**Module: 3(HTML5)**

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

There have been a few elements introduced in HTML5. Some of them were imported from XHTML2, others from large statistical surveys on made by Google, Opera and other people. The analysis of **class** names and **id** names helped defining what were the most common semantic patterns. These new elements are not yet completely imported in all browsers at this time.

* (MOVED) [article](https://www.w3.org/wiki/HTML/Elements/article)
* (MOVED) [aside](https://www.w3.org/wiki/HTML/Elements/aside)
* [audio](https://www.w3.org/wiki/HTML/Elements/audio)
* [canvas](https://www.w3.org/wiki/HTML/Elements/canvas)
* [command](https://www.w3.org/wiki/HTML/Elements/command)
* [data list](https://www.w3.org/wiki/HTML/Elements/datalist)
* [details](https://www.w3.org/wiki/HTML/Elements/details)
* [embed](https://www.w3.org/wiki/HTML/Elements/embed)
* [fig caption](https://www.w3.org/wiki/HTML/Elements/figcaption)
* [figure](https://www.w3.org/wiki/HTML/Elements/figure)
* [footer](https://www.w3.org/wiki/HTML/Elements/footer)
* [header](https://www.w3.org/wiki/HTML/Elements/header)
* [hgroup](https://www.w3.org/wiki/HTML/Elements/hgroup)
* [keygen](https://www.w3.org/wiki/HTML/Elements/keygen)
* [mark](https://www.w3.org/wiki/HTML/Elements/mark)
* [math](https://www.w3.org/wiki/HTML/Elements/math)
* [meter](https://www.w3.org/wiki/HTML/Elements/meter)
* [nav](https://www.w3.org/wiki/HTML/Elements/nav)
* [output](https://www.w3.org/wiki/HTML/Elements/output)
* [progress](https://www.w3.org/wiki/HTML/Elements/progress)
* [rp](https://www.w3.org/wiki/HTML/Elements/rp)
* [rt](https://www.w3.org/wiki/HTML/Elements/rt)
* [ruby](https://www.w3.org/wiki/HTML/Elements/ruby)
* [section](https://www.w3.org/wiki/HTML/Elements/section)
* [source](https://www.w3.org/wiki/HTML/Elements/source)
* [summary](https://www.w3.org/wiki/HTML/Elements/summary)
* [svg](https://www.w3.org/wiki/HTML/Elements/svg)
* [time](https://www.w3.org/wiki/HTML/Elements/time)
* [track](https://www.w3.org/wiki/HTML/Elements/track)
* [video](https://www.w3.org/wiki/HTML/Elements/video)
* [wbr](https://www.w3.org/wiki/HTML/Elements/wbr)

**2) How to embed audio and video in a webpage**

HTML5 features include native audio and video support without the need for Flash.

The HTML5 <audio> and <video> tags make it simple to add media to a website. You need to set **src** attribute to identify the media source and include a controls attribute so the user can play and pause the media.

**Embedding Video**

Here is the simplest form of embedding a video file in your webpage −

<video src = "foo.mp4” width = "300" height = "200" controls>

Your browser does not support the <video> element.

</video>

The current HTML5 draft specification does not specify which video formats browsers should support in the video tag. But most commonly used video formats are −

* **Ogg** − Ogg files with Theodora video codec and Vorbis audio codec.
* **mpeg4** − MPEG4 files with H.264 video codec and AAC audio codec.

## Embedding Audio

HTML5 supports <audio> tag which is used to embed sound content in an HTML or XHTML document as follows.

<audio src = "foo.wav" controls autoplay>

Your browser does not support the <audio> element.

</audio>

The current HTML5 draft specification does not specify which audio formats browsers should support in the audio tag. But most commonly used audio formats are **ogg, mp3** and **wav**.

**3) Semantic element in HTML5?**

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

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

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

Semantic Elements in HTML

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>
* <fig caption>
* <figure>
* <footer>
* <header>
* <main>
* <mark>
* <nav>
* <section>
* <summary>
* <time>

**4) Canvas and SVG tags**

**SVG:** The Scalable Vector Graphics (SVG) is an XML-based image format that is used to define two-dimensional vector-based graphics for the web. Unlike raster image (Ex .jpg, .gif, .png, etc.), a vector image can be scaled up or down to any extent without losing the image quality.

An SVG image is drawn out using a series of statements that follow the XML schema — that means SVG images can be created and edited with any text editor, such as Notepad. There are several other advantages of using SVG over other image formats like JPEG, GIF, PNG, etc.

**Canvas:** The HTML element is used to draw graphics on the fly, via scripting (usually JavaScript). The element is only a container for graphics. You must use a script to actually draw the graphics. Canvas has several methods for drawing paths, boxes, circles, text, and adding images.

