

SILVER OAK UNIVERSITY

EDUCATION TO INNOVATION

Date : Page No. :

* Assignment *

* HTML *

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* Remark:



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NAME: Dhandhukriya Ritul J.

ENROLLMENT NO.: 077

HyperText
Markup
language

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~~Assignment~~
~~UNIT - 1~~

Q.1) describe the basic structure of an HTML document.
Ans :-

→ An HTML document is structured with a hierarchy of elements that define the content and layout of a web page.

→ Here's the basic structure:

1). <!DOCTYPE html>:

→ This declaration defines the document type and version of HTML being used (HTML 5 in this case).

2). <html>:

→ The root element that encloses the entire document.

3). <head>:

→ Contains metadata and links to resources that are not directly visible on the page, such as:

- <title>: specifies the title of the web page.
- <meta>: provide a metadata like viewport settings.
- <link>: links to external resources like CSS.
- <script>: links to external JavaScript files or includes inline JavaScript.

4). <body>:

- contains the visible content of the page,
- such as, text elements, media elements, layout elements and interactive elements.

* Example:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title> Sample Page </title>
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>
    <h1> Welcome to my website </h1>
    <p> This is a sample web page. </p>
    <a href="https://www.example.com" >
      Click here </a>
  </body>
</html>
```

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Q-e) what are HTML form-elements and attributes? provide examples of commonly used form elements and their attributes.

Ans.e)

- HTML form elements are the components used to create interactive forms on web pages.
- These elements allow users to input data that can be sent to a web server for processing.
- Each form element typically comes with specific attributes that define its behavior and appearance.
- Here are some common form elements and their attributes:

* commonly used HTML Form Elements and Attributes:

1). <form>:

- defines the form,
- attributes: action, method,

2). <input>:

- for text, password, checkbox, etc;
- attributes: type, name, value, placeholder, required.

3). <textarea>:

- multi-line text input;
- attributes: name, rows, cols, placeholder.

4). <select>:

- drop-down list;
- attributes: name, size, multiple.

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5). <button>: It is used to submit the form or to perform other tasks.

→ Buttons for form actions;

→ attributes: type, name, value.

6). <label>:

→ labels for form elements;

→ attribute: for.

7). <fieldset> and <legend>: It is used to group related form elements.

→ group related form elements.

These elements and attributes are

foundational for building forms and enabling user interaction with web pages.

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Q-3) discuss the importance of browser support in HTML development. How can developers ensure cross-browser compatibility?

Ans. 3)

- * Importance of Browser support in HTML development:
- ~~Browser support is crucial in HTML development because different web browsers (e.g., chrome, firefox, safari, edge) often interpret HTML, CSS, and JavaScript in slightly different ways.~~
- without ensuring cross-browser compatibility, a website might not function or display correctly for users on different browsers.
- This can lead to issues such as layout problems, broken functionality, or inconsistent user experiences.

* How developers can ensure cross-Browser compatibility:

1). Use modern standards:

- Stick to HTML-5 and CSS-3, as most browsers now support them.

2). CSS Resets:

- Use tools like normalize.css to eliminate default browser styling inconsistencies.

3). Feature detection:

- Use tools like modernizer to check feature support and provide fallbacks.

4). Cross-Browser Testing:

- regularly test your site on various browsers (chrome, firefox, safari, etc).

5). Vendor prefixes:

- include necessary prefixes (e.g., -webkit-, -moz-) for CSS properties.

6). Responsive design:

- ensure your site is mobile-friendly using media queries and flexible layouts.

7). Polyfills and shims:

- use these for older browser support (e.g., - HTML5 shim for IE).

8). Valid code:

- use tools like W3C validators to catch syntax issues.

- these practise help create websites that work well across different browsers, improving user experience and accessibility.

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* Assignment - 2 *

* UNIT - 2 *

Q1) Explain the difference between heading (`<h1>`) and paragraph (`<p>` tag) in HTML. provide examples of when each should be used and their semantic signification.

Ans.1)

→ * Headings (`<h1>` to `<h6>`):

- purpose :-

→ structure content by creating titles and subheadings.

- semantic meaning:

→ indicates importance and hierarchy (e.g., `<h1>` is the main title, `<h2>` to `<h6>` are sub-headings).

- use:-

→ for section titles, main headings, or subsections.

* Example:-

→

<code><head></code>	
<code><h1> main title </h1></code>	
<code><h2> subtitle </h2></code>	
<code><h3> subsection </h3></code>	
<code></head></code>	

* Paragraph (<P>):

- Purpose:

→ groups related text into blocks of paragraphs.

- semantic meaning:

→ represents a coherent block of text, use for the regular block of text.

* Example:

→

~~<P> This is a paragraph of text. </P>~~

* Key differences:

1). headings:

→ organize content hierarchically (SEO and structure).

2). paragraphs: same kind of text (information).

→ display regular text in blocks.

→ In short, headings create structure and paragraphs display content.

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*Q-2) How can you create horizontal rule (`<hr>` tag) in HTML? Describe its purpose and provide an example of its usage.

Ans.

- The `<hr>` tag in HTML is used to create a horizontal rule, which is a thematic break or a link line that visually separates section of content on a web page.
- It can be used to indicate a change in the topic, content section, or theme.

* How to use `<hr>` tag:

- The `<hr>` tag is a self-closing tag, meaning it does not require a closing tag.

* Example:

```
→ <hr>
<Style> border: 0;
height: 2px;
background-color: #333;
margin: 10px 0;
</Style>
<p> This is the first section of content.
<hr> <hr>
<p> This is second section after hr. rule. </p>
```

- The `<hr>` tag creates a horizontal line to separate content.
- It useful for dividing sections or signaling a change in topics.

* Q-3). Discuss the use of subscript (`<sub>`) and superscript (`<sup>`) tags in HTML. Provide examples demonstrating their applications in text formatting.

Ans. 3)

→ The `<sub>` and `<sup>` tags in HTML are used to format text as subscripts and superscript, respectively.

* Subscript (`<sub>`) Tag:

• Purpose:

→ The `<sub>` tag is used to display text below the baseline of the normal text.
→ This is typically used in chemical formulas, mathematical expressions where a lower position is needed.
→ like as a, chemical formulas e.g., H_2O , CO_2 .

* Example:

→ " H_2O ".

`<p>` The chemical formula for water is $H₂O. </p>$

* Superscript (`<sup>`) Tag:

• Purpose:

→ The `<sup>` tag is used to display text above the baseline of the normal text.
→ It is commonly used for powers of exponents, footnotes, and trademarks.

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* Example:

→ "e3" or "company™"

<P> 2 <SUP> 3 <SUP> equals 8. <P>

<P> This is an example of a trademark:
company <SUP> TM <SUP>. <P>

Q-4). 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.4)

- In HTML, text alignment refers to the positioning of text within an element.
- CSS is used to control the alignment of text within these elements.

* Text alignment process in HTML using CSS:

- To align text in HTML, you can apply various CSS-properties to elements.
- The most commonly used property for text alignment is text-align.
- this property allows you to specify how text should be aligned within a container.

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* CSS properties for text alignment:

• text-align:

→ Align text horizontally within a block-level element.
common values: left, right, center, justify.

• vertical-align:

→ Adjusts the vertical alignment of inline elements.
common values: top, middle, bottom.

• text-indent:

→ Indents the first line of a paragraph.

• line-height:

→ Controls vertical spacing between lines of text.

* Example:

→ `<P style="text-align:center;">` this is centered. `</P>`
`<P style="text-align:justify;">` this is justified. `</P>`

* Conclusion:

→ Text alignment in HTML is primarily achieved through the `text-align` property in CSS, with values like left, right, center, and justify.

→ These tools give you full control over how text appears within different HTML elements.

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* Q.5). compare and contrast unordered lists (``), ordered lists (``), and definition lists (`<dl>`) in HTML.

Ans.5)

→ In HTML, Unordered lists (``), ordered lists (``), and definition lists (`<dl>`) are used to display collections of items,
→ but they differ in terms of structure, presentation, and purpose.

• unordered list (``):

→ used for lists where the order doesn't matter. items are marked with `` and displayed with bullets by default.

* Example:

→

`* Item 1 Item 2 Item 3 `

• ordered list (``):

→ used for lists where the order matters. items are numbered by default.

* Example:

→

` first step second step `

• definition list (`<dl>`):

→ used for terms and their definitions. includes `<dt>` (term) and `<dd>` (definition).

* Example:

→

`<dl> <dt> HTML </dt> <dd> Hyper text </dd> </dl>`

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* comparison:

→ ~~marked~~ ordered vs un-ordered lists

feature	unordered	ordered	definition
names	()	()	(<list>)
Purpose	grouping un-ordered items.	grouping ordered items.	grouping terms and definitions.
presentation	Bullets by default	numbers or letters by default using.	Terms followed by definitions.
HTML	 + 	 + 	<dl> + <dt> + <dd>
static			
topic:			

→ Each list type is used based on whether the order of items matters and whether you're displaying terms with descriptions.

★ Assignment ★

★ UNIT - 3 ★

Q-1). Explain the structure of an HTML table. Provide an examples of a basic table structure.

A.M.S. 1)

- An HTML table is structured using a combination of specific tags to organize and display data in rows and columns.
- Here's a breakdown of the main elements:

*** Basic structure of HTML Table:**

- 1). **<table>**: This is the container for the entire table.
- 2). **<thead>**: This section is optional but used for grouping header content.
- 3). **<tbody>**: This is where the main data rows go. It groups the body of the table content.
- 4). **<tr>**: The row element, used to define a row in the data.
- 5). **<th>**: The table header cell element, used within a **<tr>** element, used within a **<tr>** to define a header cell.
- 6). **<td>**: The table data cell element, used within a **<tr>** cell.

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* Example of Basic HTML Table:

→

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
<title> Basic Table example </title>
<head>
<body>
    <table border="1">
        <thead>
            <tr>
                <th> Name </th>
                <th> Age </th>
                <th> City </th>
            </tr>
        <thead>
        <tbody>
            <tr>
                <td> John Doe </td>
                <td> 28 </td>
                <td> New York </td>
            <tr>
                <td> Jane Smith </td>
                <td> 34 </td>
                <td> Los Angeles </td>
            <tr>
                <td> Sam Brown </td>
                <td> 22 </td>
                <td> Chicago </td>
            <tbody>
        <html>
```

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Q-e) How can you align a table and its cell contents in HTML? Describe the CSS properties or HTML attributes used for alignment, and provide examples demonstrating their application.

Ans.e)

- In HTML and CSS, you can align a table and its cell contents using various properties and attributes.
- Below ~~places~~ the common methods to achieve alignment for tables and their contents:

i). Aligning the Table:

→ Use the margin property to center the table:

* Example:

table {	margin-left: auto;	margin-right: auto;
}		

e). Aligning Table cell content:

• Horizontal alignment:

→ Use text-align in td or th:

td {

 text-align: center; }

→ options: left, center, right.

• Vertical alignment:

→ Use CSS vertical-align to align content vertically: top, middle, bottom.

→ `<td style = "vertical-align: middle;"> middle-align </td>`

3). HTML ATTRIBUTES:

- Four table alignment:

but for example

- Four cell vertical alignment:

`valign="top"`

→ `<table align="centered">`

`<td align="middle" valign="middle"> content </td>`

`</table>`

→ this example demonstrates how to center the table and align the content within each cell - both horizontally and vertically.

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* Q-3) Describe the process of nesting tables in HTML. Provide an example illustrating nested tables.

Ans. 3)

- nesting tables in HTML refers to the practice of placing one `<table>` element inside another `<table>`.
- this can be useful for creating complex layouts or when you need to organize data in a hierarchical structure.
- when nesting tables, the inner table becomes a part of the outer table's same cell.

* Example:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width,
        initial-scale=1.0" />
    <title> Nested Tables </title>
    <style>
        table { border: 1px solid black; }
        td { padding: 10px; }
    </style>
</head>
<body>
    <table>
        <tr>
            <td> Outer Table-cell 1 </td>
            <td> Outer Table-cell 2 </td>
        </tr>
        <tr>
            <td> Outer Table-cell 3 </td>
            <td> Outer Table-cell 4 </td>
        </tr>
    </table>
</body>
```

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→ <td> nested Table-cell 1 </td>

<td> nested Table-cell 2 </td>

<table>

</td>

</tr>

<table>

the <tr><td> body </td> </tr> will be displayed.

<html> <body> <table> <tr> <td> </td> </tr> </table> </body> </html>

has single <table> tag so it

* Output:

- The outer table will display cells, with the second-cell of the first row containing a nested table inside it.

- The nested table will appear inside the second-cell and be formatted separately.

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* Q-4) what are frames in HTML, and how are they created?
Explain the purpose of the <frameset> and <frame> tags in details.

Ans.4)

- In HTML, frames were used to divide a webpage into multiple sections, each capable of displaying different content.
- This allows a browser to show multiple HTML documents within a single window, effectively creating a multi-panel layout.
- However, frames have been deprecated in HTML5, and using them is not recommended - anymore in modern web development.
- Instead, CSS techniques like flexbox and CSS grid are used for layout purposes.

* The purpose of <frameset> and <frame> tags:

i). <frameset>:

- This tag is used to define a container that holds multiple <frame> elements.
- It replaces the <body> tag in a page that uses frames, allowing the browser to organize different sections of content within a single window.

e). <frame>:

- This tag is used inside a <frameset> to define individual sections (or "frames") within the frameset.
- Each frame can display a separate HTML document.

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* Example of a frameset Layout's:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8" />
    <title> Frames Example </title>
</head>
<body>
    <frameset rows="50%, 50%" />
        <frame src="top.html" name="topframe" />
        <frame src="bottom.html" name="bottomf." />
    </frameset>
</body>
</html>
```

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* Q.5). Discuss the concept of applying hyperlink targets to frames.

Ans.5).

- In HTML, the target attribute in anchor tags () is used to define where the linked content will be displayed when working with frame.
- you can specify different targets for links, such as:

• -self:

- default, opens the link in the same frame.

• -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 browser window's.

• <frame-name>:

- opens the link in a specific frame identified by its name attribute.

* Example:

```
→ <frameset rows="50%, 50%">
    <frame src="top.html" name="topFrame">
    <frame src="bottom.html" name="bottomFrame">
</frameset>
<a href="page.html" target="bottomFrame" opens <br>
```

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- In this example, clicking the link loads page 1.html in the bottom-frame.
- Note that frames are deprecated in HTML5 in favour of modern layout methods like CSS grid and flexbox. It is good practice not to use it.

Assignment

UNIT-4

Q-1). Explain the different ways to create hyperlinks in HTML.

Ans. 1)

- Hyperlinks are created using the `<a>` (anchor) tag.
- There are several ways to create and customize hyperlinks depending on what you want to link to.
- Here are the common methods:

1). External website:

* Example:

→ ` visit example `

2). same website | page:

* Example:

→ ` About us `

3). Anchor links:

* Example:

→ ` go to section 1 `

4). new Tab | window:

* Example:

→ ` visit example `

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5). Email link:

* Example:

→ `link`.

6). Phone number:

* Example:

→ `call us `.

7). File link:

* Example:

→ `file download`.

8). JavaScript link:

* Example:

→ `click me `.

→ ~~These are some of the main ways to create hyperlinks in HTML, allowing for flexible navigation within and outside of a website.~~

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* Q-2). How can you style hyperlinks in HTML to change their colour?

Ans. C.

→ You can style hyperlinks using CSS to change their colour. Here's how you can do it:

* Inline CSS:

* Example: [click here](https://example.com)

→ [click here](https://example.com)

* Internal CSS:

* Example: [click here](https://example.com)

→

```
<head>
  <style>
    a {color: blue; }
  </style>
</head>
<body>
  <a href="https://example.com">click here</a>
</body>
```

* External CSS:

* Example:

→

```
a {color: green; }

<link rel="stylesheet" href="style.css">
```

→ You can also style different states like :hover, :visited, etc. for more control.

Q-3). Describe the process of inserting an image on a webpage using the `` tag in HTML.

Ans. 3).

→ To insert an image on a web page using the `` tag in HTML, follow these steps:

i). Use the `` tag:

→ The `` tag is an empty tag used to embed image. It requires two key attributes:

- `src` attribute,
- `alt` attribute.

→ ``

v). The `src` attribute:

- this is where you define the location of image file and path.

3). The `alt` attribute:

- this provides a textual description of the image for accessibility purpose and as a fallback if the image doesn't load.

4). Optional Attributes:

→ `width` and `height`: you can specify the size of the image.

→ The values are in pixels by default.

→ ``

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Q4). Discuss the steps involved in creating an HTML form with various input elements like textboxes, buttons, checkboxes, dropdowns, and date fields. Provide an example demonstrating each type of form element.

Ans. 4)

→ Creating an HTML form involves using the `<form>` tag and various input elements to collect data from users.

→ Below are the steps to create an HTML form with common input types like below after these.

1). Textbox (Text Input):

→ `<input type="text" name="name">`
`<input placeholder="Enter your name">`

2). Password input:

→ `<input type="password" name="password">`
`<input placeholder="Enter your password">`

3). Submit button:

→ `<input type="submit" value="Submit">`
`<input type="submit" value="Submit">`

4). checkbox:

→ `<input type="checkbox" name="subscribe">`
`value="yes" & subscribe.`

5). Radio button:

→ `<input type="radio" name="gender" value="male">`
`male.`
`*use female = male*)`

6). Dropdown (select) :

```
→ <select name="country">
    <option value="usa"> USA </option>
    <option value="canada"> Canada </option>
</select>
```

7). Data field :

```
→ <input type="date" name="dob">
```

* Full example:

```
→ <form action="1submit_form" method="POST">
    <input type="text" name="name"
          placeholder="Name" <br>
    <input type="password" name="password"
          placeholder="Password" <br>
    <input type="submit" value="Submit" >
</form>
```

→ This structure allows users to input various types of data like text, passwords, dates, and choices, and submit the form for processing.

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Q5). Explain how multimedia content can be embedded on a webpage using HTML5 `<video>` and `<audio>` tags.

Ans5).

- HTML5 introduced the `<video>` and `<audio>` tags to easily embed multimedia content like videos and audio files on webpages without needing third-party plugins.
- Here's how you can use these tags:

*1). Embedding video:

- The `<video>` tag allows you to display video files directly on your webpage.

* Example:

→

```
<video width="640" height="360" controls>
  <source src="video.mp4" type="video/mp4">
  <source src="video.webm" type="video/webm">
your browser does not support the video
tag. </video>.
```

- `controls`: Adds video controls (play, pause, volume).
- `width & height`: Set the video dimensions.

*2). Embedding Audio:

- The `<audio>` tag embeds audio content.

* Example:

→

```
<audio controls>
  <source src="audio.mp3" type="audio/mp3">
  <source src="audio.ogg" type="audio/ogg">
your browser supports the audio. </audio>.
```

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- controls: This property adds controls such as play, pause, volume, etc.
- Adds audio controls (play, pause, volume).
- Both tags support attributes like autoplay, loop, and muted for customization.

~~play~~