**ASSIGNMENT MODUL-3**

**(HTML-5)**

1. **What are the new tags added in HTML5?**

The following tags (elements) have been introduced in HTML5 −

|  |  |
| --- | --- |
| Tags (Elements) | Description |
| <article> | Represents an independent piece of content of a document, such as a blog entry or newspaper article |
| <aside > | Represents a piece of content that is only slightly related to the rest of the page. |
| <audio> | Defines an audio file. |
| <canvas> | This is used for rendering dynamic bitmap graphics on the fly, such as graphs or games. |
| <command> | Represents a command the user can invoke. |
| <datalist> | Together with the a new list attribute for input can be used to make comboboxes |
| <details> | Represents additional information or controls which the user can obtain on demand |
| <embed> | Defines external interactive content or plugin. |
| <figure> | Represents a piece of self-contained flow content, typically referenced as a single unit from the main flow of the document. |
| <footer> | Represents a footer for a section and can contain information about the author, copyright information, et cetera. |
| <header> | Represents a group of introductory or navigational aids. |
| <hgroup> | Represents the header of a section. |
| <keygen> | Represents control for key pair generation. |
| <mark> | Represents a run of text in one document marked or highlighted for reference purposes, due to its relevance in another context. |
| <meter> | Represents a measurement, such as disk usage. |
| <nav> | Represents a section of the document intended for navigation. |
| <output> | Represents some type of output, such as from a calculation done through scripting. |
| <progress> | Represents a completion of a task, such as downloading or when performing a series of expensive operations. |
| <ruby> | Together with <rt> and <rp> allow for marking up ruby annotations. |
| <section> | Represents a generic document or application section |
| <time> | Represents a date and/or time. |
| <video> | Defines a video file. |
| <wbr> | Represents a line break opportunity. |

New types for <input> tag

The input element's type attribute now has the following new values −

|  |  |
| --- | --- |
| Type | Description |
| Color | Color selector, which could be represented by a wheel or swatch picker |
| Date | Selector for calendar date |
| datetime-local | Date and time display, with no setting or indication for time zones |
| Datetime | Full date and time display, including a time zone. |
| Email | Input type should be an email. |
| Month | Selector for a month within a given year |
| Number | A field containing a numeric value only |
| Range | Numeric selector within a range of values, typically visualized as a slider |
| Search | Term to supply to a search engine. For example, the search bar atop a browser. |
| Tel | Input type should be telephone number. |
| Time | Time indicator and selector, with no time zone information |
| url | Input type should be URL type. |
| Week | Selector for a week within a given year |

**2. How to embed audio and video in a webpage?**

To embed audio in HTML, we use the <audio> tag. Before HTML5, audio cannot be added to web pages in the Internet Explorer era. To play audio, we used web plugins like Flash. After the release of HTML5, it is possible. This tag supports Chrome, Firefox, Safari, Opera, and Edge in three audio formats – MP3, WAV, OGG. Only Safari browser doesn’t support OGG audio format.

#### Syntax:

<audio>

<source src="file\_name" type="audio\_file\_type">

</audio>

* **Attributes of <audio> tag**

| Attribute |  |  | Value | Description |
| --- | --- | --- | --- | --- |
| Autoplay |  |  | Autoplay | When the page is loaded. It specifies to play audio as soon as possible. |
| Controls |  |  | Controls | It displays audio control. |
| Loop |  |  | Loop | It will start the audio again when it is finished. |
| Muted |  |  | Muted | When the page is loaded audio will be automatically muted. |
| Preload |  |  | auto metadata  none | It specifies how the author thinks the audio will be loaded when the page is ready. |
| Src |  |  | URL | It specifies the URL of the audio file. |

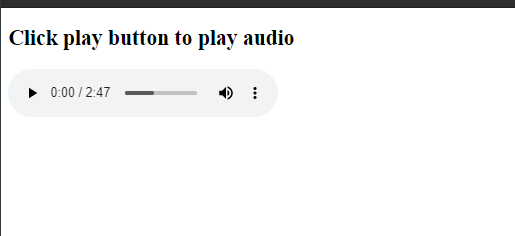
**Example:**

In this example, we will add an audio file to a webpage. To add audio files on the webpage, we need a notepad or another text editor.

* HTML

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>  <title>Page Title</title>  </head>  <body>  <h2>Click play button to play audio</h2>  <audio src="./test.mp3" controls></audio>  </body>  </html> |

**Output:**



**Note:**Before adding an audio source must be sure that the audio file is in the same directory and specified name.

### How to embed video in HTML?

To embed video in HTML, we use the <video> tag. It contains one or more video sources at a time using <source> tag. It supports MP4, WebM, and Ogg in all modern browsers. Only Ogg video format doesn’t support in Safari browser.

**Syntax**

<video>

<source src="file\_name" type="video\_file\_type">

</video>

* **Attributes of <video> tag**

| Attribute | Value | Description |
| --- | --- | --- |
| Autoplay | autoplay | When the page is loaded. It specifies to play video as soon as possible. |
| Controls | controls | It displays video control such as play, pause, and stop. |
| Loop | loop | It will start the video again when it is finished. |
| Muted | muted | When the page is loaded video will be automatically muted. |
| Poster | URL | It specifies an image will be shown until video play. |
| Preload | auto metadata none | It specifies how the author thinks the video will be loaded when the page is ready. |
| Src | URL | It specifies the URL of the audio file. |
| Width | pixels | It specifies the width of the video area. The default value of width is ‘auto’. |
| Height | pixels | It specifies the height of the video area. The default value of height is ‘auto’. |

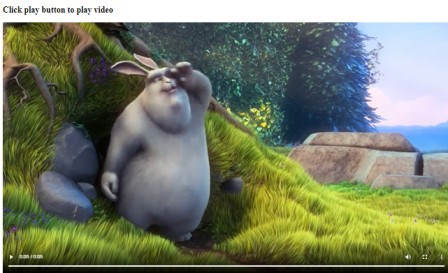
* **Example:**

In this example, we will add a video to our webpage. To add video, we will use the <video> tag defining source using <source> tag. Create an HTML file just like an audio file example and save the video file in the same directory. Suppose a video file name test.mp4 save in the same directory where your HTML file was saved.

* HTML

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>  <title>Page Title</title>  </head>  <body>  <h2>Click play button to play video</h2>  <video src="./test.mp4" controls></video>  </body>  </html> |

|  |
| --- |
| **OUTPUT**:- |



**3. Semantic element in HTML5?**

Semantic HTML elements are those that clearly describe their meaning in a human- and machine-readable way.

Elements such as <header>, <footer> and <article> are all considered semantic because they accurately describe the purpose of the element and the type of content that is inside them.

### List of new semantic elements

The semantic elements added in HTML5 are:

* <article>
* <aside>
* <details>
* <figcaption>
* <figure>
* <footer>
* <header>
* <main>
* <mark>
* <nav>
* <section>
* <summary>
* <time>
* Elements such as <header>, <nav>, <section>, <article>, <aside>, and <footer> act more or less like <div> elements. They group other elements together into page sections. However where a <div> tag could contain any type of information, it is easy to identify what sort of information would go in a semantic <header> region.

**4. Canvas and SVG tags**

The HTML <canvas> element is used to draw graphics on a web page.

The graphic to the left is created with <canvas>. It shows four elements: a red rectangle, a gradient rectangle, a multicolor rectangle, and a multicolor text.

Canvas has several methods for drawing paths, boxes, circles, text, and adding images.

* **Canvas Examples**

A canvas is a rectangular area on an HTML page. By default, a canvas has no border and no content.

The markup looks like this:

<canvas id="myCanvas" width="200" height="100"></canvas>



* **SVG**
* SVG stands for Scalable Vector Graphics
* SVG is used to define graphics for the Web
* SVG is a W3C recommendation

## The HTML <svg> Element

The HTML <SVG> element is a container for SVG graphics.

SVG has several methods for drawing paths, boxes, circles, text, and graphic images.

### Example

<!DOCTYPE html>  
<html>  
<body>  
<svg width="100" height="100">  
  <circle cx="50" cy="50" r="40" stroke="green" stroke-width="4" fill="yellow" />  
</svg>  
</body>  
</html>

* SVG

