

Assignment No 1

What is HTML5? explain the features of HTML5.

HTML5 :-

HTML5 is the fifth and larger version of the HTML standard for creating web pages. It was officially released on 20th 2014 and is currently the most widely used version of HTML. Some key features of HTML5 include improved multimedia support. HTML5 contains built-in support for video & audio making it easier to embed media content into web pages without the need for third party plugins like Flash.

Semantic markup HTML5 introduces new semantic elements like `<header>`, `<nav>`, `<section>` & `<body>` `<footer>` that provide more context & meaning to web page content making it easier for search engines to index & categorize pages.

Features of HTML5

1) Improved multimedia support :-

HTML5 includes built-in support for video & audio making it easier to embed media content into web pages without the need for third party plugins like Flash. This provides a more seamless & reliable user experience.

2) Semantic Markup :-

HTML5 introduced new semantic elements like `<header>`, `<nav>`, `<article>`, & `<footer>` that provide more context & meaning to web page content, making it easier for search engines to index and categorize pages.

3) Canvas and SVG :-

HTML5 introduces new graphics elements in canvas & SVG, which allow developers to create & manipulate graphics and animations directly with the browser.

4) Simplified Code :-

HTML5 introduces new & edited like native from validation & input types within simplify the code needed to create web page. This helps developers created more user - friendly & secure forms.

5) Mobile Friendly :-

HTML designed to work well on mobile device with features like responsive design, touch support & location - based servers.

Q2) Compare The earlier version of HTML to HTML5

→

HTML	HTML5
1) It didn't support audio & video without the use of third party player support.	It support audio and video controls with the use of <code><audio></code> and <code><video></code> tags.
2) It used cookies for store temporary data.	It used SQL database and application cache to store offline data.
3) Does not allow Javascript to run in the browser.	Allow Javascript to run in the background. This is possible due to Web worker API in HTML5.

It does not allow drags and drop effects.

It allow drags & drop effects.

Character coding is very complicated.

In character coding is simple & easy.

It works with all add browser.

It supported by all new browser, like Firefox, Mozilla, Chrome, etc.

Q. Give the structure of HTML webpage & what are advantages & disadvantages of HTML5?

Structure of HTML5 :-

HTML5 include key elements :-

1) Document Type Declaration (DOCTYPE) :

Specific the version of HTML being used.

2) HTML Element :

The root element of the HTML document denoted by `<html>`.

3) Head Section :

Contains meta information about the document. Such as the title, character encode links to external resources (css, javascript).

4) Title :

Defines the title of the webpage displayed in the browser title bar or tab.

5) Body :-

Contains the content as webpage. It is within the `<body>` tag.

6) Element in Body HTML :-

- Heading `<h1 - h6>` :-

Used to define headings

- Paragraphs `<p>` : define using the `<p>` tag.

- Links :- Create with `<a>` tag for hyperlinking

- Images :- inserted using the `` tag.

- ~~lists~~ List :- created with `` unordered list or `` ordered list tag.

7) Forms :-

Constructed with tag `<form>`, used to collect user input & submit data.

8) Semantic Elements :-

HTML5 introduced several new semantic elements such as `<header>`, `<footer>`, `<nav>`, `<section>`, `<main>` etc.,

- Advantages :-

- 1) HTML5 introduces semantic element that improves the structure and clarity of the webpage.

- 2) HTML5 provides native support for audio & video playback.

- 3) HTML5 includes the `<canvas>` element for dynamic scriptable rendering of graphics.

HTML5 incorporates responsive design features & touch support, making webpage more accessible.

Disadvantages:-

Which modern browser support HTML5, older browser may have limited or incomplete supports.

HTML5 introduce new features like WebSockets & WebRTC that may pose security risks.

Developers may need to invest time & effort to learn & master the new features & API introduced in HTML5.

4) What is meant by form? What are essential to while designing the web form? Explain following tag used to construct web-form.

5) HTML form :-

In HTML a `<form>` is used to collect user input and submit it to a server processing it. It acts as a container for form elements such as input fields, buttons, checkboxes, radio buttons, and dropdown menus.

The `<form>` element specifies the action to be performed when the form is submitted and the method used to send the data (usually either "GET" or "POST").

- Essential Steps while designing:-

1) Define purpose:-

Clearly define the purpose of the form and the information you want to add & collect from users.

2) Choose input field:-

Define the types of input field needed to collect the required information.

3) Use labels:-

Associate each input field with a label using `<label>` element.

4) Group Related field:-

Group related fields tags using `fieldset` or `legend` element to create.

5) Use place holder Text:

User place holder text to provide example or hints for the expected form of the input.

* Explaining tags:-

① `<form>`:-

The `<form>` tag is used to create an HTML form. It contains various form elements such as input field, buttons, checkboxes, etc.

The `action` attribute specifies the URL where the form data will be sent and the `method` attribute defines the HTML method (`"GET"` or `"POST"`).

`<input>`:-

The `<input>` tag is used to create input fields within a form. It can be used to create various

password fields, radio, button, checkbox, etc.

3) <Select>:-

The <select> tag used to create a dropdown menu within a form. It contains one or more <option> tags, which represent the options available in the dropdown menu.

Q5) Explain with example various Semantic elements in HTML5?

→ Semantic Element:-

Semantic elements in HTML5 are tags that provide meaning to the content they element enclosed making it easier for browser search engine screen readers & developers to understand the structure & purpose of the webpage. Some common Semantic elements in HTML <header>, <nav>, <main>, <section>, <article>, <div>, <footer>.

eg)

```
<!DOCTYPE html>
<html lang="en">
<head>
```

<title> Semantic Elements <title>

```
</head>
```

```
<body>
```

```
<header>
```

```
<h1> my website </h1>
```

```
<nav>
```

```
<ul>
```

```
<li> <a href="#"> HOME </a> </li>
```

```
</ul>
```

```
</nav>
```

```

</header>
<main>
  <section id = "home">
    <h2> welcome to my home </h2>
    <p> Home page </p>
  </section>
</main>
<footer>
  <p> © Copy: 2024 My webpage. </p>
</footer>
</body>
</html>

```

2) Non-Semantic element :-

Non-semantic element on the other hand, do not convey any inherent meaning about the content they contain.

They are used to purely for presentation purpose or to provide structure to the webpage.

Example of non-semantic element include:

<div>, , , <i>, <u>, <form>, <center> etc.

Eg:

```

<!DOCTYPE html>
<html>
<head>
  <title> Non-Semantic element </title>
</head>
<body>
  <div style="background-color: black;
    padding: 20px;">

```


welcome to my website

<p> This is a paragraph </p>

 Bold the text

<i> Italic text </i>

</div>

</body>

</html>

[Signature]