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Enrollment = 247

BSCCSIT DIV = B

HTML

ASSIGNMENT



HTML

Assignment no-1

(1) Describe the basic structure of an HTML document?

Introduction:-

A simple HTML document

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title> Page Title </title>
```

```
</head>
```

```
<h1> My first heading </h1>
```

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

```
</body>
```

```
</html>
```

Example Explained

- The `<!DOCTYPE html>` declaration defines that this document is HTML5 document.
- 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, table lists, etc.
- The `<h1>` element defines a large heading.
- The `<p>` element defines a paragraph.

Q) What are HTML form elements and attributes?

Provide examples of commonly used form elements and their attributes?

Introduction

ANS: HTML FORM ELEMENTS AND ATTRIBUTES

→ HTML forms allow users to interact with websites by entering data, making selections, and submitting information. They're essential for tasks like user registration, search queries, and feedback submission.

1. The `<input>` Element;

The `<input>` element is one of the most common form elements and it depends upon the type attribute.



Examples

HTML

```
<label for="fname">First name :</label>  
<input type="text" id="fname" name="fname">
```

2) The `<label>` Element

→ The `<label>` element defines a label for form elements. It's useful for screen readers and improves accessibility.

→ The `for` attribute of `<label>` should match the `id` attribute of the associated `input` element.

HTML

```
<label for="cars">Choose a car :</label>  
<select id="cars" name="cars">  
  <option value="volvo">Volvo</option>  
  <option value="saab">Saab</option>  
  <option value="fiat">Fiat</option>  
  <option value="audi">Audi</option>  
</select>
```

noting that in this example "Fiat" is present.

3) The `<select>` Element

The `<select>` element creates a dropdown list (also known as a select box).



Example :-

```
<label for = "cars"> Choose a car :</label>
<select id = "cars" name = "cars">
    <option value = "Audi"> Audi </option>
    <option value = "Hyundai"> Hyundai </option>
    <option value = "mercedes"> Mercedes </option>
    <option value = "mahindra" selected> Mahindra </option>
<option value = "Honda"> Honda </option>
</select>
```

In this example we can see "mahindra" is pre selected.

4) The `<textarea>` Element:-

- `<textarea>` creates a multi-line input field (area) where users can enter longer text
- You can specify the visible number of lines

`<label>` : Associates a label with an input element

Example

HTML

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



↳ Standard → Skip navigation legend
↳ Alternative Field Generics ↳
↳ Fieldset ↳

- ↳ Discuss the importance support in HTML development -
HTML can develop ensure cross-browser compatibility
↳ Importance of Support in HTML Document

(a) User Experience : Ensuring that accessible content
can easily access without browser extensions
The user experience users expect a consistent
and smooth experience regardless of the browser
they use

- (b) Accessibility - Proper support in HTML development
ensure that webpages are accessible to all
users, including those with disabilities. This
includes using the semantic HTML elements
and ensuring compatibility with screen readers

2. Site Semantic :- Search engines friendly website
that are clean - Structured and accessible Proper
HTML support can improve a sites Search
engine ranking



(4) Maintenance and Scalability :- Well supported HTML code is easier to maintain and scale. It reduces the likelihood of bugs and issues as updates or changes are made.

→ Ensuring Cross - Browser Compatibility

(1) Use Standardized HTML and CSS : Stick to using standardized HTML and CSS to avoid browser-specific quirks. This includes using a proper `<DOCTYPE>` declaration to ensure standards mode is activated.

(2) CSS Resets and Normalization : Implement CSS resets or normalization to mitigate inconsistent browser styling. Libraries like Normalize.css can help ensure consistent styling across browsers.

(3) Responsive Design:- Create responsive websites that adapt to different screen sizes and resolutions. This ensures a consistent experience on both desktop and mobile browsers.

(4) Cross Browser Testing : Regularly test your website on multiple browsers and devices. Tools like Browser Stack or Lambda Test can automate this process and help identify issues early.



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Progressive Enhancement and Graceful Degradation
Use progressive enhancement to build a core experience that works on all browsers, and then add advanced features that enhance the experience on modern browsers. Graceful degradation ensures that even if some features are not supported the website remains functional.

Polyfills and Shims :- Use polyfills and shims to add support for newer HTML5 and CSS3 features in older browsers. Libraries like Modernizr can help detect and implement these features.

JavaScript Frameworks and Libraries
Utilizes well-supported JavaScript frameworks and libraries that handle cross-browser compatibility issues. Frameworks like React, Angular, and Vue often have built-in solution for common compatibility problems.

How can background colors and images be added to an HTML webpage? Provide code examples demonstrating both techniques?

Introduction



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Ans Adding Background Color:-

→ To set a background color for an HTML element, you can use the `background-color` property in CSS.

Example

```
HTML
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <style>
        body {
            background-color: #f0f0f0; /* Set the background color to light gray */
        }
    </style>
<title>My Colorful Web Page </title>
</head>
<body>
    <!-- Your content goes here-->
    <h1> Welcome to my Web Page </h1>
    <p> This is some sample text. </p>
</body>
</html>
```



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Here this example says that the entire background of the page represented by the `<body>` element will be light gray (#f0f0f0). You can replace the color value with any valid CSS colors definition (such colors as in name, hexadecimal code RGB, or HSL value).

Background Image adding code

```
<p style="background-image:  
url('img-girl.jpg');> This paragraph has a  
background image.</p>
```

Alternative code

```
<style>  
p {  
    }  
    background-image: url('img-girl.jpg');  
</style>  
  
2. Background image for the entire Page (on the  
<body> element):  
• If you want the entire page to have a background  
image, set it on the <body> element:
```



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HTML

```
<style>
body {
    background-image: url('img girl.jpg')
}</style>
```

3) Controlling Background Repeat and Size

- By default, if the background image is smaller than the element, it will repeat itself both horizontally and vertically. To avoid repetition set background-repeat: no-repeat.
- To make the background images cover the entire element without stretching, use background-size: cover.
- If you want the image to stretch to fit the entire element, use background-size: 100% 100%.

(5) Explain div and span tags in details?

Ans
Introduction

HTML div tag

The div tag is known as the Division tag. The HTML <div> tag is a block-level element used for grouping and structuring content. It provides a container to organize and



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Sections of webpage, facilitating layout design and CSS styling

```
<!DOCTYPE html>
<html>
<head>
<title> Div tag </title>
<style>
div {
    color: white;
    margin: 2px;
    font-size: 25px;
}
div {
    background-color: #1a1a2a;
}
div {
    background-color: #9a9a9a;
}
div {
    background-color: #8a3a2a;
}
```



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(2) tags

- The tag is an inline element. It is like a tiny stylish brush that you can apply to specific parts of your content.
- Use when you want to style a small portion of text differently (e.g. change its color, font or background).
- Dynamically manipulate content using java script.

Let's understand it with an example

HTML :-

```
<p>
    This is a <span class="crimson">crimson</span> within black text
    This is an <span class="indigo">indigo</span> within others,
    and this is an <span class="orange">orange</span> with other texts.
</p>
```



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key notes

- `<div>` is for longer sections and block-level grouping
- `` is for smaller, inline styling or manipulation



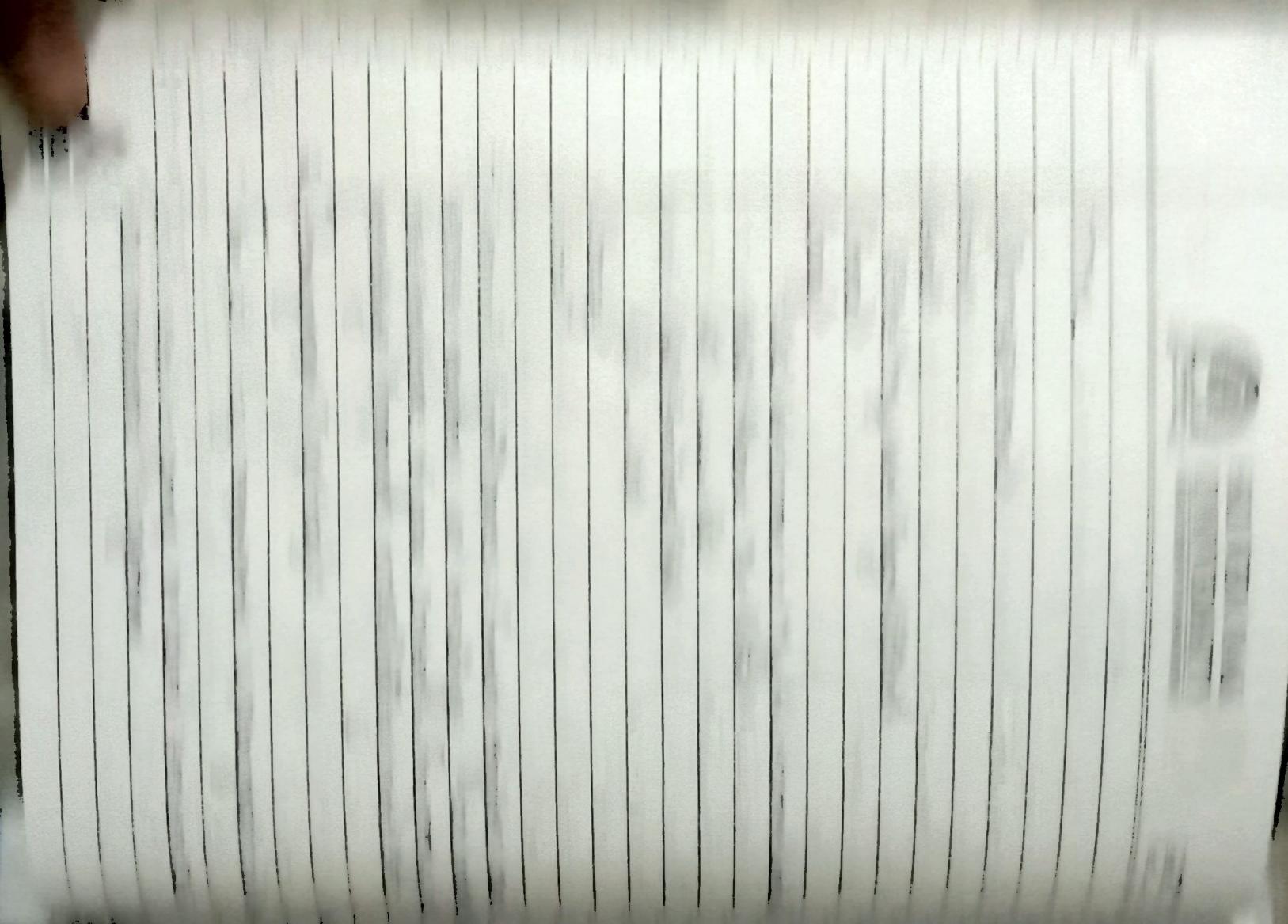
HTML Assignment no - 2

- (ii) Explain the difference between (h1-h6) and paragraph (<p> tag) in HTML. Provide example of when each should be used and describe their semantic significance?

Introduction

Ques 2.) Heading (h1-h6):-

- Headings in HTML are used to structure and organize content on a webpage. They represent different levels of importance and hierarchy
- The <h1> through <h6> tags define six levels of headings with <h1> being the highest (most important) level and <h6> being the lowest
- Here's how they are typically mostly used:-
 - <h2> : Main page title (usually appears once per page).
 - <h2> : Subsections or major content blocks
 - <h3> to <h6> :- Further subdivisions within subsection





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It is used to group related sentences on content together.

Example:-

HTML

```
<p>lorem ipsum dolor sit amet, consectetur  
adipiscing elit. Sed ac justo nec odio  
aliquam tincidunt.</p>
```

Semantic significance. Paragraphs provide context and readability. By adding spacing before and after paragraphs making the content visually distinct.

Q) Discuss the use of subscript (``) and superscript (``) tags in HTML? Provide example

Introduction

4) Subscript (``):

The `` tag is used to display text on numbers in a lower position (subscript) relative to the normal text line. It is commonly used for chemical formulas, mathematical expressions, and footnotes.



- For example, if you want to write "H₂O" (water), you can use the `<sub>` tag like this:-

Code :-

```
H<sub>2</sub>O
```

This code could render :- H₂O

(2) Super Script (`<sup>`):

→ The `<sup>` tag is used to display text or number in an upper position (superior relative to the normal text-line). It's often used for mathematical exponents, copy symbols, and other similar notations.

→ For example, to write "x²" (x squared), you can use the `<sup>` tag like this

```
x<sup>2</sup>
```

This could render "x²".



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both `<sub>` and `<sup>` tags are inline elements, which means they affect only the content within them. You can use them alongside regular text or other HTML elements.

(3) How can you create a horizontal rule (`<hr>`) tag in HTML? Describe its purpose and provide an example of its usage?

Introduction

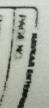
The `<hr>` tag in HTML stands for "horizontal rule" and it's used to create a thematic break or a visual separation between content sections on a webpage.

(1) Basic Usage :- To create a simple horizontal line, you can just include the `<hr>` tag in your HTML code. It doesn't require a closing tag because it's a self-closing element. Here's an example:-

```
HTML
<p> This some content above the line.</p>
<hr>
<p> This content below the line.</p>
With this, a horizontal line would appear
between the two paragraphs.
```



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2 Customizing the line :- You can also add some attributes to customize the appearance of the line .

- **[color]** :- Sets the color of the line
- **[size]** :- Determines the height (thickness) of the line.
- **[width]** :- Specifies the width of line

HTML

```
<p> Before the line. </p>
<br color = "blue" size = "2" width = "50%">
<p> After the line. </p>
```

In this modified example, the line will be blue, 2 pixels thick and cover 50% of the page width

→ Semantic Use :- While **
** is often used for decorative purposes, it's good to remember its original intent: to indicate Alphanumeric Shift. For instance, you might use it to separate different sections of an article, a contact form from the rest of the page



Q. Describe the process of aligning text in HTML using CSS. What are some CSS properties and values you can use to achieve text alignment?

Ans Introduction

In Text Alignment:-

To control the alignment of text with an HTML element, you can use the text-align property accepts several values

- left :- Aligns text to the left (default)
- right :- Aligns text to the right.
- center :- Centers text horizontally
- justify :- Justifies text, meaning it spreads spreads the text evenly across the container, adjusting spaces between words as needed.

2) Applying Text Alignment:-

- You can apply the text-align property to various HTML elements, such as paragraphs (

), headings (

, , etc), and even inline elements like .



HTML

```
<style>
  .centered-text {
    text-align: center;
  }
}
```

<listyle>
<p class="centered-text"> This text is
centred. </p>

3) Vertical Alignment

While text-align handle horizontal alignment, vertical alignment can be achieved using the vertical-align property. However, note that this property primarily applies to inline or inline-block elements (like img e or inline text).

→ Values for vertical-align include:-

- baseline :- Aligns the baseline of the element with the baseline.
- middle :- Vertically centers the elements
- top :- Aligns the top of the element bottom of its parent



HTML ASSIGNMENT-3

- 1) Explain the structure of an HTML Table.
Provide an example of a basic table structure.
- 2) Inside Table Element (<Table>):
 - The <Table> element is the container for the entire Table.
 - It defines the beginning and end of the Table.
- 3) Inside the <Table> element, you'll find the Table Rows (<tr>).
 - A Table Row represents a horizontal row within the Table.
 - It contains one or more table cells (also known as Table Data Cells).
- 4) Inside the <tr> element, you'll find the Table Cells (<td>).



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2 Table Rows (tr):

- A table row represents a horizontal row within the table
- It contains one or more table cells (also known as table data cells).





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HTML

<td align = "center" valign = "middle"> Content</td>

CSS properties

(1) Aligning the Table

→ Use the margin property to center the table

HTML

```
<style>
table {
    margin-left: auto;
    margin-right: auto;
}
```

```
<style>
<table>
<!-- Table Content -->
</table>
```

(2) Aligning Cell Contents

→ Use the text-align property to align the content horizontally

→ Use the vertical-align property to align the content vertically



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Middle
style
1d

text - align: center; // Middle alignment *!
vertical-align: middle; // Vertical alignment *

type
size
font

16

text-content-color

background

Code sample

<Div style="text-align:center; vertical-align:middle;">

content

</div>

vertical - align: middle; // Vertical alignment,
middle, bottom, baseline *!

align

size
font-size: 1em;

color: #000000;

background-color: white;



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```
<td> Data 2 </td>  
<tr>
```

```
<table>
```

(Q3) Describe the process of nesting tables in HTML. Provide an example illustrating nested tables.

Ans Nested tables in HTML involves placing one table inside another table's cell

```
<!DOCTYPE html>  
<html>  
<head>  
<style>  
table, th, td {  
border: 1px solid black;  
border-collapse: collapse;  
padding: 10px;  
}  
</style>  
<thead>  
<body>  
<h2> Nested Tables Example </h2>  
<table>  
<tr>  
<th> Main Table Header 1 </th>  
<th> Main Table Header 2 </th>  
<td>  
<table>  
<tr>  
<td>
```



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REGISTRATION NO.
ROLL NO.

```
<tr>
<th> Nested Table Header 1 </th>
<th> Nested Table Header 2 </th>
<td>
<br>
<td> Nested Table Header 1</td>
<td> Nested Table Header 2 </td>
<br>
<br>
<td> Nested Table Header 3 </td>
<td> Nested Table Header 2 </td>
<br>
<td>
<br>
<td> Main Table Data 2</td>
<br>
<table>
<tbody>
<tr>
<td> . . .
</td>
</tbody>
</table>
```

Explanation :-

i) Main Table :- The outer table is defined with standard `<table>`, `<tr>`, `<th>`, and `<td>` tags

ii) Nested Table :- Inside one of the `<td>` cells of the main table, another table is defined using the same tags



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Ques) What are frames in HTML and how are they created? Explain the purpose of the <frameset> and <frame> tags.

Ans) Frame are created using the <frameset> and <frame> tags.

```
HTML  
<!DOCTYPE html>  
<html>  
<head> frameset Example </head>  
<frameset cols : "25%,75%">  
<frame src = "menu.html" name = "menu-frame">  
</frameset>  
<noframes>  
<body>  
<p> Your browser does not support frames. </p>  
</body>  
</noframes>  
</html>
```

⇒ Explanation

(1) <frameset cols = "25%,75%"> : This defines a frame with two columns, where the first column takes up 75%



- 1) `<frame src = "menu.html" name = "menuFrame" >` :- This defines a frame that loads the ~~content.html file~~ menu.html file and names it menuFrame.
- 2) `<f name src = "content.html" name = "content Frame" >` : This defines a frame that loads the content.html file and names it contentFrame.
- 3) `<frames>` : The tag provides content for browsers that do not support frames.
- 4) Discuss the concept of applying hyperlink targets to frames?
- 5) self :- Opens the link in the same frame (default).
- blank :- Opens the link in a new window or tab
- parent :- Opens the link in the parent frame
- top :- Opens the link in the full body of the window
- framename :- Opens the link in a specific frame named framename.



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```
Html
<!DOCTYPE html>
<html>
<head>
<title> Frame set with Hyperlink Target is</title>
<head>
<frameset cols = "35% 35%">
<frame src = "menu.html" name = "menuFrame">
<frame src = "content.html" name = "contentFrame">
<frameset>
<noframes>
<body>
<p> Your browser does not support frames</p>
<body>
<noframes>
</html>

menu.html
<!DOCTYPE html>
<html>
<head>
<title> menu </title>
<head>
<body>
<body>
<ul>
<li> <a href = "page.html" target = "contentFrame"> Page </a>
<li> <a href = "page.html" target = "contentFrame"> Page </a>
<li> <a href = "page.html" target = "contentFrame"> Page </a>
</ul>
</body>
</html>
```



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HTML Assignment - 4

i. Explain the different ways to create a hyperlink in HTML?

> HTML
> href = "https://www.example.com".

> HTML → Open Link in a New Tab Target = "blank"
> href = "https://www.example.com"

> link to an Email Address
mailto

<a href = "mailto : someone@example.com"

> link to a Phone Number : scheme
ka href = "tel:123456789" > callus

> link a Section on the Same Page
> id = Target-Section ->
the id = "Section1" > Section1 </h2>

<p> This is Section 1. </p>
> --- link to Section ->
 Go to Section 1

> link to a file
 Document



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→ Image as a link

 tag inside the <a> tag

<img src = "image.jpg" alt = Example Image

(2) How can you style hyperlinks in HTML to change their color?

Ans

```
<!DOCTYPE html>
<html>
<head>
<style>
/* Unvisited link */ a:link {color : blue;}
/* Visited link */ a:visited {color : purple;}
/* Mouse over link */ a:hover {color : black;}
/* Selected link */ a:active {color : green;}
</style>
</head>
<body>
<h2>Styled links </h2>
<p><a href = "https://www.example.com"><img src = "image.jpg" alt = Example Image</a></p>
</body>
</html>
```

In this example, the a link selector styles unvisited links, a:visited styles visited anchors, style links when user hovers and a:active styles links when they are clicked.



Describe the process of inserting an image on a webpage using the tag in HTML.

Basic Syntax

``

- src - This attribute specifies the path to the image to be displayed
- alt - This attribute provides alternative text for the image if it cannot be displayed. It's also useful for accessibility purpose

(HTML)

<img alt =

"alt text" />



(4) Discuss the steps involved in creating an HTML form with various input elements like text boxes, buttons, checkboxes, dropdowns and date fields.

→ Form action = "Submit - form" method="post"

→ Textboxes

→ <label for="name"> Name </label>

<input type="text" id="name" name="name" />

Buttons

→ <button type="submit"> Submit Abstion </button>

Checkboxes

<label for="Subscribe"> Subscribe </label>

<input type="checkbox" id="Subscribe" name="Subscribe" />

→ Dropdown

<label for="Country"> Country </label>

<select id="Country" name="Country">

<option value="India"> India </option>

<option value="UK"> UK </option>

<option></option> </option>

→ DateFields

<label for="DOB"> Date of Birth </label>

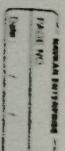
<input type="date" id="DOB" />

lets combine all elements



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Embedding Audio

<audio controls>

<source src = "audio.mp3" type="audio/mpeg">

Your browser does not support the audio tag.

</audio>

Basic Example

<!DOCTYPE html>

<html>

<head>

<title> Audio Example </title>

</head>

<body>

<h2> My Audio </h2>

<audio controls>

<source src = "https://cococo.example.com/audio.mp3"

type="audio/mpeg">

Your browser does not support the audio tag.

</audio>

</body>

</html>