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New Key Features in HTML5

HTML5 is the 5th version of HyperText Markup Language and was officially introduced in 2014, but it has also been around in some form since 2008 (Collins, 2017). The latest version presented a breakthrough in how web developers could design a website, as well as standardizing the way of working.

The changes can be broken down into several parts (Khan, 2018):

- The encouragement of semantic markup
- The separation of content from the design
- The improvement of responsiveness and accessibility on different devices
- The reduction of the overlap between HTML, CSS and JavaScript
- The elimination of the need for flash plugins

Key Features

1. The <audio> and <video> tags

Before HTML5, we could only use tags such as <embed> and <object> to display audio or video files, which required the Flash plugin for support. With the new introduction of <audio> and <video> tags, it could work out of the box without any 3rd party plugin support.

<audio> tag example:

```
<audio controls autoplay>
  <source src = "/html5/audio.ogg" type = "audio/ogg" />
</audio>

<video width = "300" height = "200" controls autoplay>
  <source src = "/html5/foo.ogg" type = "video/ogg" />
  <source src = "/html5/foo.mp4" type = "video/mp4" />
  Your browser does not support the video element.
</video>
```

<video> tag example:

The *controls* attribute enables the control panel for the audio or video, while the *autoplay* attribute plays the audio/video automatically when it is loaded.

2. Vector Graphics

Vector graphics uses the `<svg>` tag, which is a revision from the previous version and which removes the need for Adobe Flash. It is light-weight, scalable, and makes graphic loads on the website much faster (Shonalikushwaha, 2021).

`<svg>` tag example:

```
<svg id = "svgelem" height = "200" xmlns =  
"http://www.abc.org/2000/svg">  
    <circle id = "redcircle" cx = "50" cy = "50" r = "50" fill =  
"red" />  
</svg>
```

3. The *email* attribute

In the old days, when we needed to validate whether a user had input a valid email address, we needed the help of Javascript with Regex to perform a validation check. With the introduction of the *email* attribute in the `<input>` tag, it removed the need to implement a custom validation check on the email.

`<email>` attribute example:

```
<form>  
    Email: <input type="email" pattern=".+@hotmail.com">  
</form>
```

With the *pattern* attribute, you can always customize what pattern you want the email to be. It must be in a valid Javascript regular expression (Regex).

References

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