

Module (HTML5) -3

1. What are the new tags added in HTML5?

There are lots of new elements are added which provides some extra functionality to create an attractive and dynamic website.

These tags belong to many aspects such as structure tags, form tags, graphic tags, media tags,

***Structural or Semantic Tags***

<article>: It defines the independent content of webpage

<aside>: Provides information about the main content

<details>: It defines additional information which only visible as per demand

<dialog>: Used for dialog box or other interactive components

<header>: It contains information related to the title and heading.

<footer>: It contains the footer information like author information,

copyright information, carriers, etc.

<nav>: It represents the section which contains navigation links.

<section>: It defines a generic section within HTML document

<progress>: It defines a progress bar which shows completions of a task.

<meter>: It represents a scalar value within a known range

<time>: It defines data/time within an HTML document.

***Form Tags:***

<datalist>: It represent predefined list for input<option> element.

<output>: It is used a container element to represent the output of a

calculation or outcome of user action.

***Graphic tags:***

<canvas>: It allows drawing graphics and animations via scripting.

<svg>: It is used to draw scalable vector graphics.

***Media tags:***

<audio>: It defines sound content

<embed>: It defines a container for external media.

<source>: It defines multiple media resources for the media elements.

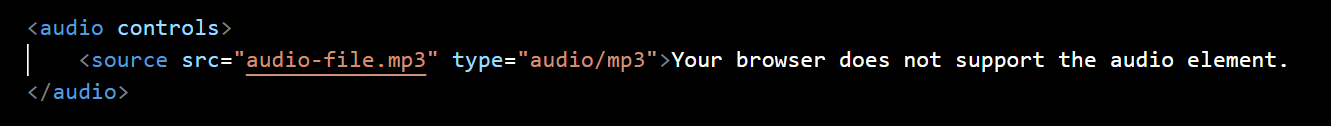
<track>: It defines text tracks for <audio> and <video> files

<video>: It defines video content within HTML document.

1. How to embed audio and video in a webpage?

To embed audio and video in a webpage, you can use the <audio> and <video> tags, Here’s a basic example for each:

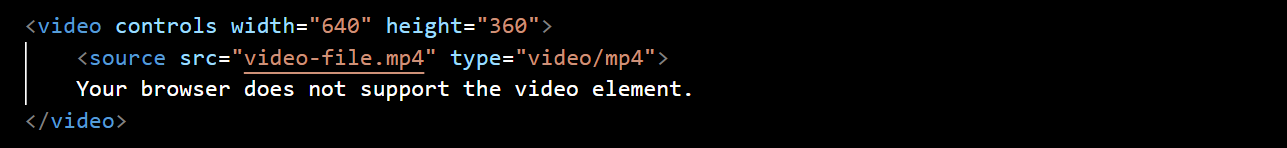
Embedding Audio:



In this example:

* The control attribute adds audio playbook controls (play,pause,volume,etc..)
* The <source> element provides different sources of the audio file, allowing the browser to choose the appropriate one based on compatibility.

Embedding video:



In this example:

* The controls attribute adds video playback controls.
* The <source> element provides different sources of the video file, allowing the browser to choose the appropriate one based on compatibility.
* The width and height attributes set the dimensions of the video player.

“audio-file.mp3” should be replaced and “video-file.mp4” with the actual paths to audio and video files.

The text inside the <audio> and <video> tags (“Your browser does not support the..”) will be displayed if the browser dosen’t support the audio or video element.

1. Semantic element in HTML5

Semantic elements in HTML5 provides additional information about the parts they enclose, making it clearer and more meaningful for both browser and developers. Using semantic elements helps improve accessibility, SEO and the overall structure of HTML document. Here are some key semantic elements.

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task.

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1. Canvas and SVG tags

The <canvas> and <svg> tags are both used for creating graphics on web pages, but they have different approaches and use cases.

**<canvas> Tag:**

The <canvas> element is used for drawing graphics, animations, and other visual elements using JavaScript. It provides a bitmap drawing surface where JavaScript can be used for Shapes, Images, and Manipulate pixels directly.

Example:

A computer screen with text on it

Description automatically generated

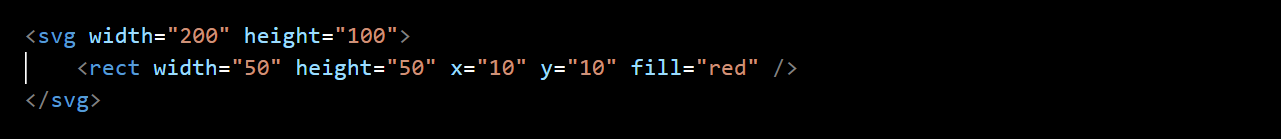
In this example <canvas> element creates a drawing area with an id of “myCanvas” and dimensions of 200 pixels by 100 pixels.

The JavaScript code fetches the canvas element, gets its 2D rendering context, and then draws a blue rectangle on the canvas

**<svg> tag:**

The <svg> tag full form is Scalable Vector Graphics. This element is an XML based vector image format. It is used for describing two dimensional vector graphics. SVG graphics can be created and edited with any text editor and scaled without losing quality.

Example



Comparison:

* Canvas is works with pixels. Any drawing on the canvas are essentially a static image. Suitable for complex graphics, animation, and pixel-based manipulations.
* SVG is vector based representing graphics. Its suitable for graphics that need to scale without losing quality. SVG elements are part of the DOM, making them scriptable and accessible.