

HTML is the standard markup language for creating Web pages.

What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

Example-1

```
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

- The `<html>` element is the root element of an HTML page
- The `<head>` element contains meta information about the HTML page
- The `<title>` element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The `<body>` element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

- The `<h1>` element defines a large heading
- The `<p>` element defines a paragraph

What is an HTML Element?

An HTML element is defined by a start tag, some content, and an end tag:

`<tagname>`Content goes here...`</tagname>`

The HTML **element** is everything from the start tag to the end tag:

`<h1>`My First Heading`</h1>`

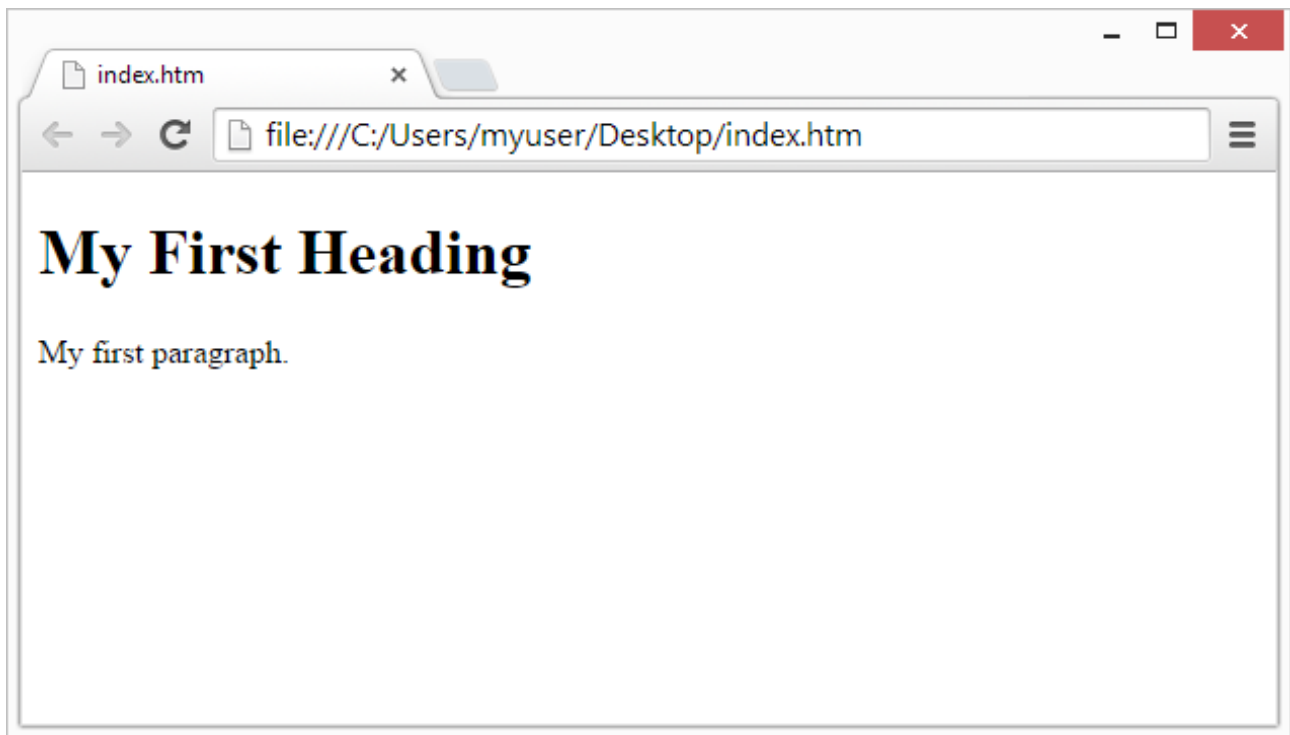
`<p>`My first paragraph.`</p>`

Start tag	Element content	End tag
<code><h1></code>	My First Heading	<code></h1></code>
<code><p></code>	My first paragraph.	<code></p></code>
<code>
</code>	<i>none</i>	<i>none</i>

Web Browsers

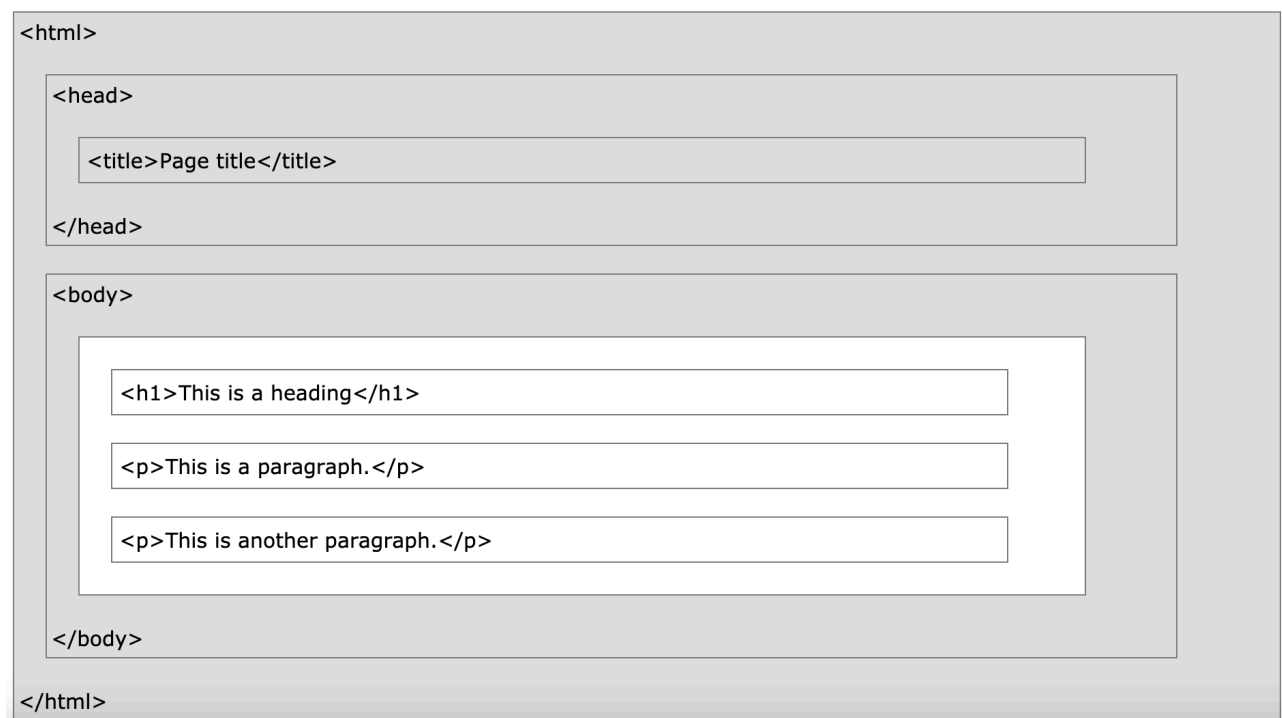
The purpose of a web browser (Chrome, Edge, Firefox, Safari) is to read HTML documents and display them correctly.

A browser does not display the HTML tags, but uses them to determine how to display the document:



HTML Page Structure

Below is a visualization of an HTML page structure:



Learn HTML Using Notepad or TextEdit

Web pages can be created and modified by using professional HTML editors.

However, for learning HTML we recommend a simple text editor like Notepad (PC) or TextEdit (Mac).

We believe in that using a simple text editor is a good way to learn HTML.

Follow the steps below to create your first web page with Notepad or TextEdit.

HTML EDITORS:

Step 1: Open Notepad (PC)

Windows 8 or later:

Open the **Start Screen** (the window symbol at the bottom left on your screen). Type **Notepad**.

Windows 7 or earlier:

Open **Start > Programs > Accessories > Notepad**

Step 1: Open TextEdit (Mac)

Open **Finder > Applications > TextEdit**

Also change some preferences to get the application to save files correctly. In **Preferences > Format >** choose "**Plain Text**"

Then under "Open and Save", check the box that says "Display HTML files as HTML code instead of formatted text".

Then open a new document to place the code.

Step 2: Write Some HTML

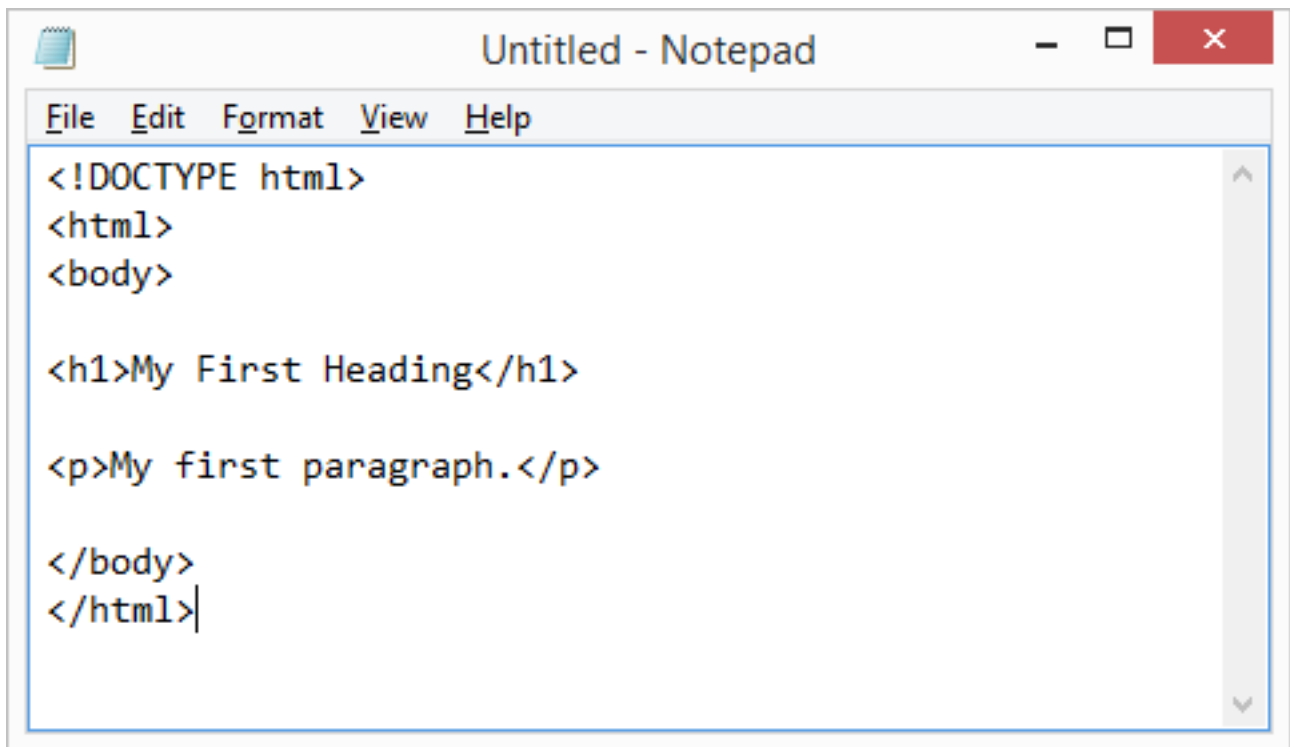
Write or copy the following HTML code into Notepad:

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

<h1>My First Heading</h1>

<p>My first paragraph.</p>

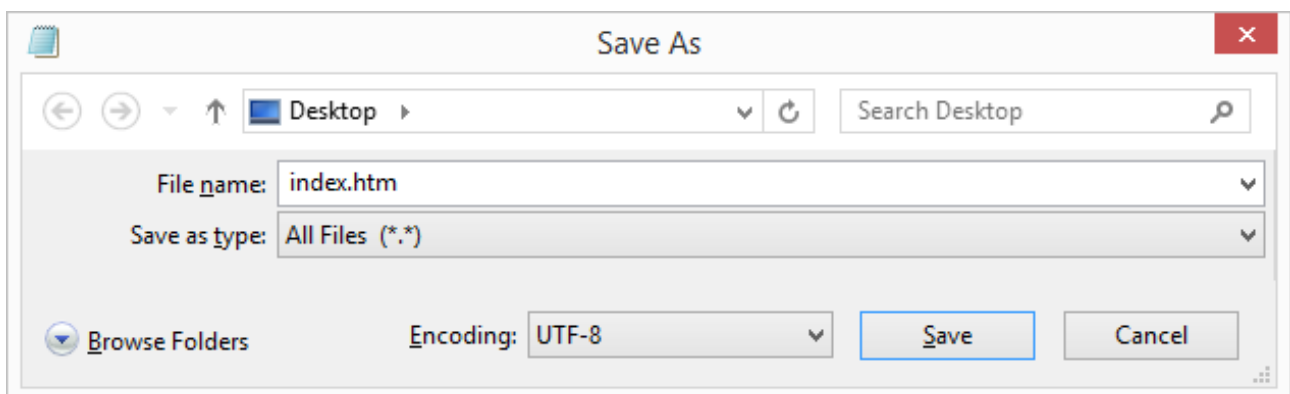
</body>
</html>
```



Step 3: Save the HTML Page

Save the file on your computer. Select **File > Save as** in the Notepad menu.

Name the file **"index.htm"** and set the encoding to **UTF-8** (which is the preferred encoding for HTML files).

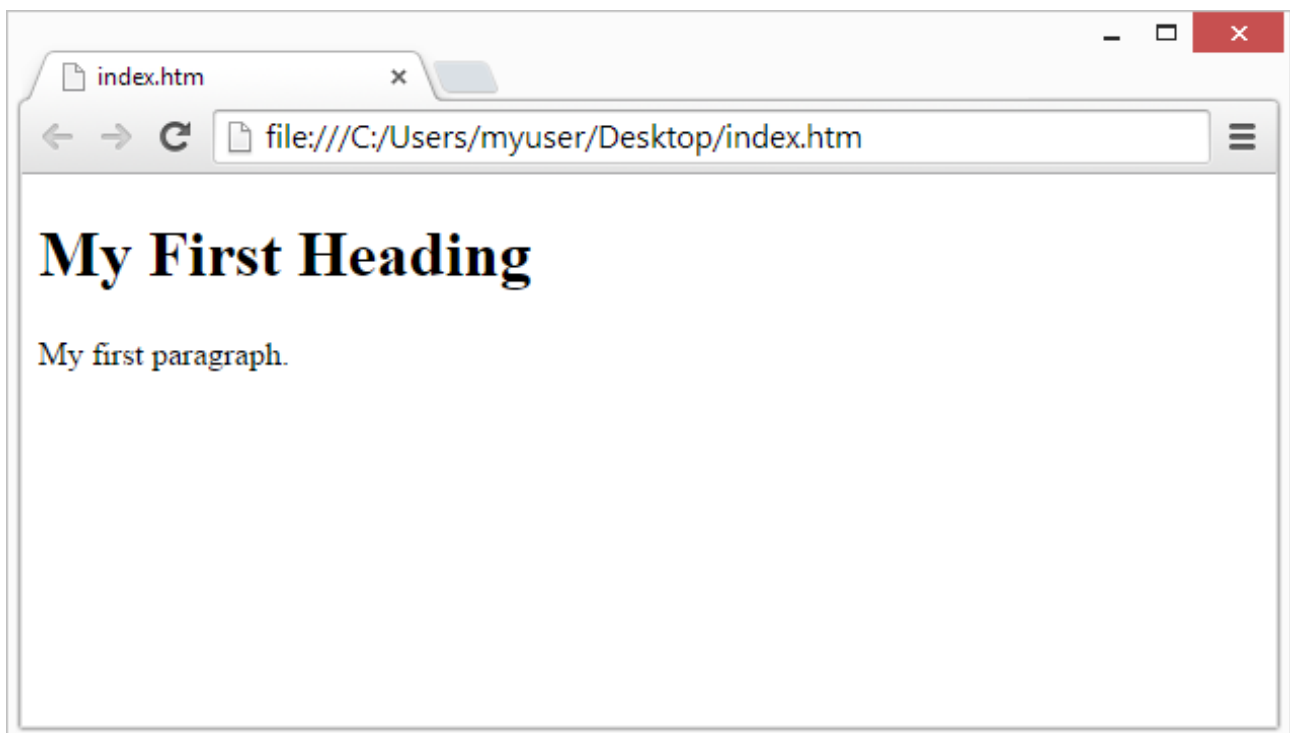


Tip: You can use either .htm or .html as file extension. There is no difference, it is up to you.

Step 4: View the HTML Page in Your Browser

Open the saved HTML file in your favorite browser (double click on the file, or right-click - and choose "Open with").

The result will look much like this:



HTML Headings

HTML headings are defined with the `<h1>` to `<h6>` tags.

`<h1>` defines the most important heading. `<h6>` defines the least important heading:

Example:

```
<h1>This is heading 1</h1>  
<h2>This is heading 2</h2>
```

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

HTML Paragraphs

HTML paragraphs are defined with the `<p>` tag:

Example:

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

HTML Links

HTML links are defined with the `<a>` tag:

Example


```
<a href="https://www.google.com">This is a link</a>
```

The `<a>` tag defines a hyperlink. The `href` attribute specifies the URL of the page the link goes to.

By default, links will appear as follows in all browsers:

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

HTML Links - The 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

Example

Use `target="_blank"` to open the linked document in a new browser window or tab:

```
<a href="https://www.google.com/" target="_blank">Visit Google!</a>
```

HTML Images

HTML images are defined with the `` tag.

The source file (`src`), alternative text (`alt`), `width`, and `height` are provided as attributes.

The `` tag is used to embed an image in an HTML page. The `src` attribute specifies the path to the image to be displayed

Example

```

```

There are two ways to specify the URL in the `src` attribute:

1. Absolute URL - Links to an external image that is hosted on another website. Example: `src="https://www.google.com/images/img_girl.jpg"`.

Notes: External images might be under copyright. If you do not get permission to use it, you may be in violation of copyright laws. In addition, you cannot control external images; it can suddenly be removed or changed.

2. Relative URL - Links to an image that is hosted within the website. Here, the URL does not include the domain name. If the URL begins without a slash, it will be relative to the current page. Example: `src="img_girl.jpg"`. If the URL begins with a slash, it will be relative to the domain. Example: `src="/images/img_girl.jpg"`.

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.abc.org/">ABC</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>
```

The `` tag should also contain the `width` and `height` attributes, which specifies the width and height of the image (in pixels).

The required `alt` attribute for the `` tag specifies an alternate text for an image, if the image for some reason cannot be displayed. This can be due to slow connection, or an error in the `src` attribute, or if the user uses a screen reader.

HTML Links - Use an Image as a Link

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

Example

```
<a href="default.asp">

```

Link to an Email Address

Use `mailto:` inside the `href` attribute to create a link that opens the user's email program (to let them send a new email):

Example

```
<a href="mailto:someone@example.com">Send email</a>
```

Button as a Link

To use an HTML button as a link, you have to add some JavaScript code.

JavaScript allows you to specify what happens at certain events, such as a click of a button:

Example

```
<button onclick="document.location='default.asp'">HTML Tutorial</button>
```

Link Titles

The `title` attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element.

Example

```
<a href="https://www.google.com/html/" title="Go to HTML section">Visit our HTML Tutorial</a>
```

The style Attribute

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

Example

```
<p style="color:red;">This is a red paragraph.</p>
```

The title Attribute

The `title` attribute defines some extra information about an element.

The value of the title attribute will be displayed as a tooltip when you mouse over the element:

Example

```
<p title="I'm a tooltip">This is a paragraph.</p>
```

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:

Example

```
<h1>This is heading 1</h1>  
<p>This is some text.</p>  
<hr>  
<h2>This is heading 2</h2>
```

```
<p>This is some other text.</p>
<hr>
```

Define an HTML Table

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

A simple HTML table:

```
<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>
</table>
```

Notes:

Nested HTML Elements

Never Skip the End Tag

Empty HTML Elements

HTML is Not Case Sensitive

Lab 2

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

Set the background color for a page to powderblue:

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

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

</body>
```

Set background color for two different elements:

```
<body>

<h1 style="background-color:powderblue;">This is a
heading</h1>
<p style="background-color:tomato;">This is a
paragraph.</p>

</body>
```

You can set the background color for HTML elements:

Hello World

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.

Example

```
<h1 style="background-color:DodgerBlue;">Hello
World</h1>
<p style="background-color:Tomato;">Lorem ipsum...</
p>
```


Text Color

The CSS `color` property defines the text color for an HTML element:

Example

```
<h1 style="color:blue;">This is a heading</h1>  
<p style="color:red;">This is a paragraph.</p>
```

You can set the color of text:

Hello World

Abcd

Good morning

Example

```
<h1 style="color:Tomato;">Hello World</h1>  
<p style="color:DodgerBlue;">Abcd</p>  
<p style="color:MediumSeaGreen;">Good morning</p>
```

Border Color

You can set the color of borders:

Hello World

Hello World

Hello World

Example

```
<h1 style="border:2px solid Tomato;">Hello World</h1>  
<h1 style="border:2px solid DodgerBlue;">Hello  
World</h1>  
<h1 style="border:2px solid Violet;">Hello World</h1>
```

Color Values

In HTML, colors can also be specified using RGB values, HEX values

```
<h1 style="background-color:rgb(255, 99, 71);">...</h1>  
<h1 style="background-color:#ff6347;">...</h1>
```

Fonts

The CSS `font-family` property defines the font to be used for an HTML element:

Example

```
<h1 style="font-family:verdana;">This is a heading</h1>  
<p style="font-family:courier;">This is a  
paragraph.</p>
```

Text Size

The CSS `font-size` property defines the text size for an HTML element:

Example

```
<h1 style="font-size:300%;">This is a heading</h1>  
<p style="font-size:160%;">This is a paragraph.</p>
```

Text Alignment

The CSS `text-align` property defines the horizontal text alignment for an HTML element:

Example

```
<h1 style="text-align:center;">Centered Heading</h1>  
<p style="text-align:center;">Centered paragraph.</p>
```

HTML Formatting Elements

This text is bold

This text is italic

This is subscript and superscript

Formatting elements were designed to display special types of text:

- `` - Bold text
- `` - Important text
- `<i>` - Italic text
- `` - Emphasized text. (Italic)

- `<mark>` - Marked text. (Highlighted)
- `<small>` - Smaller text
- `` - Deleted text. (Striked)
- `<ins>` - Inserted text. (Undelined)
- `<sub>` - Subscript text
- `<sup>` - Superscript text

HTML `` and `` Elements

The HTML `` element defines bold text, without any extra importance.

Example

```
<b>This text is bold</b>
```

HTML `<address>` for Contact Information

The HTML `<address>` tag defines the contact information for the author/owner of a document or an article.

The contact information can be an email address, URL, physical address, phone number, social media handle, etc.

The text in the `<address>` element usually renders in *italic*, and browsers will always add a line break before and after the `<address>` element.

Example

```
<address>
```

Written by John Doe.

Visit us at:

Example.com

Box 564, Disneyland

USA
</address>

HTML Lists

HTML lists allow web developers to group a set of related items in lists.

Example

An unordered HTML list:

- Item
- Item
- Item
- Item

An ordered HTML list:

1. First item
2. Second item
3. Third item
4. Fourth item

Unordered HTML List

An unordered list starts with the `` tag. Each list item starts with the `` tag.

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

Example

```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Ordered HTML List

An ordered list starts with the `` tag. Each list item starts with the `` tag.

The list items will be marked with numbers by default:

Example

```
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

HTML Description Lists

HTML also supports description lists.

A description list is a list of terms, with a description of each term.

The `<dl>` tag defines the description list, the `<dt>` tag defines the term (name), and the `<dd>` tag describes each term:

Example

```
<dl>
  <dt>Coffee</dt>
```

```
<dd>- black hot drink</dd>
<dt>Milk</dt>
<dd>- white cold drink</dd>
</dl>
```

Tag	Description
<u></u>	Defines an unordered list
<u></u>	Defines an ordered list
<u></u>	Defines a list item
<u><dl></u>	Defines a description list
<u><dt></u>	Defines a term in a description list
<u><dd></u>	Describes the term in a description list

Design an HTML page for (1) Student Information (2) Job Application.

1. Mention the following information.

1. Student Information

1. Name
2. Address(City, Street, State, Pincode)
3. Birthdate
4. Contact Details(Mail Id, Mobile Number)
5. Hobbies
6. Gender

7. Semesters

8. Year

9. Subject list

2. Job Application

1. Name

2. Address(City, Street, State, Pincode)

3. Birthdate

4. Contact Details(Mail Id, Mobile Number)

5. Designation

6. Highest qualification

7. Experience

8. Expected salary

9. References