

HTML 5

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

Some new tags were introduced in HTML 5 to provide a better document structure. These tags are listed below.

Structural or Semantic Tags:

Tag	Uses
<article>	Used to specify a blog, a magazine or a newspaper article or any other independent piece of content in a document.
<aside>	Used to indicate that the specified article is somehow related to the rest of the document.
<bdi>	Used for bi-directional isolation, i.e, to isolate a part of a content which is formatted in other direction from the outside text document.
<data>	Used to facilitate a machine readable version of the data.
<details>	Used to define any additional information on a topic or a summary.
<dialog>	Used to specify a window or a dialog box.
<figcaption>	Used to specify a caption for a <figure> element.
<figure>	Used to specify a self-contained content like photos, diagrams etc.
<footer>	Used to specify a footer for a section.
<header>	Used to specify a header for a section.

<main>	Used to specify the main content of a document.
<mark>	Used to mark or highlight the specified content.
<menuitem>	Used to specify a command that the user can invoke from a popup menu.
<meter>	Used to determine a scalar value within a given range.
<nav>	Used to specify a navigation link in an HTML document.
<progress>	Used to define the progress of a task.
<rp>	Used to specify the content to show in a browser that don't support ruby annotation.
<rt>	Used to indicate an explanation or pronunciation of characters.
<ruby>	Used to specify a ruby annotation along with <rp> and <rt>.
<section>	Used to specify a section in an HTML document.
<summary>	Used to define a visible heading for the HTML <details> element.
<time>	Used to define a date or time.
 	Used to specify a line break opportunity.

HTML5 Form Tags:

Tag	Uses
<datalist>	Used to facilitate an auto complete feature for textfield.

<output>	Used to specify the output of a calculation or an outcome of the user action.
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Graphics Tags:

Tag	Uses
<canvas>	Used to draw canvas in an HTML document.
<svg>	Used to display shapes.

HTML 5 Media Tags:

Tag	Uses
<audio>	Used to define an audio file in HTML.
<embed>	Used to specify a container for an external file, application or a media.
<source>	Used to specify multiple media resources for a media element.
<track>	Used to specify the text tracks for an <audio> or a <video> element.
<video>	Used to specify a video file in HTML.

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>
```

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>
```

3). Semantic element in HTML 5 ?

A semantic element clearly describes its meaning to both the browser and the developer.

Examples of **non-semantic** elements: `<div>` and `` - Tells nothing about its content.

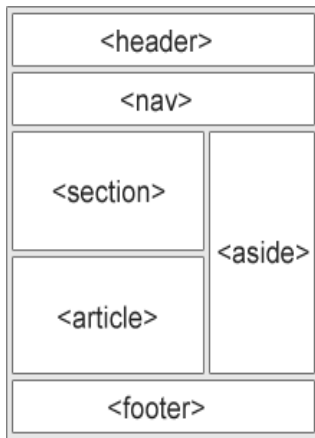
Examples of **semantic** elements: `<form>`, `<table>`, and `<article>` - Clearly defines its content.

Many web sites contain HTML code like: `<div id="nav">` `<div class="header">` `<div id="footer">` to indicate navigation, header, and footer.

In HTML there are some semantic elements that can be used to define different parts of a web page:

- `<article>`
- `<aside>`
- `<details>`
- `<figcaption>`
- `<figure>`
- `<footer>`
- `<header>`
- `<main>`
- `<mark>`

- `<nav>`
- `<section>`
- `<summary>`
- `<time>`



4). Canvas and SVG tags.

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

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



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

