

## Part 1

1. The HTML `<span>` element is a generic inline container for phrasing content, which does not inherently represent anything. It can be used to group elements for styling purposes (using the class or id attributes), or because they share attribute values, such as lang.

The `<span>` tag is an inline container used to mark up a part of a text, or a part of a document.

The `<span>` tag is easily styled by CSS or manipulated with JavaScript using the class or id attribute.

The `<span>` tag is much like the `<div>` element, but `<div>` is a block-level element and `<span>` is an inline element.

2. The job of the attribute placeholder is to give the user a hint on what to input from the required textbox.

The job of the attribute type is to tell the textbox what kind of input or information can be accepted in the textbox.

3. CSS: Cascading Style Sheet is the basically the scripting language. CSS is used for designing web pages.

CSS is the most important web technologies that are widely used along with HTML and JavaScript. CSS have file extension of `.css`.

SCSS : Syntactically Awesome Style Sheet is the superset of CSS. SCSS is the more advanced version of CSS. SCSS was designed by Hampton Catlin and was developed by Chris Eppstein and Natalie Weizenbaum. Due to its advanced features it is often termed as Sassy CSS. SCSS have file extension of `.scss`.

Differences:

1. SCSS contains all the features of CSS and contains more features that are not present in CSS which makes it a good choice for developers to use it.
2. SCSS is full of advanced features.
3. SCSS offers variables, you can shorten your code by using variables. It is a great advantage over conventional CSS.
4. The CSS pixel—denoted in CSS with the suffix `px`—is a unit of length which roughly corresponds to the width or height of a single dot that can be comfortably seen by the human eye without strain, but is otherwise as small as possible.

The `<em>` tag is used to define emphasized text. The content inside is typically displayed in *italic*.

A screen reader will pronounce the words in `<em>` with an emphasis, using verbal stress.

Rem is to change the font size of the text or element.

Viewport Height (vh). This unit is based on the height of the viewport. A value of 1vh is equal to 1% of the viewport height. Viewport Width (vw). ... If the viewport height is smaller than the width, the value of 1vmin will be equal to 1% of the viewport height

The difference between the specified elements it's how they display and view content.

5. The code snippet below is calling a div class called attention.

The div class attention holds the two images inside which when you move your mouse over the show message.

The code snippet of attention tells the div class attention to set the width of div class attention to 100% and the margin to 5em auto.

It tells the div class to align the text inside to center.

The width attribute specifies the width of the `<input>` element.

The width attribute is used only with `<input type="image">` .

If height and width are set, the space required for the image is reserved when the page is loaded

The margin-top CSS property sets the margin area on the top of an element.

A positive value places it farther from its neighbors, while a negative value places it closer.

They emphasize that the margin must be set at 5em auto.

They are calling the .me class to set the margin-top to be 2em, the width 3em and border-radius 50%.

They are calling the .arrows to be 15em.

6. The snippet below create a class for the button to set the word calculated at 100% - 2em.

It sets the background color button to be purple and the text to be white, it makes the button not to have any borders.

It set the cursor to the pointer when the mouse is moved over the button.

7. Media queries is a feature of CSS 3 allowing content rendering to adapt to different conditions such as screen resolution (e.g. mobile and desktop screen size).
8. @media only screen tells whichever device that is accessing the website to set the width at minimum min-width 768px.

The input textbox is set at the width calculated at 60%-1em.

!important tells the code to override all sets declaration for this class.

9. The z-index property in CSS controls the vertical stacking order of elements that overlap. As in, which one appears as if it is physically closer to you. z-index only affects elements that have a position value other than static (the default).
10. Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Onpage optimization refers to all measures that can be taken directly within the website in order to improve its position in the search rankings. Examples of this include measures to optimize the content or improve the meta description and title tags.