Differences in latest versions

HTML, HTML5

HTML stands for Hyper Text Markup Language. It is used to design web pages using a markup language. HTML is the combination of **Hypertext** and **Markup** language. **Hypertext** defines the **link** between the web pages. A **markup** language is used to define the **text document** within **tag** which defines the **structure of web pages.** This language is used to annotate (at the note for computer) text so that a machine can understand it and manipulate text accordingly.
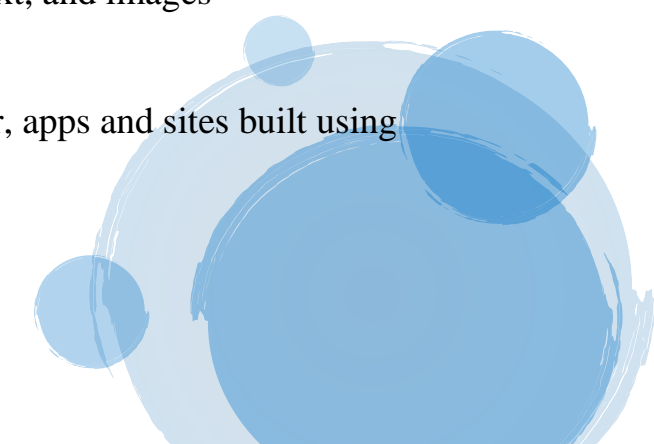
HTML5

HTML5 is the fifth version of HTML. It includes newly added features, tags, and elements.

1. The Canvas Element

One of the most exciting features of HTML5 is the **<canvas>** element for drawing various graphics components, such as boxes, circles, text, and images

2. The security improved

HTML5 is the most secure version of HTML. However, apps and sites built using HTML5 are still vulnerable to security attacks.

3. Improved Semantics for Elements

Improvements have been made to the semantic roles of various existing elements in HTML to enhance code insinuation **Section, article, nav, and header** are the new elements replacing **some obsolete div elements. Since the** elements are more straightforward, the process of mistake-scanning becomes less complicated.

4. Threading

In **HTML**, JavaScript and browser interface run in the same thread, but in **HTML5** JavaScript and browser interface run in separate threads. This is possible due to JS Web worker API in HTML5 .

### 5. Document type declaration

HTML Doctype declaration is lengthy while DOCTYPE declaration in **HTML5** is simpler.

6. Multimedia support

In **HTML** No native audio and video support but **HTML5** Provides native audio and video support

7. Data storage

HTML Only uses browser cache and cookies to store data temporarily.**HTML5** Uses web SQL databases, local storage, and application cache for storing data temporarily.
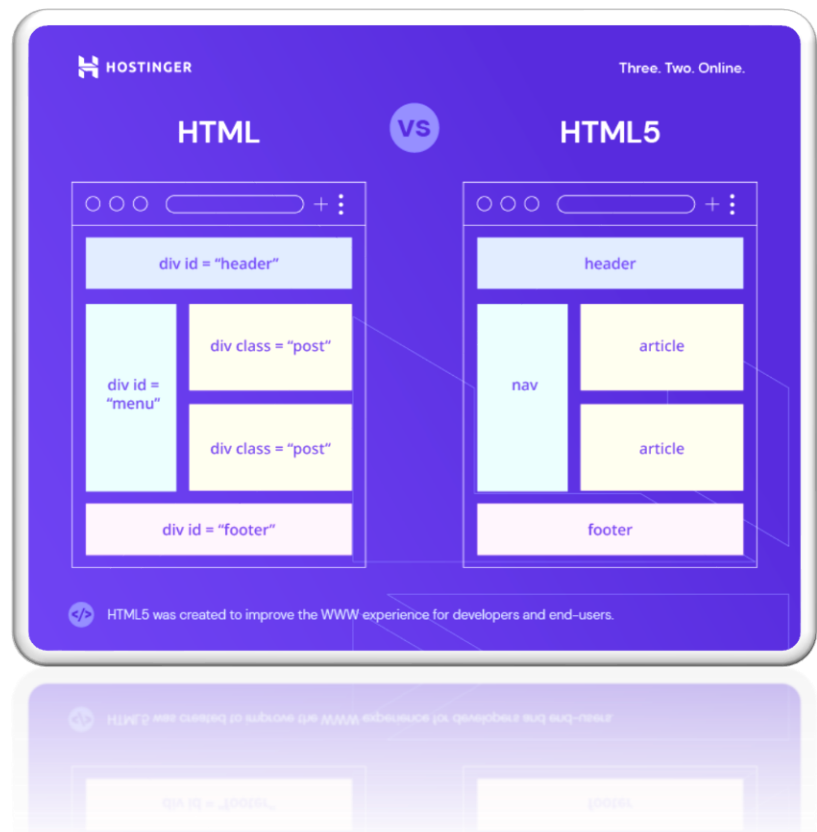
HTML5 introduces two mechanisms, similar to HTTP session cookies, for storing structured data on the client side and to overcome following drawbacks.

- Cookies are included with every HTTP request, thereby slowing down your web application by transmitting the same data.
- Cookies are included with every HTTP request, thereby sending data unencrypted over the internet.
- Cookies are limited to about 4 KB of data. Not enough to store required data.

HTML web storage provides two objects for storing data on the client:

- **Window local Storage** - stores data with no expiration date
- **Window session Storage** - stores data for one session (data is lost when the browser tab is closed)

The local Storage Object

The local Storage object stores the data with no expiration date. The data will not be deleted when the browser is closed, and will be available the next day, week, or year.

The session Storage Object

The session Storage object is equal to the local Storage object, **except** that it stores the data for only one session. The data is deleted when the user closes the specific browser tab.
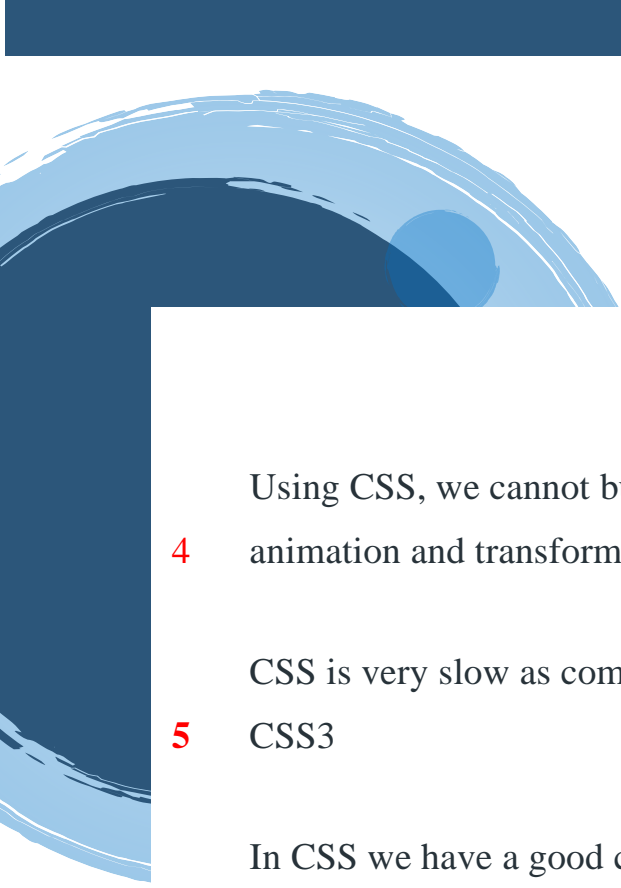
CSS

CSS stands for Cascading Style Sheet. Its main objective is to provide styling and fashion to the web page. CSS provides color, layout, background, font, and border properties. CSS features allow better content accessibility, enhanced flexibility, and control, as well as the specification of the characteristics of presentation.

CSS3

CSS3 stands for Cascading Style Sheet level 3, which is the advanced version of CSS. It is used for structuring, styling, and formatting web pages. Several new features have been added to CSS3 and it is supported by all modern web browsers. The most important feature of CSS3 is the splitting of CSS standards into separate modules that are simpler to learn and use

Comparison between CSS, CSS3

	CSS	CSS3
1	CSS is capable of positioning texts and objects. CSS is somehow backward compatible with CSS3.	CSS3 is capable of making the web page more attractive and take less time to create it. If you write CSS3 code in CSS, it will be invalid.
2	Responsive designing is not supported in CSS	CSS3 is the latest version, hence it supports responsive design.
3	CSS cannot be split into modules.	Whereas, CSS3 can be breakdown into modules.

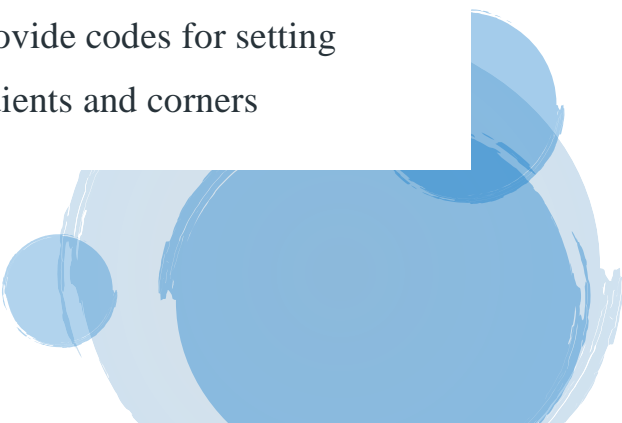|		
4	Using CSS, we cannot build 3D animation and transformation.	But in CSS3 we can perform all kinds of animation and transformations as it supports animation and 3D transformations.
5	CSS is very slow as compared to CSS3	Whereas, CSS3 is faster than CSS.
6	In CSS we have a good collection of unique color schemas and standard color.	Whereas, CSS3 has a good collection of HSL RGBA, HSLA, and gradient colors.
7	In CSS we can only use single text blocks.	But in CSS3 we can use multi-column text blocks
8	CSS does not support media queries.	But CSS3 supports media queries
9	CSS codes are not supported by all types of modern browsers.	Being the latest version, CSS3 codes are supported by all modern browsers.
10	In CSS, designers have to manually develop rounded gradients and corners.	But CSS3 provide codes for setting rounded gradients and corners
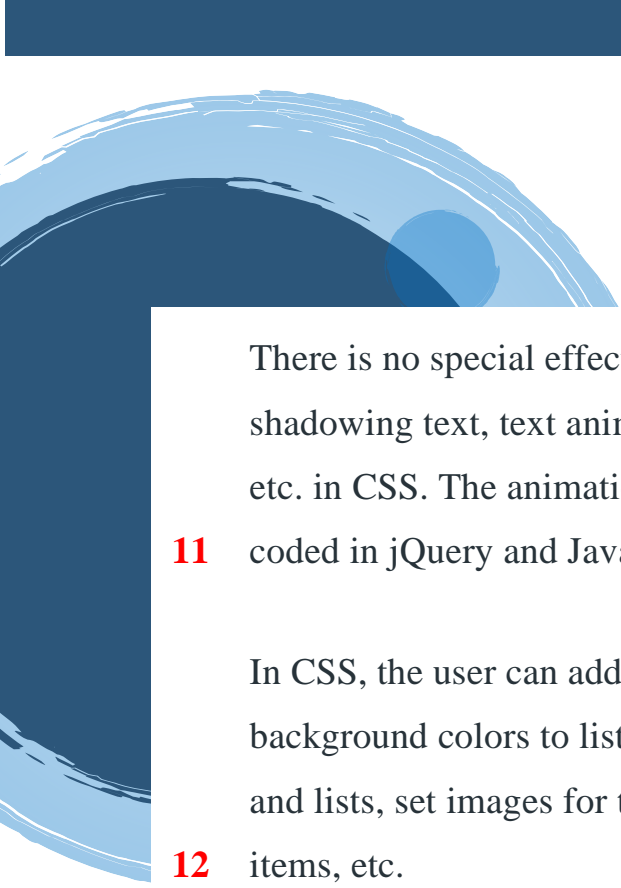
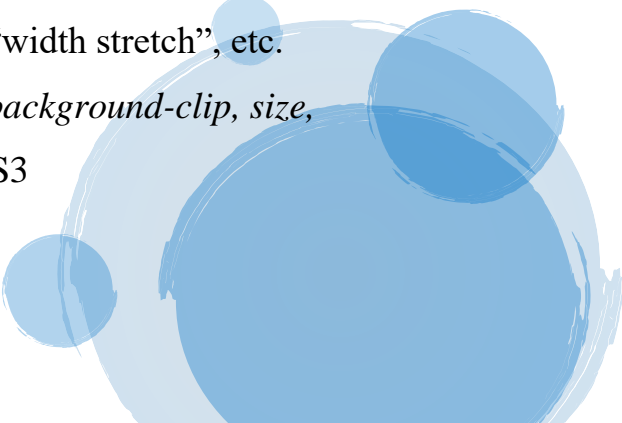|		
11	There is no special effect like shadowing text, text animation, etc. in CSS. The animation was coded in jQuery and JavaScript.	CSS3 has many advance features like text shadows, visual effects, and a wide range of font style and color.
12	In CSS, the user can add background colors to list items and lists, set images for the list items, etc.	Whereas, CSS3 list has a special *display* property defined in it. Even list items also have counter reset properties.

New features of CSS3:

1. **Combinator:** CSS3 has a new General sibling combinator which matches up with sibling elements via the tilde (~) combinator.

2. **CSS Selectors:** CSS3 selectors are much advanced in comparison to simple selectors offered by CSS, and are termed as a sequence of easy to use and simple selectors.

3. **Pseudo-elements:** Plenty of new pseudo-elements have been added to CSS3 to give easy styling in depth. Even a new convention of double colons :: is also added.

4. **Border Style:** The latest CSS3 also has new border styling features like *border-radius, image-slice, image-source,* and values for "width stretch", etc.

5. **Background style properties:** New features like *background-clip, size, style,* and *origin* properties have been added to CSS3

References:

[1] The Differences Between HTML and HTML5 – An Overview (hostinger.com)

HTML Web Storage API (w3schools.com)

[3] Difference between HTML and HTML5 - GeeksforGeeks

[4] Difference between CSS and CSS3 - GeeksforGeeks