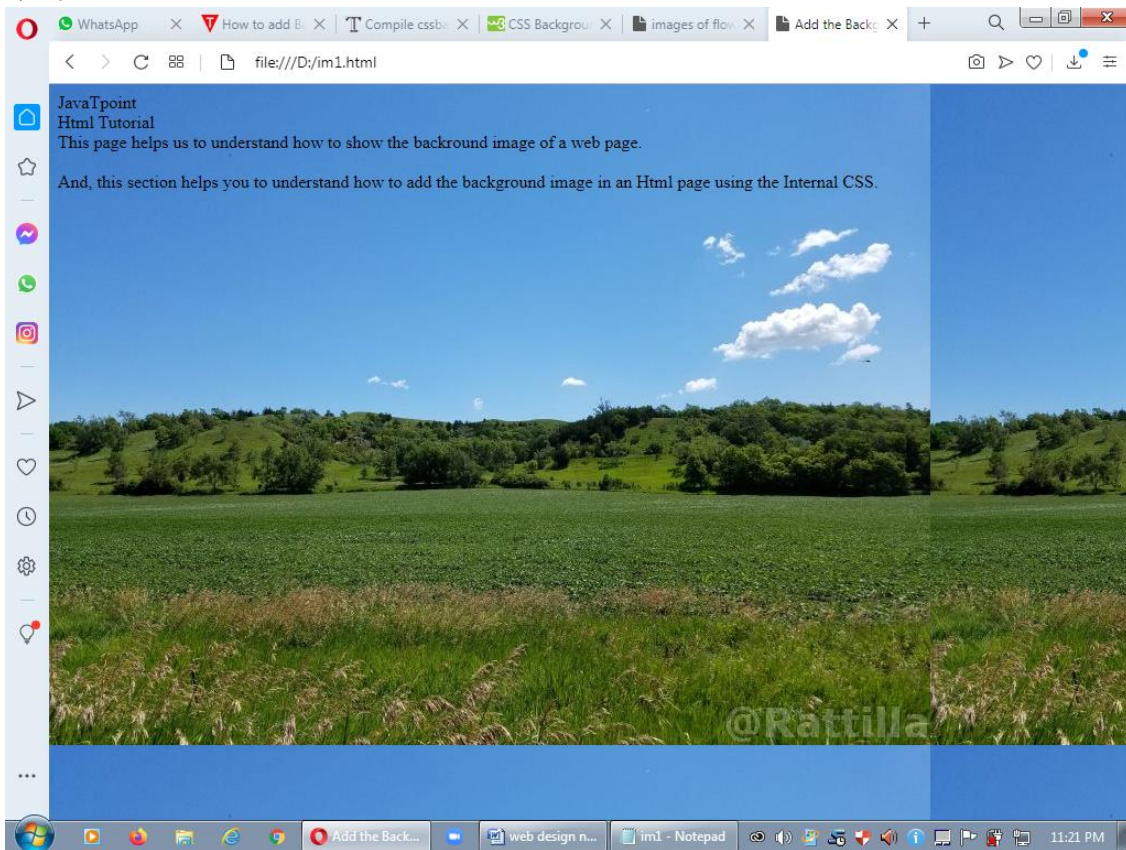
HTML Lists

HTML Lists are used to specify lists of information. All lists may contain one or more list elements. There are three different types of HTML lists:

1. Ordered List or Numbered List (ol)

2. Unordered List or Bulleted List (ul)

3. Description List or Definition List (dl)

HTML Ordered List | HTML Numbered List

HTML Ordered List or Numbered List displays elements in numbered format. The HTML ol tag is used for ordered list. We can use ordered list to represent items either in numerical order format or alphabetical order format, or any format where an order is emphasized. There can be different types of numbered list:

- o Numeric Number (1, 2, 3)
- o Capital Roman Number (I II III)
- o Small Romal Number (i ii iii)
- o Capital Alphabet (A B C)
- o Small Alphabet (a b c)

To represent different ordered lists, there are 5 types of attributes in <ol> tag.

Type	Description
Type "1"	This is the default type. In this type, the list items are numbered with numbers.
Type "I"	In this type, the list items are numbered with upper case roman numbers.
Type "i"	In this type, the list items are numbered with lower case roman numbers.
Type "A"	In this type, the list items are numbered with upper case letters.
Type "a"	In this type, the list items are numbered with lower case letters.

1.HTML Ordered List Example(default type)

```
<!DOCTYPE html>
<html>
<body>
```

```
<ol>
 <li>HTML</li>
 <li>Java</li>
 <li>JavaScript</li>
 <li>SQL</li>
</ol>
</body>
</html>
```
Output:
HTML
Java
JavaScript
SQL

2.ol type="I"

```
<ol type="I">
 <li>HTML</li>
 <li>Java</li>
 <li>JavaScript</li>
 <li>SQL</li>
</ol>
```

   I. HTML
  II. Java
 III. JavaScript

 IV. SQL

3.ol type="i"

```
<ol type="i">
 <li>HTML</li>
 <li>Java</li>
 <li>JavaScript</li>
 <li>SQL</li>
</ol>
```
Output:

   i. HTML

  ii. Java

 iii. JavaScript

 iv. SQL

4.ol type="A"

```
<ol type="A">
 <li>HTML</li>
 <li>Java</li>
 <li>JavaScript</li>
 <li>SQL</li>
</ol>
```

Output:

   A. HTML

   B. Java

   C. JavaScript

   D. SQL

5.ol type="a"

```
<ol type="a">
 <li>HTML</li>
 <li>Java</li>
 <li>JavaScript</li>
 <li>SQL</li>
 </ol>
```

Output:

 a. HTML
 b. Java
 c. JavaScript
 d. SQL

start attribute

The start attribute is used with ol tag to specify from where to start the list items.

\<ol type="1" start="5"\> : It will show numeric values starting with "5".

\<ol type="A" start="5"\> : It will show capital alphabets starting with "E".

\<ol type="a" start="5"\> : It will show lower case alphabets starting with "e".

\<ol type="I" start="5"\> : It will show Roman upper case value starting with "V".

\<ol type="i" start="5"\> : It will show Roman lower case value starting with "v".

```
<ol type="i" start="5">
 <li>HTML</li>
 <li>Java</li>
 <li>JavaScript</li>
 <li>SQL</li>
 </ol>
```

Output:

    v.   HTML

   vi.   Java

  vii.   JavaScript

 viii.   SQL
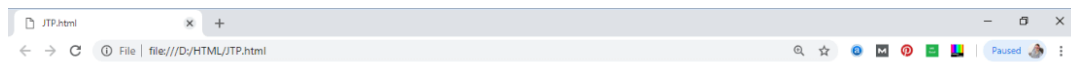
reversed Attribute:

This is a Boolean attribute of HTML <ol> tag, and it is new in HTML5 version. If you use the reversed attribute with tag then it will numbered the list in descending order (7, 6, 5, 4......1).

Example:

```
<ol reversed>
<li>HTML</li>
<li>Java</li>
<li>JavaScript</li>
<li>SQL</li>
 </ol>
```

Output:

HTML Unordered Lists

The HTML <ul> tag defines an unordered (bulleted) list.

An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

The list items will be marked with bullets (small black circles) by default:

Example

```
<!DOCTYPE html>
<html>
<body>
<h2>An unordered HTML list</h2>
<ul>
 <li>Coffee</li>
 <li>Tea</li>
 <li>Milk</li>
</ul>
</body>
</html>
```

Output:

An unordered HTML list

- Coffee
- Tea
- Milk

Unordered HTML List - Choose List Item Marker

The CSS **list-style-type property** is used to define the style of the list item marker. It can have one of the following values:

Value	Description

disc	Sets the list item marker to a bullet (default)
circle	Sets the list item marker to a circle
square	Sets the list item marker to a square
none	The list items will not be marked

1.Example - Disc

```
<ul style="list-style-type:disc;">
 <li>Coffee</li>
 <li>Tea</li>
 <li>Milk</li>
</ul>
```

Output:

Unordered List with Circle Bullets

- o Coffee
- o Tea
- o Milk

2.Example - Square

```
<ul style="list-style-type: square;">
 <li>Coffee</li>
 <li>Tea</li>
 <li>Milk</li>
</ul>
```

Output:

Unordered List with Square Bullets

- Coffee
- Tea
- Milk

```
<ul style="list-style-type:none;">
 <li>Coffee</li>
 <li>Tea</li>
 <li>Milk</li>
</ul>
```

Output:

Unordered List without Bullets

- Coffee
- Tea
- Milk

4.Example - Circle

```
<ul style="list-style-type:circle;">
 <li>Coffee</li>
 <li>Tea</li>
 <li>Milk</li>
</ul>
```

Output:

Unordered List with Circle Bullets

- Coffee
- Tea
- Milk

Nested HTML Lists

We can create a list inside another list, which will be termed as nested List.

Lists can be nested (list inside list).

```
<!DOCTYPE html>
<html>
<body>
<h2>A Nested List</h2>
<p>Lists can be nested (list inside list):</p>
<ul>
 <li>Coffee</li>
 <li>Tea
  <ul>
    <li>Black tea</li>
    <li>Green tea</li>
  </ul>
 </li>
 <li>Milk</li>
</ul>
</body>
</html>
```

Output:

A Nested List

Lists can be nested (list inside list):

- Coffee
- Tea
  - Black tea
  - Green tea
- Milk

HTML Tables(table creation)

The <table> tag defines an HTML table.

Each table row is defined with a <tr> tag. Each table header is defined with a <th> tag. Each table data/cell is defined with a <td> tag.

By default, the text in <th> elements are bold and centered.

By default, the text in <td> elements are regular and left-aligned.

Example

```
<!DOCTYPE html>
<html>
<body>
<h2>Basic HTML Table</h2>
<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
  <tr>
    <td>John</td>
    <td>Doe</td>
    <td>80</td>
  </tr>
</table>
</body>
</html>
```

Output:

Basic HTML Table

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

HTML Table - Add a Border

To add a border to a table, use the CSS border property:

```html
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td
{
  border: 1px solid black;
}
</style>
</head>
<body>
<h2>Table With Border</h2>
<p>Use the CSS border property to add a border to the table.</p>
<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
  <tr>
    <td>John</td>
    <td>Doe</td>
    <td>80</td>
  </tr>
</table>
</body>
</html>
```

Output:

Table With Border

Use the CSS border property to add a border to the table.

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

Collapsed Borders

If you want the borders to collapse into one border, add the CSS border-collapse property.

```
!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
  border: 1px solid black;
  border-collapse: collapse;
}
</style>
</head>
<body>
<h2>Collapsed Borders</h2>
<p>If you want the borders to collapse into one border, add the CSS border-collapse
property.</p>
<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
 <tr>
   <td>Eve</td>
   <td>Jackson</td>
   <td>94</td>
  </tr>
```

```
 <tr>
  <td>John</td>
  <td>Doe</td>
  <td>80</td>
 </tr>
</table>
</body>
</html>
```
Output:

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

Width of tables and Cells

- How to set table width (with CSS).

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td
 {
  border: 1px solid black;
 }
</style>
</head>
<body>
<h1>Add a Specific Width to a Table</h1>
<table style="width:400px">
 <tr>
  <th>Month</th>
  <th>Savings</th>
 </tr>
 <tr>
  <td>January</td>
  <td>$100</td>
 </tr>
 <tr>
  <td>February</td>
```

```
    <td>$80</td>
  </tr>
</table>
</body>
</html>
```

Output:

Add a Specific Width to a Table

Month	Savings
January	$100
February	$80

Example

How to create table headers:

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
  border: 1px solid black;
}
</style>
</head>
<body>
<h1>Table Headers</h1>
<h2>Horizontal headers:</h2>
<table>
  <tr>
    <th>Name</th>
    <th>Email</th>
    <th>Phone</th>
  </tr>
  <tr>
    <td>John Doe</td>
```

```
    <td>john.doe@example.com</td>
    <td>123-45-678</td>
  </tr>
</table>
<h2>Vertical headers:</h2>
<table>
  <tr>
    <th>Name:</th>
    <td>John Doe</td>
  </tr>
  <tr>
    <th>Email:</th>
    <td>john.doe@example.com</td>
  </tr>
  <tr>
    <th>Phone:</th>
    <td>123-45-678</td>
  </tr>
</table>
</body>
</html>
```
Output:

Table Headers

Horizontal headers:

Name	Email	Phone
John Doe	john.doe@example.com	123-45-678

Vertical headers:

Name:	John Doe
Email:	john.doe@example.com
Phone:	123-45-678

How to set cell width and height in HTML?

To set the cell width and height, use the CSS style. The height and width attribute of the <td> cell isn't supported in HTML5. Use the CSS property width and height to set the width and height of the cell respectively.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      table, th, td {
        border: 1px solid black;
      }
    </style>
  </head>
  <body>
    <h1>Tutorial</h1>
    <table>
      <tr>
        <th>Language</th>
        <th>Lessons</th>
      </tr>
      <tr>
        <td style="height:100px;width:100px">Java</td>
        <td style="height:100px;width:100px">50</td>
      </tr>
      <tr>
        <td>Ruby</td>
        <td>40</td>
      </tr>
    </table>
  </body>
</html>
```
Output:

Tutorial

Language	Lessons

Java	50
Ruby	40

Cell's Spanning

Cell spanning means joining cells together to make a larger cell. You can join cells horizontally, vertically, or both.

HTML <td> colspan Attribute

The colspan attribute defines the number of columns a cell should span.

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
  border: 1px solid black;
}
</style>
</head>
<body>
<h1>The td colspan attribute</h1>
<table>
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
  </tr>
  <tr>
    <td>February</td>
    <td>$80</td>
  </tr>
  <tr>
    <td colspan="2">Sum: $180</td>
```

```
   </tr>
</table>
</body>
</html>
```

The td colspan attribute

Month	Savings
January	$100
February	$80
Sum: $180	

HTML rowspan Attribute

The rowspan attribute specifies the number of rows a cell should span.

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
  border: 1px solid black;
}
</style>
</head>
<body>

<h1>The td rowspan attribute</h1>

<table>
  <tr>
    <th>Month</th>
    <th>Savings</th>
    <th>Savings for holiday!</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
```

```
     <td rowspan="2">$50</td>
   </tr>
   <tr>
    <td>February</td>
    <td>$80</td>
   </tr>
 </table>
 </body>
 </html>
```

The td rowspan attribute

Month	Savings	Savings for holiday!
January	$100	$50
February	$80	

Coloring Cells
HTML | <td> bgcolor Attribute

The **HTML <td> bgcolor attribute** is used to specify the background color of a table cell. It is not supported by HTML 5.

Syntax:

`<td bgcolor= "color_name | hex_number | rgb_number">`

Attribute Values:
*   **color_name**: It sets the text color by using the color name. For example *"red"*.
*   **hex_number**: It sets the text color by using the color hex code. For example *"#0000ff"*.
*   **rgb_number**: It sets the text color by using the rgb code. For example: *"RGB(0, 153, 0)"*.

```
<!DOCTYPE html>
<html>
 <head>
  <title>HTML bgcolor align Attribute</title>
<head>
 <body>
   <h1>GeeksforGeeks</h1>
   <h2>HTML bgcolor align Attribute</h2>
```

```
    <table width="500" border="1">
     <tr>
       <th>NAME</th>
       <th>AGE</th>
       <th>BRANCH</th>
     </tr>
      <tr>
       <td bgcolor="green">BITTU</td>
       <td bgcolor="red">22</td>
       <td bgcolor="yellow">CSE</td>
     </tr>
      <tr>
       <td bgcolor="yellow">RAKESH</td>
       <td bgcolor="green">25</td>
       <td bgcolor="red">EC</td>
     </tr>
   </table>
</body>
 </html>
```

GeeksforGeeks

HTML bgcolor align Attribute

NAME	AGE	BRANCH
BITTU	22	CSE
RAKESH	25	EC

HTML Table Background Color

```
<!DOCTYPE html>
<html>

<head>
   <title>HTML bgcolor align Attribute</title>
</head>
 <body>
   <h1>GeeksforGeeks</h1>
     <h2>HTML bgcolor align Attribute</h2>
```

```
<table style= "width:100%;text-align:left;background-color:gold;width="500" ;border="1" >
  <tr>
   <th>NAME</th>
   <th>AGE</th>
   <th>BRANCH</th>
 </tr>
  <tr>
   <td bgcolor="green">BITTU</td>
   <td bgcolor="red">22</td>
   <td bgcolor="yellow">CSE</td>
 </tr>
  <tr>
   <td bgcolor="yellow">RAKESH</td>
   <td bgcolor="green">25</td>
   <td bgcolor="red">EC</td>
 </tr>
  </table>
</body>
</html>
```

GeeksforGeeks

HTML bgcolor align Attribute

NAME	AGE	BR
BITTU	22	CSE
RAKESH	25	EC

Column Specification

The <col> tag specifies column properties for each column within a <colgroup> element.

The <col> tag is useful for applying styles to entire columns, instead of repeating the styles for each cell, for each row.

```
<!DOCTYPE html>
<html>
<head>
<style>
```

```
table, th, td {
  border: 1px solid black;
}
</style>
</head>
<body>
<h1>The col element</h1>
<table>
  <colgroup>
    <col span="2" style="background-color:red">
    <col style="background-color:yellow">
  </colgroup>
  <tr>
    <th>ISBN</th>
    <th>Title</th>
    <th>Price</th>
  </tr>
  <tr>
    <td>3476896</td>
    <td>My first HTML</td>
    <td>$53</td>
  </tr>
  <tr>
    <td>5869207</td>
    <td>My first CSS</td>
    <td>$49</td>
  </tr>
</table>
</body>
</html>
```
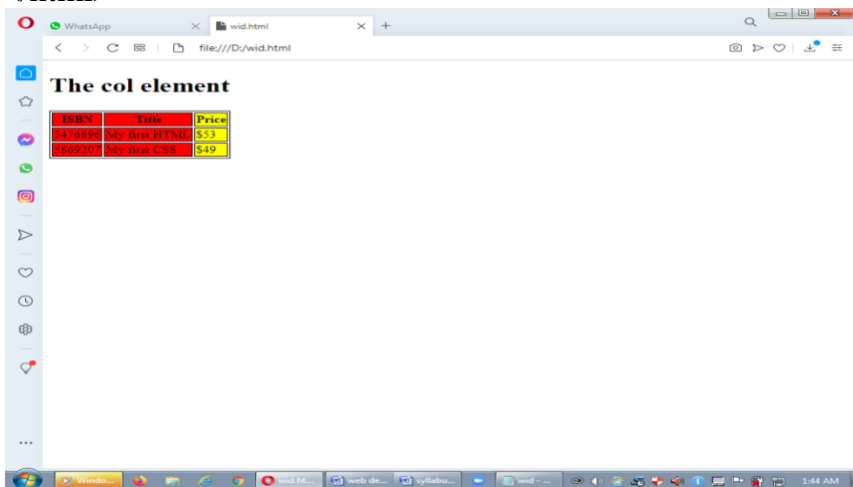
HTML <frame> tag

HTML Frames are used to divide the web browser window into multiple sections where each section can be loaded separately. A frameset tag is the collection of frames in the browser window.

Creating Frames: Instead of using body tag, use frameset tag in HTML to use frames in web browser. But this Tag is deprecated in HTML 5. The frameset tag is used to define how to divide the browser. Each frame is indicated by frame tag and it basically defines which HTML document shall open into the frame. To define the horizontal frames use row attribute of frame tag in HTML document and to define the vertical frames use col attribute of frame tag in HTML document.

HTML <frame> tag define the particular area within an HTML file where another HTML web page can be displayed.

A <frame> tag is used with <frameset>, and it divides a webpage into multiple sections or frames, and each frame can contain different web pages.
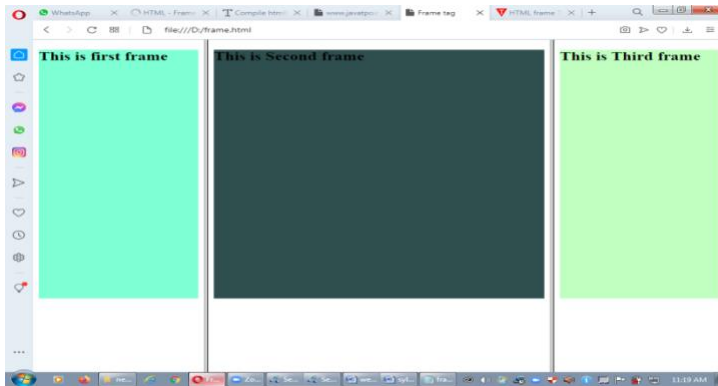
Note: Do not use HTML <frame> tag as it is not supported in HTML5, instead you can use <iframe> or <div> with CSS to achieve similar effects in HTML.

Syntax

```
< frame src = "URL" >
```

Example:
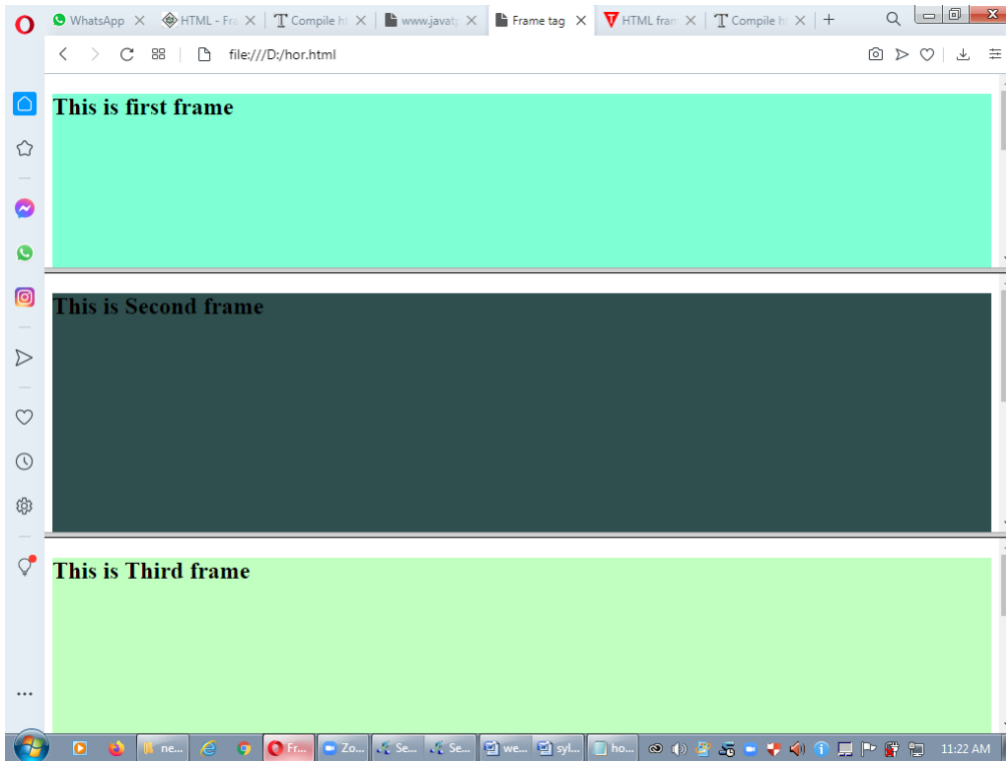
```
<!DOCTYPE html>
<html>
<head>
       <title>Frame tag</title>
</head>
 <frameset cols="25%,50%,25%">
       <frame src="frame1.html" >
       <frame src="frame2.html">
       <frame src="frame3.html">
 </frameset>
</html>
```

Create Horizontal frames:

```
<!DOCTYPE html>
<html>
<head>
        <title>Frame tag</title>
</head>
  <frameset rows="30%, 40%, 30%">
        <frame name="top" src="frame1.html" >
        <frame name="main" src="frame2.html">
        <frame name="bottom" src="frame3.html">
  </frameset>
</html>
```

Attribute

Tag-specific attribute

Attribute	Value	Description
frameborder	0 1	It specifies whether to display a border around the frame or not, and its default value is 1
longdsec	URL	It specifies a page which contains the long description of the content of the frame.
marginheight	pixels	It specifies the top and bottom margins of the frame.
marginwidth	pixels	It defines the height of the margin between frames.
name	text	It is used to assign the name to the frame.

noresize	noresize	It is used to prevent resizing of the frame by the user.
scrolling	yes no auto	It specifies the existence of the scrollbar for overflowing content.
src	URL	It specifies the URL of the document which we want to display in a frame.

HTML | frameset Tag

The <frameset> tag in HTML is used to define the frameset. The <frameset> element contains one or more frame elements. It is used to specify the number of row and column in frameset with their pixel of spaces. Each element can hold a separate document.
Syntax:
<frameset cols = "pixels|%|*">

Attributes: The list of frameset attributes are given below:
- **cols:** The cols attribute is used to create vertical frames in web browser. This attribute is basically used to define the no of columns and its size inside the frameset tag.
- **rows:** The rows attribute is used to create horizontal frames in web browser. This attribute is used to define no of rows and its size inside the frameset tag.
- **border:** This attribute of frameset tag defines the width of border of each frames in pixels. Zero value is used for no border.
- **frameborder:** This attribute of frameset tag is used to specify whether three dimensional border should be displayed between the frames or not for this use two values 0 and 1, where 0 defines for no border and value 1 signifies for yes there will be border.
- **framespacing:** This attribute of frameset tag is used to specify the amount of spacing between the frames in a frameset. This can take any integer value as an parameter which basically denotes the value in pixel.

```
<!DOCTYPE html>
<html>
  <head>
     <title>frameset attribute</title>
  </head>

  <!-- frameset attribute starts here -->
  <frameset rows = "20%, 60%, 20%">
```

```html
        <frame name = "top" src = "frame1.html" />
        <frame name = "main" src = "frame1.html" />
        <frame name = "bottom" src = "frame1.html" />
      <noframes>
         <body>The browser you are working does not
                        support frames.</body>
      </noframes>
    </frameset>
    <!-- frameset attribute ends here -->
  </html>
```
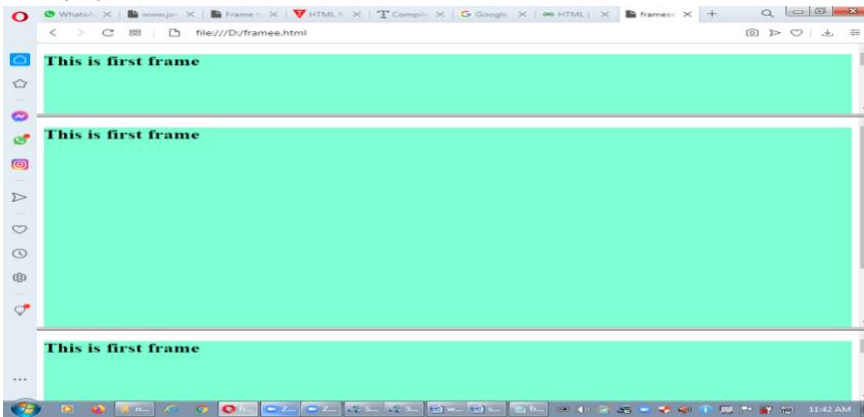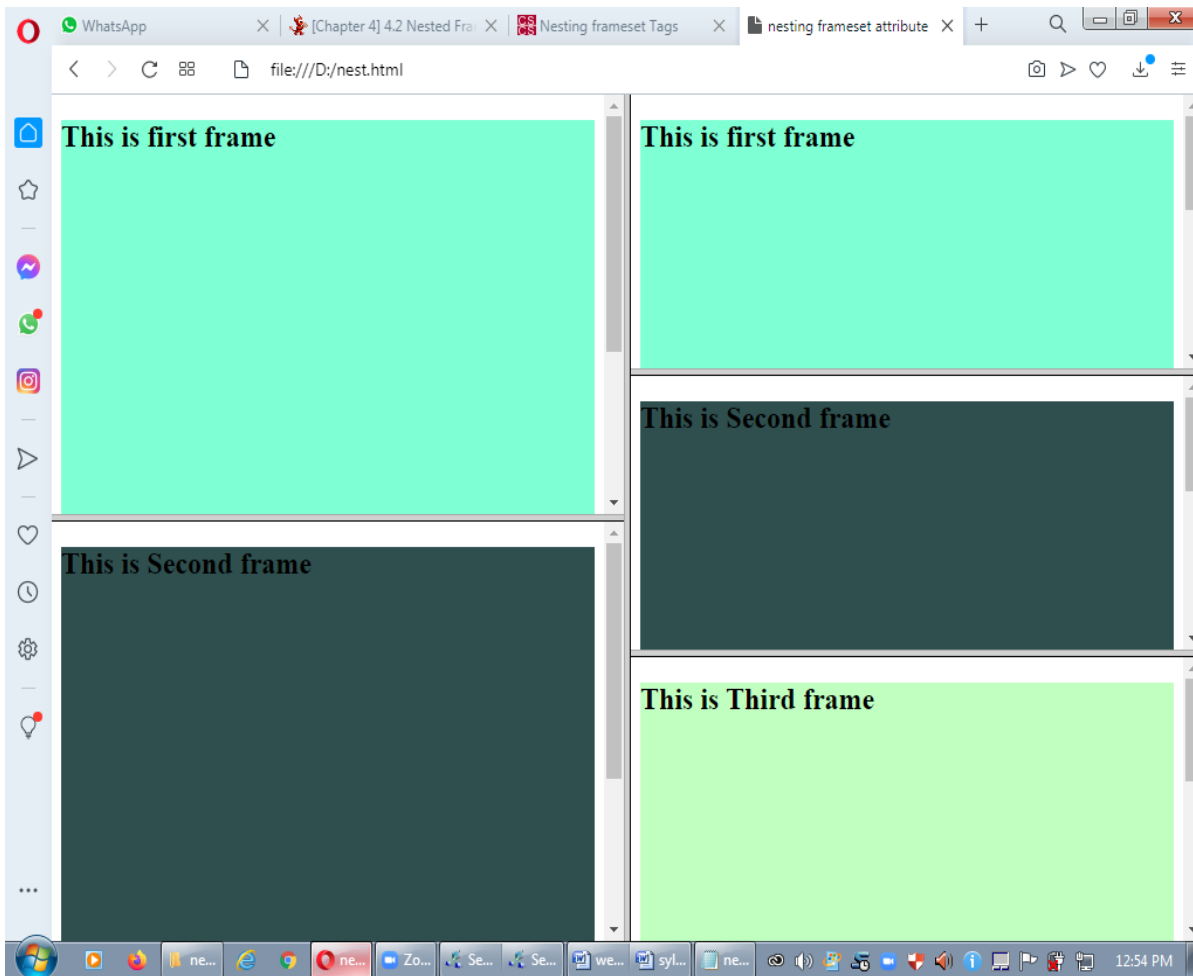

Nested Framesets

You can achieve more complex layouts by using nested tags. Any frame within a frameset can contain another frameset.

```html
<!DOCTYPE html>
<html>
  <head>
     <title> nesting frameset attribute</title>
  </head>
 <frameset cols="50%,*">
 <frameset rows="50%,*">
  <frame src="frame1.html">
  <frame src="frame2.html">
 </frameset>
 <frameset rows ="33%,33%,*">
  <frame src="frame1.html">
  <frame src="frame2.html">
  <frame src="frame3.html">
 </frameset>
</frameset>
</html>
```

HTML Form

An **HTML form** is a section of a document which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.

An HTML form facilitates the user to enter data that is to be sent to the server for processing such as name, email address, password, phone number, etc. .

Why use HTML Form

HTML forms are required if you want to collect some data from of the site visitor.

For example: If a user want to purchase some items on internet, he/she must fill the form such as shipping address and credit/debit card details so that item can be sent to the given address.

HTML Form Syntax

<form action="server url" method="get|post"**>**
//input controls e.g. textfield, textarea, radiobutton, button
</form>

HTML Form Tags

Let's see the list of HTML 5 form tags.

Tag	Description
<form>	It defines an HTML form to enter inputs by the used side.
<input>	It defines an input control.
<textarea>	It defines a multi-line input control.
<label>	It defines a label for an input element.
<fieldset>	It groups the related element in a form.
<legend>	It defines a caption for a <fieldset> element.
<select>	It defines a drop-down list.

<optgroup>	It defines a group of related options in a drop-down list.
<option>	It defines an option in a drop-down list.
<button>	It defines a clickable button.

HTML <form> element

The HTML <form> element provide a document section to take input from user. It provides various interactive controls for submitting information to web server such as text field, text area, password field, etc.

Note: The <form> element does not itself create a form but it is container to contain all required form elements, such as <input>, <label>, etc.

Syntax:

<form>
//Form elements
</form>

HTML <input> element

The HTML <input> element is fundamental form element. It is used to create form fields, to take input from user. We can apply different input filed to gather different information form user. Following is the example to show the simple text input.

Example:

1. **<body>**
2.   **<form>**
3.   Enter your name **
**
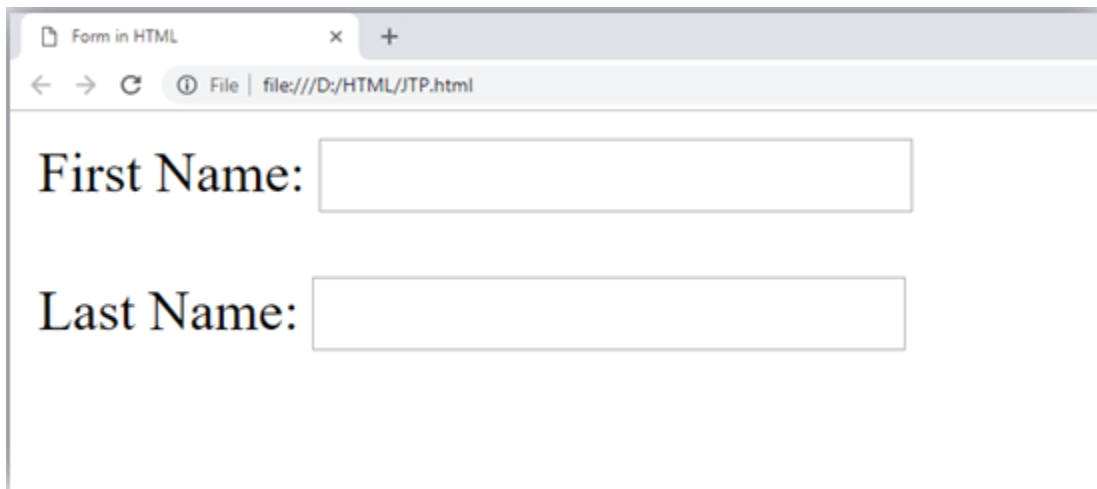4.   **<input** type="text" name="username">
5.   **</form>**
6. **</body>**

Enter your name

HTML TextField Control

The type="text" attribute of input tag creates textfield control also known as single line textfield control. The name attribute is optional, but it is required for the server side component such as JSP, ASP, PHP etc.

1. **<form>**
2.   First Name: **<input** type="text" name="firstname"**/>
**
3.   Last Name: **<input** type="text" name="lastname"**/>
**
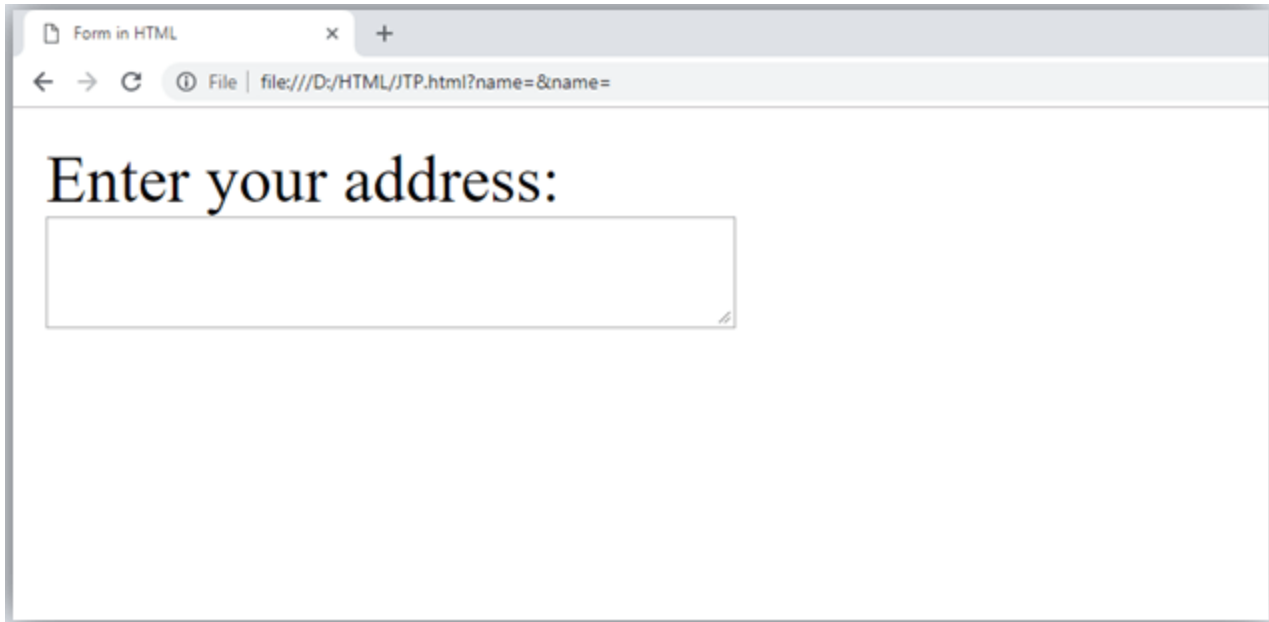4. **</form>**

Output:

HTML <textarea> tag in form

The <textarea> tag in HTML is used to insert multiple-line text in a form. The size of <textarea> can be specify either using "rows" or "cols" attribute or by CSS.

Example:

<!DOCTYPE html**>**
<html>
<head>
    <title>Form in HTML**</title>**

```
</head>
<body>
 <form>
     Enter your address:<br>
     <textarea rows="2" cols="20"></textarea>
 </form>
</body>
</html>
```


Label Tag in Form

It is considered better to have label in form. As it makes the code parser/browser/user friendly.

If you click on the label tag, it will focus on the text control. To do so, you need to have for attribute in label tag that must be same as id attribute of input tag.

```
<form>
   <label for="firstname">First Name: </label> <br/>
         <input type="text" id="firstname" name="firstname"/> <br/>
   <label for="lastname">Last Name: </label>
         <input type="text" id="lastname" name="lastname"/> <br/>
 </form>
```

HTML Password Field Control

The password is not visible to the user in password field control.

```
<form>
   <label for="password">Password: </label>
         <input type="password" id="password" name="password"/> <br/>
</form>
```
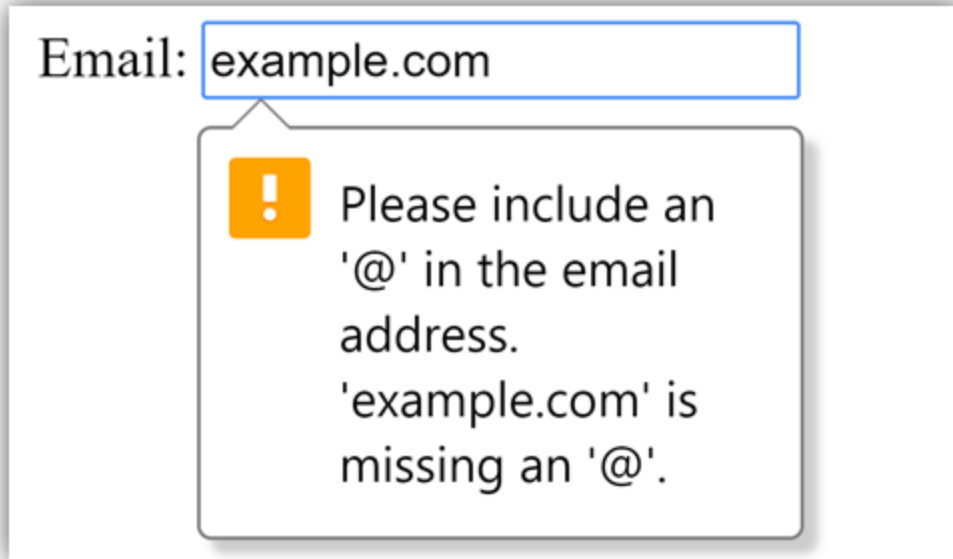

The **for attribute** specifies which form element a label is bound to.

HTML 5 Email Field Control

The email field in new in HTML 5. It validates the text for correct email address. You must use @ and . in this field.

```
<form>
    <label for="email">Email: </label>
        <input type="email" id="email" name="email"/> <br/>
</form>
```

Email: example.com

! Please include an
'@' in the email
address.
'example.com' is
missing an '@'.

Radio Button Control

The radio button is used to select one option from multiple options. It is used for selection of gender, quiz questions etc.

If you use one name for all the radio buttons, only one radio button can be selected at a time.

Using radio buttons for multiple options, you can only choose a single option at a time.

```
<form>
    <label for="gender">Gender: </label>
        <input type="radio" id="gender" name="gender" value="male"/>Male
        <input type="radio" id="gender" name="gender" value="female"/>Female <br/>
</form>
```

Checkbox Control

The checkbox control is used to check multiple options from given checkboxes.

```html
<form>
Hobby:<br>
        <input type="checkbox" id="cricket" name="cricket" value="cricket"/>
          <label for="cricket">Cricket</label> <br>
        <input type="checkbox" id="football" name="football" value="football"/>
          <label for="football">Football</label> <br>
        <input type="checkbox" id="hockey" name="hockey" value="hockey"/>
          <label for="hockey">Hockey</label>
</form>
```

Output:

Submit button control

HTML **<input type="submit">** are used to add a submit button on web page. When user clicks on submit button, then form get submit to the server.

Syntax:

<input type="submit" value="submit">

The type = submit , specifying that it is a submit button

The value attribute can be anything which we write on button on web page.

The name attribute can be omit here.

Example:

1. **<form>**
2.   **<label** for="name">Enter name**</label>
**
3.   **<input** type="text" id="name" name="name">**
**
4.   **<label** for="pass">Enter Password**</label>
**
5.   **<input** type="Password" id="pass" name="pass">**
**
6.   **<input** type="submit" value="submit">
7. **</form>**

Output:

HTML <fieldset> element:

The <fieldset> element in HTML is used to group the related information of a form. This element is used with <legend> element which provide caption for the grouped elements.

Example:

```
 <form>
    <fieldset>
     <legend>User Information:</legend>
   <label for="name">Enter name</label><br>
<input type="text" id="name" name="name"><br>
label for="pass">Enter Password</label><br>
<input type="Password" id="pass" name="pass"><br>
<input type="submit" value="submit">
</fieldset>
/form>
```

User Information:

Enter name

Enter Password

[submit]

HTML Form Attributes

The Action Attribute

The action attribute defines the action to be performed when the form is submitted.

Usually, the form data is sent to a file on the server when the user clicks on the submit button.

In the example below, the form data is sent to a file called "action_page.php". This file contains a server-side script that handles the form data:
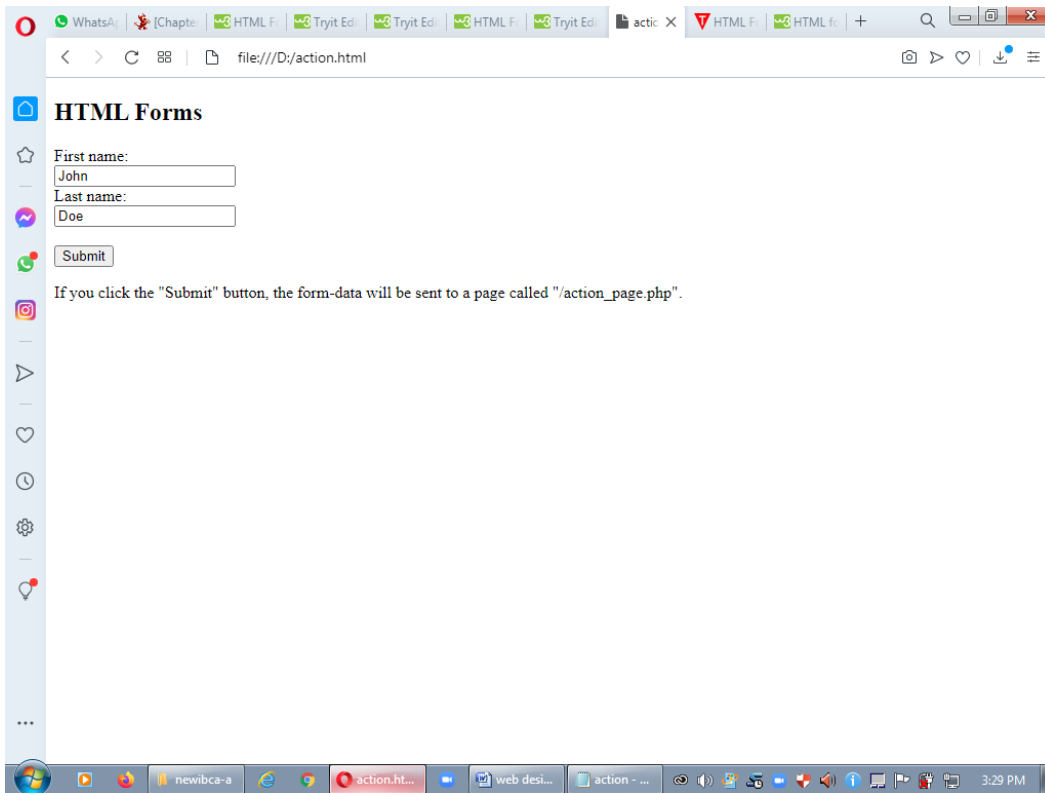

Syntax
<form action="URL of page"**>** .... **</form>**

This attribute specifies the URL of a web page as its value which receives the information of the form filled by the user.

Example

```
<!DOCTYPE html>
<html>
<body>
<h2>HTML Forms</h2>
<form action="/action_page.php">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="John"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="Doe"><br><br>
  <input type="submit" value="Submit">
</form>
<p>If you click the "Submit" button, the form-data will be sent to a page called
"/action_page.php".</p>
</body>
</html>
```

The Method Attribute

The method attribute specifies the HTTP method to be used when submitting the form data.

The form-data can be sent as URL variables (with method="get") or as HTTP post transaction (with method="post").

The default HTTP method when submitting form data is GET.

Example
This example uses the GET method when submitting the form data:
```
<!DOCTYPE html>
<html>
<body>

<h2>The method Attribute</h2>

<p>This form will be submitted using the GET method:</p>

<form action="/action_page.php" target="_self" method="get">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="John"><br>
```

```
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="Doe"><br><br>
  <input type="submit" value="Submit">
</form>

<p>After you submit, notice that the form values is visible in the address bar of the new browser tab.</p>

</body>
</html>
```
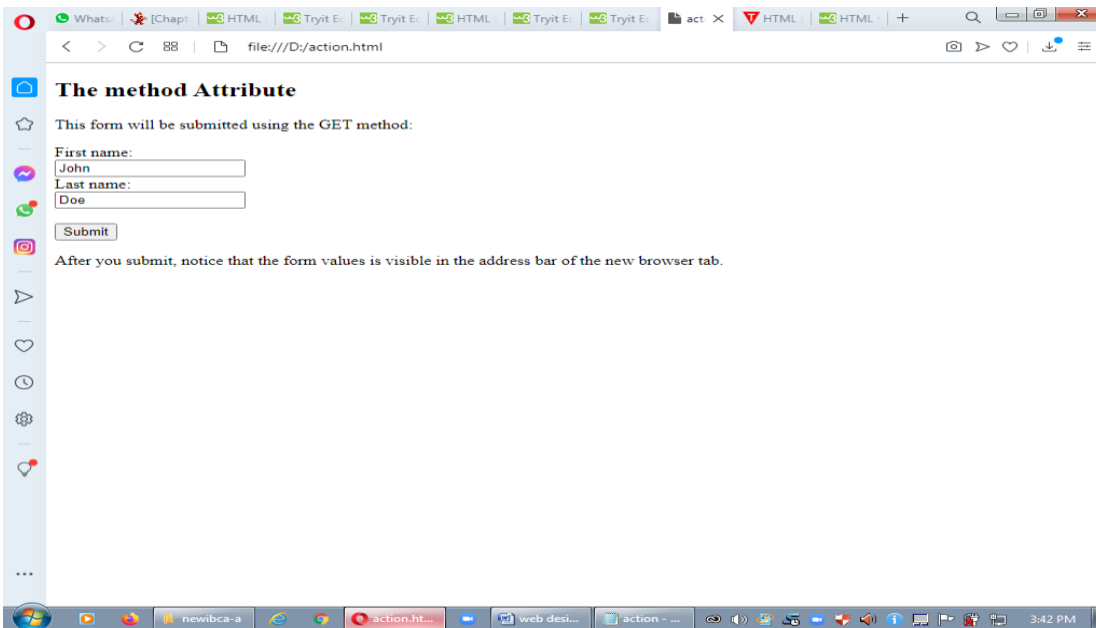
Notes on GET:

- Appends the form data to the URL, in name/value pairs
- NEVER use GET to send sensitive data! (the submitted form data is visible in the URL!)
- The length of a URL is limited (2048 characters)
- Useful for form submissions where a user wants to bookmark the result
- GET is good for non-secure data, like query strings in Google

This example uses the POST method when submitting the form data:

Notes on POST:

- Appends the form data inside the body of the HTTP request (the submitted form data is not shown in the URL)
- POST has no size limitations, and can be used to send large amounts of data.

- Form submissions with POST cannot be bookmarked

```
<!DOCTYPE html>
<html>
<body>

<h2>The method Attribute</h2>

<p>This form will be submitted using the POST method:</p>

<form action="/action_page.php" target="_blank" method="post">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="John"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="Doe"><br><br>
  <input type="submit" value="Submit">
</form>

<p>After you submit, notice that, unlike the GET method, the form values is NOT visible in the
address bar of the new browser tab.</p>

</body>
</html>
```
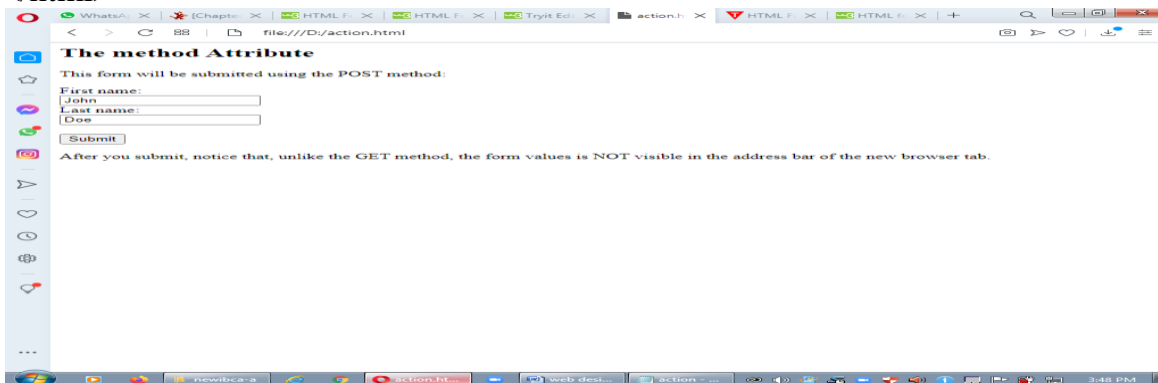
HTML Registration Form(exercise for form tag)

```html
<Html>
<head>
<title>
Registration Page
</title>
</head>
<body bgcolor="Lightskyblue">
<br>
<br>
<form action="/action_page.php">
<label> Firstname </label>
<input type="text" name="firstname" size="15"/> <br> <br>
<label> Middlename: </label>
<input type="text" name="middlename" size="15"/> <br> <br>
<label> Lastname: </label>
<input type="text" name="lastname" size="15"/> <br> <br>
<label>
Course :
</label>
<select>
<option value="Course">Course</option>
<option value="BCA">BCA</option>
<option value="BBA">BBA</option>
<option value="B.Tech">B.Tech</option>
<option value="MBA">MBA</option>
<option value="MCA">MCA</option>
<option value="M.Tech">M.Tech</option>
</select>
  <br>
  <br>
<label>
Gender :
</label><br>
<input type="radio" name="male"/> Male <br>
<input type="radio" name="female"/> Female <br>
<input type="radio" name="other"/> Other
<br>
<br>
  <label>
```

```html
Phone :
</label>
<input type="text" name="country code"  value="+91" size="2"/>
<input type="text" name="phone" size="10"/> <br> <br>
Address
<br>
<textarea cols="80" rows="5" value="address">
</textarea>
<br> <br>
Email:
<input type="email" id="email" name="email"/> <br>
<br> <br>
Password:
<input type="Password" id="pass" name="pass"> <br>
<br> <br>
Re-type password:
<input type="Password" id="repass" name="repass"> <br> <br>
<input type="button" value="Submit"/>
</form>
<p>If you click the "Submit" button, the form-data will be sent to a page called
"/action_page.php".</p>
</body>
</html>
```
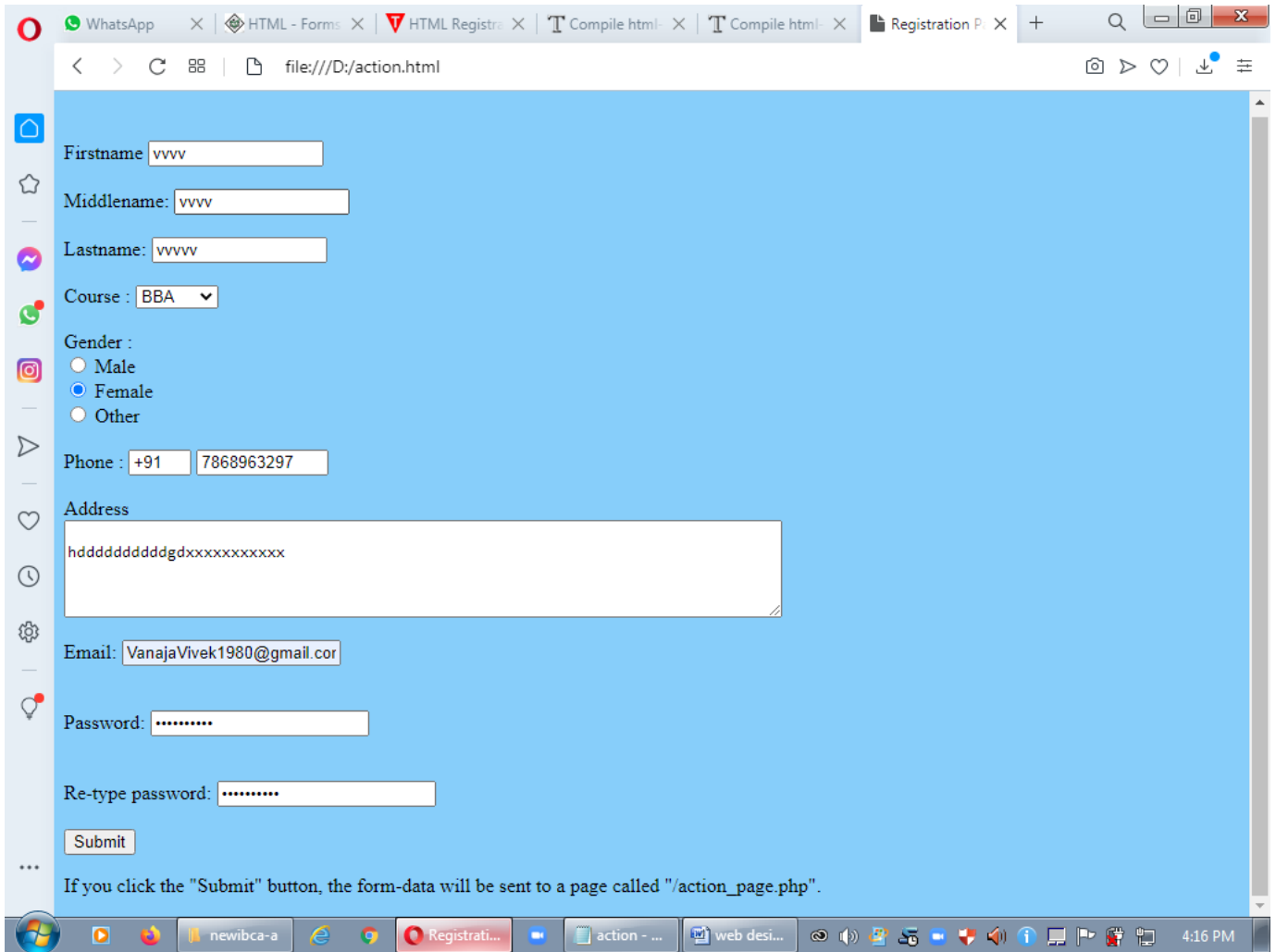
Firstname vvvv

Middlename: vvvv

Lastname: vvvvv

Course : BBA

Gender :
○ Male
● Female
○ Other

Phone : +91   7868963297

Address

hdddddddddddgdxxxxxxxxxxxx

Email: VanajaVivek1980@gmail.cor

Password: ••••••••••

Re-type password: ••••••••••

Submit

If you click the "Submit" button, the form-data will be sent to a page called "/action_page.php".

********************************THE END**************************************