

Assignment 2 (HTML)

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Q.1. Why HTML is called markup language, not a programming language? Explain with examples.

⇒ HTML is called markup language, not a programming language, because it is used to structure and present content on the web rather than to perform computations or control program flow.

① Markup language :-

* Purpose :- organise and format content.

* eg:- `<h1> Welcome </h1>`
`<p> This is paragraph </p>`

* Function :- Defines elements like headings, paragraphs and links.

HTML structures content, while programming languages handle logic and functionality. This difference is why HTML is markup language and not a programming language.

Q.2 Explain pros and cons of HTML with their application.

⇒ Pros of HTML :-

① Simplicity :-
* Easy to learn and use.
* Ideal for beginners and creating basic web pages.

② Wide support :-

* Universally supported by all browsers.

③ Flexibility and integration :-

* Easily integrates with CSS and JS.
* Used to build modern, dynamic web app.

④ SEO friendly :-

* Improves search engine visibility.
* Enhance online marketing efforts.

⑤ Accessibility :-

* Supports features for disabled users.
* Create inclusive web content.

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Cons of HTML :-

① static nature :

- * Can not create dynamic content alone.
- * Need js or server side technologies.

② Lack of functionality :

- * No backend operations or data processing.

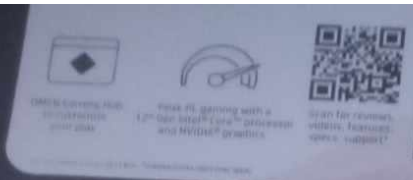
③ Dependence on other languages :-

- * Need css and js for modern web functionalities.
- * Developer must learn multiple languages.

④ Manual update :

- * Content changes requires manual updates.

⑤ No inherent security features.



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Q.3 what is tag in html? explain structure tags, formatting tags, list tags Hyperlink tags & executable content tags.

⇒ Tags in HTML are fundamental elements that defines the structure, formatting and functionality of web content.

(1) Structure Tags :-

Defines the layout and structure of an HTML document.

- * <html>: Root element.
- * <head>: meta information.
- * <title>: Document title.
- * <body>: main content.
- * <header>: Header section.

(2) Formatting tags :- Apply styles to text and content.

- * : Bold text
- * : strong important (bold)
- * : Italic text
- * <hr>: Horizontal line
- *
: Line break
- * <u>: Underline text

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③ List tags :- create list of items.

* `` : unordered list.

* `` : ordered list

* `<dl>` : Description list.

* `` : list items.

④ Hyperlink Tags :-

create links to other documents or locations.

` Click here `.

⑤ Executable content Tags :-

Embed scripts or interactive content.

* `<script>` : embed javascript.

`<script> console.log('Hello'); </script>`

* `<embed>` : embed external content.

`<embed src = "video.mp4" width = "500" height = "300">`

* `<iframe>` : embed another HTML page.

`<iframe src = "https://www.abc.com"> </iframe>`

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Q.4 Explain text level formatting and block-level formatting tags also include diff. betn them. What happen if you overlap sets of tags?

→

Text-level formatting tags:

Inline tags that format specific text portions.

- * ``: Bold text.
- * ``: Important (bold)
- * `<i>`: Italic text.

Block level formatting tags:

Tag that create blocks of content and start on a new line.

- * `<p>`: Paragraph
- * `<div>`: Division/ container.
- * `<h1>` to `<h6>`: Headings.
- * ``: unordered list.

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Differences:-

- * Text level: Inline, within block elements, do not start a new line.
- * Block-level: Block, start a new line, take full width.

Overlapping Tags:-

Improperly nested tags can cause unpredictable rendering.

* Correct: `<p> This is a correctly nested example . </p>`

* Incorrect: `<p> This is an incorrectly nested . example </p>`

Effects of overlapping:-

* Unpredictable display.

* Structural and visual issues.

* Browser - dependant rendering.

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Qno-5 Do older HTML files work on newer browsers? Can a single tag link point to two different web pages?

→ ① Yes, they generally do due to!

* Backward compatibility! - New standards support older HTML.

* Browser Robustness: Modern browsers handle old HTML as well.

* Browser display content even if some features don't work.

② A single <a> tag cannot point to two different pages.

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Q.6 Differences betⁿ inline and block level elements with an example.

Inline elements	Block-level elements.
(i) Do not start on a new line.	(i) Start on a new line.
(ii) Occupy only necessary width	(ii) Occupy full width of the container.
(iii) can not contain block-level elements.	(iii) can contain both inline and block-level elements.
eg:- $\langle \text{span} \rangle$, $\langle a \rangle$, $\langle \text{img} \rangle$	eg:- $\langle \text{div} \rangle$, $\langle p \rangle$, $\langle h_1 \rangle$, $\langle h_6 \rangle$, $\langle u \rangle$, $\langle \text{p} \rangle$.

Q.7 what are physical and logical tags? explain with an example.

Physical tags :-

Physical tags explicitly define how text should be displayed, focusing on the visual appearance of the content. These tags are more about the style rather than the meaning.

example :-

`` : makes text bold.

`` This is bold text ``.

Logical Tags :-

It's main purpose is to convey meaning or structure.

example :-

`` : Strong importance (usually bold)

`` This text is important ``.

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Q.8 How do you create links to sections within the same page?

=> To create links to sections within the same pages in HTML, you use a combination of anchor tags and ID attributes. ~~Here's how~~.

* Use the 'id' attribute to assign a unique identifier to the section you want to link to.

* Use the 'href' attribute of an anchor tag to create a link that points to the ID.

eg:-

Assign IDs to sections

`<h2 id = "section"> Section </h2>`

`& a href = "#section"> go to section `

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Q.9 How do you create multicolored text on a webpage?

⇒ To create multicolored text on the web pages we can use HTML and CSS.

(i) Use Inline CSS: Apply the 'style' attribute directly to the text elements.

(ii) Use a CSS class: Define a CSS class & apply it to the text elements.

eg:-

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

`<p style="color: black;"> This is black </p>`

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Ques. 10 How do attributes and tags differ?
How do you insert a comment in HTML?

Tags :-

It define elements and structure

Syntax: `<tagname>` or `</tagname>` or `<tagname />`

eg:- `<p>` paragraph `</p>` `
`

Attributes :-

It's main purpose is to provide additional information about elements.

Syntax:- 'name = "value"', inside the opening tag

eg:-

``

To insert comment in HTML :-

`<!-- This is comment -->`

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Ques. 12 How does a web server link physically on the internet? How do we navigate from one URL to another from a page displayed at a browser? Explain.

⇒ Internet connection:- The web server connects to the internet via an ISP.

- * The server has a unique IP address.
- * maps domain names to IP addresses for easy access.

Navigate from one URL to another :-

Hyperlinks:-

↳ a href = "https://abc.com" > go to abc
* click a link to send an HTTP request to the server.

How it works:-

- (i) DNS Resolution:- Browser gets IP address from the domain name.
- (ii) HTTP Request: Browser sends request to the server at the IP address.
- (iii) Server response: server sends back the requested page.

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Ques 13 How can you map images in HTML?
Does a hyperlink apply to text only? Explain the logic behind it and its types in detail.

⇒ Mapping images in HTML involves creating clickable regions on an image. ~~Here~~

Inside the `<map>` element we use `<area>` element to define clickable regions on the image. Each `<area>` element specifies a shape and coordinates for the clickable area.

eg:- `<area shape="rect" coords="222,322,223,229" href="abc.html" alt="abc">`

(ii) No, hyperlinks in HTML can be applied to various elements, not just text.

Anchor tag (`<a>`): Creates a hyperlink.

Types: Text, image, button, outline sections.

* logic: Specify the destination URL in the `href` attribute.

Enhance: Navigation and interactivity on web pages.

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Q. no. 14 Explain the meta tag in detail.
Also mention its advantage.

The `<meta>` tag in HTML is used to provide metadata about the HTML document. It does not represent any visible content on the web pages but rather provides information about the document itself.

Syntax:-

`<meta name="name" content="value">`

'name' specifies metadata type & 'content' contains its value.

Advantages:-

- * SEO optimization
- * responsive Design
- * Character encoding

Ques. 15 Difference betⁿ server-side & client-side image maps?

server side image map	client side image map
(i) Handled on the server	(i) managed on the browser.
(ii) coordinates and URLs defined by server-side script.	(ii) coordinates and URLs defined in HTML.
(iii) Browser sends coordinates to server, which determines URL	(iii) Browser interprets coordinates, navigates directly.
(iv) Handles complex mappings, dynamic URL generation.	(iv) Less server load, faster, no server-side scripting.

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Qno:16 What's marquee? Explain the marquee tag with an example.

⇒ The `<marquee>` tag in HTML creates a scrolling effect for text or images.

eg:-

```
<marquee behavior="scroll" direction="right"
scrollamount=1000> Text </marquee>
```

~~It is not~~

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Qno. 18 HTML vs XHTML.

HTML	XHTML
(i) more forgiving syntax.	(i) Requires strict XML syntax.
(ii) more tolerant of errors.	(ii) Stricter parsing, errors may cause page failure.
(iii) Various doctype declaration.	(iii) Requires <code><!DOCTYPE html></code> declaration.
(iv) It is not case-sensitive.	(iv) It is case-sensitive.
(v) Attribute values can be unquoted.	(v) Requires attributes to be quoted.



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Qno. 19 How grouping of elements is possible in HTML? Explain different types of grouping tags. (3)

⇒ In HTML, grouping elements allows us to structure content logically & semantically, making it easier to style with CSS and manipulate with JavaScript.

Here are the primary grouping tags in HTML,

① <div> tag:-

* A block-level container for grouping elements

eg:-

```
<div class="content">  
  <h2> Title </h2>  
</div>
```

② tag:-

* It is an inline container for grouping text or inline elements.

eg:- Highlighted text

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③ and tags:-

⇒ It is used to group list items.

eg:-
 item1
 item2

④ <table> tag:-

It is used to group table elements

eg:- <table>
 <tr>
 <td> cell1 </td>
 <td> cell2 </td>
 </tr>
</table>

⑤ <fieldset> :-

It is used to group related form elements.

eg:- <fieldset>
 <legend> Personal </legend>

 <label for = "name"> Name: </label>
 </fieldset>

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Ques:- Advantages and disadvantages of frames.

Advantages of Frames:-

- * Allows reusing elements like headers and menus across multiple pages.
- * Faster page loading.
- * Each frame can scroll independently, improving navigation.
- * Ensures a uniform user experience with same elements.

Disadvantages of Frames:-

- * Makes the HTML structure more complex & harder to manage.
- * Users can't bookmark specific frames, only the main page.
- * Search engines may have difficulty indexing content within frames.

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Qno. 21 Explain the frameset tag with an example.

=> The `<frameset>` tag is used to define a frameset that divides the browser window into multiple frames, each capable of displaying a different HTML document.

eg:-

```
<!DOCTYPE html>
<html>
  <frameset cols = "25%, 75%">
    <frame src = "menu.html">
    <frame src = "content.html">
  </frameset>
</html>
```

- * The browser window is divided into two columns
- * The first column (25% width) loads "menu.html"
- * The second column (75% width) loads "content.html"

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Q.no-22 How we can introduce multimedia in HTML explain with an example.

⇒ In HTML, multimedia elements such as audio, video and images can be embedded directly into web pages using specific tags.

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

```
<img src = "abc.jpg" alt = "img" width = "200px"
height = "300px">
```

```
<audio controls>
```

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

```
<video width = "140" height = "300" controls>
```

```
<source src = "abc.mp4" type = "video/mp4">
</video>
```

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


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Q.no.23 A company asked you to develop a website for them. Which language and tools will you use for the development and why? Also, how can you put the website online?

⇒ Firstly, it totally depends upon which type of website they want.
Let us consider they want product based website, In such a case I will go for MERN stack (Mongo DB, Express.js, React.js and Node.js).

Because ~~it~~ ~~can mean~~ MERN is specially good for product based apps. It handle more traffic at a time.

It is also efficient, faster than other stack.

* To put the website online is called Hosting.

1. Firstly I will push my project into github.
2. Then I will go for Netlify or vercel for hosting service.
3. Create project there and select respective repo there.
4. Custom domain or buy. ~~it~~.