1. The various charsets used in HTML include,

a. ASCII(American Standard Code for Information Interchange) Character set.

b. ANSI(American National Standards Institute) Character set.

c. ISO-8859-1(International Organization for Standardization) Character set.

d. UTF-8(Unicode Transformation Format) Character set.

UTF-8 covers almost all of the characters and symbols in the world. The default character encoding for HTML5 is UTF-8.

2. There's no error in using self closing tags along with the end tags. However, it's just a good practice to just self-close the tags rather than

combining them with the end tags.

3. The different types of unordered list(ul) in HTML5 includes,

a. disc - Sets the list item marker to a bullet (default).

b. circle - Sets the list item marker to a circle.

c. square - Sets the list item marker to a square.

d. none - The list items will not be marked.

EXAMPLE:

<ul style="list-style-type:disc">

<li>Coffee</li>

<li>Tea</li>

<li>Milk</li>

</ul>

The different types of ordered list(ol) in HTML5 includes,

a. type="1" - The list items will be numbered with numbers (default).

b. type="A" - The list items will be numbered with uppercase letters.

c. type="a" - The list items will be numbered with lowercase letters.

d. type="I" - The list items will be numbered with uppercase roman numbers.

e. type="i" - The list items will be numbered with lowercase roman numbers.

EXAMPLE:

<ol type="a">

<li>Coffee</li>

<li>Tea</li>

<li>Milk</li>

</ol>

4. Inorder to include image as a bullet in an unordered list, use the list-style-image property of the unordered list.

EXAMPLE:

ul {

list-style-image: url('any\_image\_url');

}

<ul>

<li>Coffee</li>

<li>Tea</li>

<li>Coca Cola</li>

</ul>

5. Inorder to design a table with a single border, use the border-collapse property of the table.

If a !DOCTYPE is not specified, the border-collapse property can produce unexpected results in IE8 and earlier versions.

EXAMPLE:

table {

border-collapse: collapse;

}

table, td, th {

border: 1px solid black;

}

<table>

<tr>

<th>Firstname</th>

<th>Lastname</th>

</tr>

<tr>

<td>Peter</td>

<td>Griffin</td>

</tr>

<tr>

<td>Lois</td>

<td>Griffin</td>

</tr>

</table>

6. rowspan - Allows a single table cell to span the height of more than one cell or row.

colspan - Allows a single table cell to span the width of more than one cell or column.

This might be used for a header cell that titles a group of columns, or a side-bar that groups rows of entries.

EXAMPLE:

<table>

<tr>

<th>Month</th>

<th>Savings</th>

<th>Savings for holiday!</th>

</tr>

<tr>

<td>January</td>

<td>$100</td>

<td rowspan="2">$50</td>

</tr>

<tr>

<td>February</td>

<td>$80</td>

</tr>

</table>

7. The types of file that can be chosen by the user can be restricted by using the accept attribute of <input type = "file">.

EXAMPLE:

<input type="file" accept=".xls,.xlsx, application/vnd.openxmlformats-officedocument.spreadsheetml.sheet,application/vnd.ms-excel" />

8. The input range in an input element can be defined by specifying the type attribute as range along with the minimum and maximum attributes.

type="range" is not supported in Internet Explorer 9 and earlier versions.

EXAMPLE:

<input type="range" name="points" min="0" max="100">

9. Youtube videos can be included in a document by specifying the iframe attribute in the body tag.

EXAMPLE:

<iframe width="420" height="345" src="https://www.youtube.com/embed/tgbNymZ7vqY"></iframe>

10. The Geolocation tag of HTML5 can be used to get the user's location. The getCurrentPosition() method is used to return the user's position.

EXAMPLE:

<script>

var x = document.getElementById("demo");

function getLocation() {

if (navigator.geolocation) {

navigator.geolocation.getCurrentPosition(showPosition);

} else {

x.innerHTML = "Geolocation is not supported by this browser.";

}

}

function showPosition(position) {

x.innerHTML = "Latitude: " + position.coords.latitude + "<br>Longitude: " + position.coords.longitude;

}

</script>

11. When we specify the encType to be multipart/form-data, it tells that no encoding is to be done of any character and all data is to be sent as it is.

If you don't specify any type, the default encoding would be converting all spaces to ‘+’ and all special characters to their corresponding ASCII

hex code. If multipart encoding isn't used, the server will fail to process the request and file upload may eventually fail.

12. HTTP Request Structure:

EXAMPLE:

GET /home.html HTTP/1.1

Host: www.yoursite.com

HTTP Response Structure:

HTTP/1.1 200 OK

Date: Sun, 28 Jul 2013 15:37:37 GMT

Server: Apache

Last-Modified: Sun, 07 Jul 2013 06:13:43 GMT

Transfer-Encoding: chunked

Connection: Keep-Alive

Content-Type: text/html; charset=UTF-8

Webpage Content

13. a. In HTTP, URL begins with “http://” whereas URL starts with “https://”.

b. HTTP uses port number 80 for communication and HTTPS uses 443.

c. HTTP is considered to be unsecure and HTTPS is secure.

d. HTTP Works at Application Layer and HTTPS works at Transport Layer.

e. In HTTP, Encryption is absent and Encryption is present in HTTPS as discussed above.

f. HTTP does not require any certificates and HTTPS needs SSL Certificates.

14. AJAX is a technique for creating fast and dynamic web pages. It allows web pages to be updated asynchronously by exchanging small amounts of data

with the server behind the scenes. This means that it is possible to update parts of a web page, without reloading the whole page.

Classic web pages, (which do not use AJAX) must reload the entire page if the content should change.

Examples of applications using AJAX: Google Maps, Gmail, Youtube, and Facebook tabs.

15. <noscript> can be used to detect if a browser supports Javascript or not. This tag will always appear when Javascript is not supported and

therefore you can put information within this tag to warn the user to enable Javascript on their browser (if they can).

EXAMPLE:

<noscript>

<img src="some\_url" alt="Javascript not enabled" />

</noscript>

16. The 'canvas' element of Modernizr can be used to detect if a browser supports HTML5 or not.

EXAMPLE:

function supportCanvas() {

return !!document.createElement('canvas').getContext;

}

17. <em>:

In the em tag, the "em" stands for "emphasized". You use it when you want to stress a particular thought or idea. Visual browsers normally

render emphasized text in italics; a screen reader might recite the text slightly more slowly or loudly than the words which surround it.

EXAMPLE:

The route is perfectly safe provided you stay on the trail. Above all, <em>do not walk on the firing range</em>.

<strong>:

The strong tag is used to indicate the relative importance of a piece of text. Visual browsers commonly show such text in bold,

but other devices might render it in other ways. One common use is to make a word or phrase stand out, so as to emphasize

the structure of the text.

EXAMPLE:

<strong>Ingredients:</strong> 3 large potatoes, 1 cup flour, ¼ cup butter. <strong>Method:</strong> Boil the potatoes in water.

So, the main difference between both the tag is that while <em> is used to stress the significance of a particular text(especially, during speech),

<strong> is use to bold the structure of the text, to stand out from other texts.

18. In HTML, colors can also be specified using RGB values, HEX values, HSL values, RGBA values and HSLA values.

EXAMPLE:

<h1 style="background-color:rgb(255, 99, 71);"></h1>

<h1 style="background-color:#ff6347;"></h1>

<h1 style="background-color:hsl(9, 100%, 64%);"></h1>

<h1 style="background-color:rgba(255, 99, 71, 0.5);"></h1>

<h1 style="background-color:hsla(9, 100%, 64%, 0.5);"></h1>

19. The HTML Citation element (<cite>) is used to describe a reference to a cited creative work, and must include either the title or author or the URL of that work.

The reference may be in an abbreviated form according to context-appropriate conventions related to citation metadata.

EXAMPLE:

<footer>First sentence in <cite><a href="http://www.george-orwell.org/1984/0.html"><i>Nineteen Eighty-Four</i></a> by George Orwell (Part 1, Chapter 1)</cite></footer>

20. A PDF file can be included in the HTML document using the embed tag.

The HTML Citation element (<cite>) is used to describe a reference to a cited creative work, and must include either the title or author or the URL of that work. The reference may be in an abbreviated form according to context-appropriate conventions related to citation metadata.

EXAMPLE:

<embed src="files/Brochure.pdf" type="application/pdf" width="100%" height="600px" />

21. <object>

The <object> element is used to embed an object in an HTML document.

It is commonly used to embed web page elements such as Flash and Java items that are handled by browser plugins.

Displayed as inline.

<embed>

The <embed> element creates an embedded panel in which a third-party application, such as a Flash-based object, can run.

The <embed> attribute was originally used both for applications (like Flash) and also for media — movies and audio. It can now use HTML5’s new media elements, <audio> and <video>.

Displayed as block.