*Introduction*

*Usage of Cascading Style sheet*

* *The Cascading & style sheet is shortly entered as CSS*
* *The CSS is a simple design language used to simplify the process of making webpages presentable.*
* *The CSS is a Style sheet language used to style and layout web pages written in markup language such as, HTML or XHTML.*
* *The CSS controls, the style of HTML elements. CSS ensures the HTML contents appears to users in the presentable way.*
* *CSS can control the layout, colors, fonts and other visual aspects of a webpage.*

*Style rules*

* *The CSS comprises of style rules:*
* *A Style rule is made up of three parts:*

1. *Selector: The Selector is an HTML tag at which a style will be applied. This could be any tag like <hr>, <p>, <table> etc.*
2. *Property: The property is a type of attribute of HTML tag. i.e., all the HTML attributes are converted into CSS properties.*

*For E.g., Color, border etc.*

1. *Value: The values are assigned to properties.*

*CSS Style Rule Syntax*

*Selector {*

*Property: Value:*

*}*

* *For example,*

*P {*

*Color: Blue;*

*Text-align: center;*

*}*

*CSS Types*

* *To style the webpage the CSS must be linked to an HTML file.*
* *There are three different ways to add CSS to HTML.*
* *The three types of CSS are as follows*
  1. *External CSS*
  2. *Internal CSS*
  3. *Inline CSS*

1. *External CSS*
   * + - *The External stylesheet is a separate CSS file. This file is linked to an HTML document with a <link>tag in the head section.*
       - *External CSS is the most common method for adding CSS TO HTML, since you can change the style of multiple HTML documents by changing just one file.*
       - *To create an external CSS file, you need to create a separate CSS file and save the file with the “.CSS" extension.*
       - *To link your CSS file to an HTML file, link the CSS file using the <link> element in the <head> section of the HTML document.*
       - *Whenever you make changes to the CSS file, it will be reflected in the appearance of your HTML document.*
       - *Syntax:*
       - *Create a CSS file with ".CSS" extension*

*Selector {*

*Property: value;*

*}*

* + - * *In HTML document, add the code in "head" section:*

*<head>*

*<link rel="stylesheet" href="location of CSS" type="text/CSS">*

*</head>*

* + - * *Attribute of link tag*

*rel: this specifies the relationship between the HTML document and the linked file.*

*type: This specifies the type of the linked file*

*href: this specifies the location at the external style sheet file.*

* + - * *For example*
      * *Create a css file Example "style.css".*

*P {*

*Color: red;*

*Text-align: center;*

*Font-size: 20;*

*}*

* + - * *In HTML document, add the following code*

*<html>*

*<head>*

*<link rel="stylesheet" type="text/css" href="style.css">*

*</head>*

*<body>*

*<p>Css stands for cascading stylesheets. Css is and for designing Webpages. </p>*

*</body>*

*</html>*

1. *Internal CSS*

* *An Internal style sheet is used when a single HTML document must be styled uniquely.*
* *An internal stylesheet is defined within the <head> section of an HTML document using the <style> element.*
* *In Internal css the css is embedded within the HTML document.*
* *The styles defined in an internal stylesheet will only apply to an HTML document in which they are defined. If you need to apply the same style to multiple pages, we need to use an external stylesheet.*
* *Syntax*

*<html>*

*<head>*

*<title> syntax</title>*

*<style>*

*Selector {*

*Property: value;*

*}*

*</style>*

*</head>*

*<body>*

*Content*

*</body>*

*</html>*

* *For examples*

*<html>*

*<head>*

*<title> Internal css </title>*

*<style>*

*P {*

*Color: red;*

*Text-align: center;*

*Font-size: 30;*

*}*

*</style>*

*</head>*

*<body>*

*<p> css stands for Cascading stylesheet.css is used for designing webpages. </p>*

*</body>*

*</html>*

1. *Inline CSS*

* *The Inline css is used to apply a unique style to a single HTML element.*
* *The Inline css is directly written within the HTML tag using the "style" attribute.*
* *In inline css the css property is written in the body section attached with HTML tag using Style attribute*
* *Syntax*

*<html>*

*<head>*

*<title>syntax</title>*

*</head>*

*<body>*

*<tag name style="property: value":> .... </tag name>*

*</body>*

*</html>*

* *For example*

*<html>*

*<head>*

*<title>Inline css</title>*

*</head>*

*<body>*

*<P Style="color: red; Text-align: center; Font size: 40;" > CSS stands for Cascading stylesheet. Css is used for designing webpages. </P>*

*</body>*

*</html>*

* *Note: Rules (overriding)*
* *If a HTML tag, styles are defined in multiple style sheets then the below order will be followed*
  + - 1. *An inline has the highest priority. If there are conflicting style for Same tag, then the inline style will be applied to the element.*
      2. *Internal has the second priority. If there are conflicting style between Internal and external, then the internal style will be applied to the element*
      3. *External has the least priority. If there are no styles defined either in inline or internal style sheet then external style sheet rules are applied for the HTML tags.*

*Advantages of CSS*

1. *Separation of content and presentation: CSS allows developers to separate the presentation of a website from its content, making it easier to maintain and update the appearance of multiple pages.*
2. *Consistency and Reusability: With css, you can define styles once and apply them to multiple pages, resulting in a consistency and Reusability.*
3. *Saves a lot of time: with css, you can define styles once and apply them to multiple pages. This reduces development time and ensures that changes to the design can be made quickly and easily.*
4. *Improved performance: By reducing the amount of HTML code needed to Create a website, CSS can improve the loading speed of a website. And by reducing the number of style attributes in HTML code, css can reduce the size of HTML files and improve the performance of the website.*
5. *Provide more attributes: css gives more specific features for defining the look of web page.*

*Text Properties of CSS*

* *There are many text properties in css that can be used to control the appearance of text on a website.*
* *The following are some common text properties in css.*

1. *Text color: Color: Color name;*

* *The color property is used to set the color of the text.*
* *The text color can have a value by using name, hex value or by its RGB Value.*
* *For example:*

*P {*

*Color: red;*

*}*

1. *Text direction: direction: rtl/ltr;*
   * *The direction property is used to set the direction of text*
   * *The direction can be set by using rtl: right to left or ltr: left to right*
   * *For Example: <p style=" direction: rtl"> The text will be right to left </p>*
   * *The left to right is the default direction of text.*
2. *letter spacing: letterspacing: n px;*
   * *The letter spacing property is used to specify the space between the Characters of the text.*
   * *The size can be given in px*
   * *For Example: <P Style = " Letter-spacing: 5px;"> text having space between letters </p>*
3. *Text-alignment: text-align: left/right/ Center/Justify;*
   * *The text-align property is used to set the horizontal alignment of the text.*
   * *The text can be set to left, right and centre alignment.*
   * *For Example: <p Style="text-align: right;">This will be right aligned </P>*
4. *Text decorations: text decoration: underline/overline/ line-through / blink /none;*
   * *Text decoration is used to add decorations to the text.*
   * *Text decoration can also be used to remove decorations from the text.*
   * *The text decoration can be underline, line-through, overline, blink and none.*
   * *For Example: <P style=" text-decoration: underline"> This will be underlined </p>*
5. *Text transformation: text transform: Lowercase/uppercase/capitalize/none;*
   * *Text transform property is used to change the case of text, uppercase or lower case*
   * *Text transform can be uppercase, lowercase or capitalise*
   * *Capitalise is used to change the first letter of each word to uppercase*
   * *For Example: <p style="text-transform: capitalize;"> This will be capitalized </p>*
6. *Text-shadow: text-shadow: horizontal-px vertical-px px color;*
   * *Text Shadow property is used to add the text shadow around a text.*
   * *You can specify the horizontal size, vertical size and shadow color for the text.*
   * *For Example: <p style="text-shadow: 4px 5x 8px blue;"> this text will be with blue shadow </p>*
7. *Word spacing: word-spacing: n px;*
   * *Word spacing is used to specify the space between the words of the line.*
   * *The size can be given in px*
   * *For example: <P style = "word-spacing: 5px;">There is space between words of line </p>*

*Font Properties of CSS*

* *The css font property is used to set the forts content of HTML element*
* *There are many font properties in css which are as follows.*

1. *Font-family: This property is used to set the font type for the text-It holds several font names, such as "Arial”,” Times New Roman" etc.*

*For example: <p Style=”font-family: "Arial;">This will be written in Arial Font </p>*

1. *Font-style: It is used to specify the font style of an HTML element. It can be normal or Italic.*
2. *Font-weight: It is used to set the boldness of the font. The value can range from 100 (light) to 900 (bold).*
3. *Font-Size: It is used to set the size of the font. The size can be specified in pixels, ems or other units of measurement.*

***Color Property***

* *The Color Property In css is used to set the color of HTML elements.*
* *This Property is used to set the color of text, the background of webpage, and also to set the color of borders.*

***Syntax:*** *Color: Value;*

* *In CSS, colors can be specified using different formats. The following are the most common formats:*

1. *Hexadecimal notation*
2. *RGB notation.*
3. *RGBA notation*
4. *HSL notation*
5. *HSLA notation*
6. *Built in color.*
7. *Hexadecimal notation*

* *This format uses Six digits to represent a color. This notation starts with*
* *# Symbol followed by six characters ranges from 0 to F.*
* *Each digit represents a value from 0 to 9 or a letter from A to F.*
* *In hexadecimal notation, the first two digits represent "Red", the next two digits represent “green", and last two digits represent the "blue".*
* *For example, Color: #FF0000 (represents the color red).*

1. *RGB Notation*

* *RGB format is the short form of 'RED GREEN and BLUE.’*
* *Each value of (R G B) is a number between 0 to 255.*
* *The color values in this format are specified by using rgb () property.*
* *Syntax; color: rgb (R, G, B);*
* *For example: color: rgb (255,0,0); (represents the Color red)*

1. *RGBA Notation.*

* *This format is similar to RGB, but it also includes an alpha value that represents the opacity of the color.*
* *The alpha value is a number between 0 and 1.*
* *Syntax = color: rgba (R, G, B, A);*
* *For example: color: rgba (255,0,0,0.5); (represents a semi-transparent red color)*

1. *HSL Notation*

* *It is a short form of Hue, saturation, and lightness.*
* *Hue is a degree on the color wheel from 0 to 360.*
* *Saturation is a percentage value from 0% to 100%.*
* *Lightness is also a percentage value from 0% 10 100%*
* *Syntax: Color: hsl (H, S, L);*
* *For example: Color: hsl (0,100%, 50%); (represents the color red)*

1. *HSLA notation*

* *This format is similar to HSL, but it also includes an alpha value that represents the opacity of the color.*
* *The alpha value is a number between 0 and 1*
* *Syntax: Color: hsla (H, S, L, A);*
* *For example: Color: hsla (0,100%, 50%, 0.5); (represent a semi-transparent red color)*

1. *Built-in Color*

* *CSS provides the original set of color keywords such as "red", "green", "blue", "black", "aqua", "purple", "yellow" and "white" etc.*
* *Syntax: Color: Color-name;*
* *For example: color: red;*

*CSS Selectors*

* *CSS Selectors are used to select and style specific HTML elements in a webpage*
* *These are different types of selectors in css*

1. *Element selector*
2. *Id selector*
3. *Class selector*
4. *Element Selector:*
   * + - *The element selector selects the HTML elements based on the element (or tag) name.*
       - *For example: To select all paragraphs on a webpage we use P selector.*

*<style>*

*P {*

*Text align: center;*

*Color: red;*

*}*

*</style>*

1. *ID Selector:*

* *The ID selector selects the HTML element based on its unique id attribute.*
* *The id attribute value is always unique within the page, so it is chosen to select a single, unique element.*
* *It is written with the hash character (#) followed by the id of the element.*
* *An id name cannot start with a number.*
* *For example: To select an element with id="my-element",*

*<style>*

*#my-element {*

*Color: bule;*

*}*

*</style>*

1. *Class Selector*

*The class selector Selects HTML elements based on the specified class attribute.*

*Multiple elements can have the same class name.*

*It is written with the period character (.) followed by the class name of the element.*

*The class name should be not be started with a number.*

*For example: To select all element with class = "my-class",*

*<style>*

*•my-class {*

*Background-color: yellow;*

*}*

1. *Universal selector:*

* *“\*” indicator-same style to all elements*

1. *Group selector:*

* *element separator by Comma - same style to one or more elements.*
* *For Example: HTML webpage using three css selectors.*

*<html>*

*<head>*

*<title> program for selectors </title>*

*<style>*

*P {*

*Text-align: center;*

*Color: red;*

*}*

*#head1 {*

*Text-decoration: underline;*

*}*

*•myclass {*

*Font-size: 20px;*

*Color: blue;*

*}*

*</style>*

*</head>*

*<body>*

*<h1 id="head1"> welcome to world of computer applications</h1>*

*<p> university institute of Computer science and applications </p>*

*<h2 class = "myclass"> Masters of Computer Applications </h2>*

*</body>*

*</html>*

*Padding and Padding Properties*

* *Padding is a property that controls the amount of space between element's content and its border.*
* *The padding property can be set for each side of an element, using the shorthand padding property or using individual properties such as*
* *padding-top, padding-right, pudding-bottom and padding-left*
* *The value of padding can be specified in different units such as pixels. ems, or percentages.*
* *A padding value of 0 means that there is no space between the content and the border.*
* *A padding value greater than 0 create space.*
* *Note that Negative padding is not allowed*

*Padding Properties*

* *Some of the common properties of padding include:*

1. *Padding-top: This property specifies the amount of space between the content and the top border of an element.*

*For example: padding-top: 10%*

1. *Padding-right: This property Specifies the amount of space between the content and the right border of an element.*

*For example: padding-right:3%*

1. *Padding-bottom: Specifies the amount of space between the content and the bottom border of an element.*

*For example: Paddling-bottom: 10%*

1. *Padding-left: Specifies the amount of space between the content and the left border of an element*

*For example: padding-left: 5%*

1. *Padding: The shorthand property for specifying all the four padding values at once. The values are given in order top, right, bottom and left, separated by spaces or slashes.*

*Lists in CSS*

* *There are various CSS properties that can be used to control lists.*
* *In HTML lists are of two types ordered list and unordered lists.*
* *In ordered lists, the list items are marked with numbers and an alphabet.*
* *In unordered list, the list items are marked with bullets*
* *To Style the list, have the following CSS Properties:*

1. *List-style-type*
2. *list-style-image*
3. *List-style - position*
4. *List-style*
5. *marker-offset*
6. *List-style-type*

* *The list-style-type property allows you to control the shape or style of bullet point in the case of unordered lists and the style of numbering characters in ordered lists.*
* *The values which can be used for an unordered list are disc, circle and square.*
* *The values which can be used for an ordered list are decimal, lower-alpha, upper-alpha, lower-roman, upper-roman,*
* *Syntax: list-style-type: circle(e.g.,);*

1. *List-style-image*

* *The list-style -image allow you to set an image for marker instead of the number or a bullet point.*
* *You can use images as list bullets by setting the list-style-image property to the URL of the Image file*
* *Syntax: List-style-image: url (““);*

1. *List-style position:*

* *The list & style-position property is used to control the placement of the list item markers.*
* *By default, the markers appear outside the content area of the list item, but you can set the value to inside to have them appear inside the content area.*
* *It includes two values inside and outside.*
* *Example: list-style -position: Inside;*

1. *List-style*

* *The list-style is the shorthand property, it allows you to specify all the list properties into a single expression.*
* *For example: List style: inside square;*

*Display in CSS*

* *The css, display property is used to control the layout of the element.*
* *The value of the display properly determines how on element is displayed in the webpage.*
* *Every HTML element has a default display value depending on its nature. The default display value for most elements is block or Inline.*
* *The following are some of the most commonly used display values*

1. *Block*
2. *Inline*
3. *Inline-block*
4. *None.*
5. *display: block*

* *The block element takes as much as horizontal space as they can*
* *The block element always starts on a new line and takes the full available width.*
* *The block property is used as the default property of following elements*
* *<div>, <h1>...<h6>, <header>, <footer>,* ***<p>****, <main>, <hr>, <section>, <pre>, <form>, <article>, <aside>, <dt>, <dl>, <ol>….*

1. *display: inline*

* *An inline element does not start on a newline and it only takes up as much width as necessary to display its content.*
* *It ignores the height and width set by the user.*
* *This property is the default property of anchor tag <a>.*
* *The Inline property is used as the default property of following elements:*
* *<a>, <script>, <abbr>, <input>, <img>, <acronym>, <select>, <label>, <span>, <b>, <textarea>, <sub>, <strong>, <bdo> ,<big>, <small>, <sup>.*

1. *display: inline-block*

* *The Inline-block element is similar to inline element but the difference is that you are able to set the width and height.*
* *It behaves like a block element in terms of its layout. It does not start on a new line.*
* *This display value is often used for images and form elements.*

1. *display: none*

* *The "none" value totally removes the element from the Page*
* *The element is not displayed at all. It will not take any Space.*
* *Example Program to implement all display properties*
* *<html>*

*<head>*

*<title> display </title>*

*<style>*

*#d1{*

*Border: 1px solid red;*

*background-color: light blue;*

*display: block;*

*}*

*• my class {*

*Border: 2px solid green;*

*background-color: pink;*

*display: inline-block;*

*}*

*div {*

*Border:1px Solid blue;*

*Background-color: light green;*

*display: inline;*

*}*

*</style>*

*<body>*

*<div id="d1”> About </div>*

*<div class = "myclass"> vision </div>*

*<div> Mission </div>*

*</body>*

*</html>*

*Margin In CSS*

* *Margin property is used to create space around an HTML element.*
* *It is useful to separate the element from its neighbouring elements.*
* *You can use the margin property to add or remove space between an element*
* *It is also possible to use negative values*
* *The Top, bottom, left and right margin can be changed independently using separate properties and we can abo change all properties at once by using shorthand margin property.*
* *The following are the css margin properties.*
  1. *Margin-bottom: Specifies the bottom margin of an element.*
  2. *Margin -top: Specifies the top margin of an element.*
  3. *Margin-left: Specifies the left margin of an element.*
  4. *Margin-right: Specifies the right margin of an element.*
  5. *Margin: The margin property allows you to set all of the properties for the four margins in one declaration.*
* *The Margin property can take one of the following values:*

1. *single value: If the margin property has one value. Then it sets the same margin on all four sides of the element.*
2. *Two values: if the margin property has two values, then it sets the top and bottom margins to the first value, and the right and left margins to the second value.*
3. *Three values: if the margin property has three valves, then it sets the top margin to the first value, the left and right margins to the second value and the bottom margin to the third value.*
4. *Four values: if the margin property has four values, Then it sets the top margin to the first value, the right margin to second value, the bottom margin to the third value, and the left margin to the fourth value.*

*For example: The program to implement all Margin properties*

*<html>*

*<head>*

*<title> Margin property </title>*

*<style>*

*div {*

*Border: 1px solid red;*

*margin-top: 10px;*

*Margin-bottom: 10px;*

*Margin-left: 10px;*

*margin-right: 10px;*

*}*

*</style>*

*</head>*

*<body>*

*<div> About </div>*

*</body>*

*</html>*

*Position Property in css*

* *In css, the position properly is used to control an element’s position in the webpage's layout.*
* *You can put any HTML element at whatever location you like*
* *The position property can take one of the following values*
  1. *Static*
  2. *Relative*
  3. *Absolute*
  4. *Fixed*

1. *static*

* *This is default position for HTML elements. It always positions an element according to the normal flow of the page.*
* *It is not affected by the top, bottom, left and right properties.*

1. *Relative*

* *The relative position property is used to change the position of the element relative to its normal position in the webpage's flow.*
* *We can use the top, right, bottom and left properties to adjust the element's position relative to its original position.*

1. *Absolute*

* *The absolute position property is used to position an element relative to the nearest parent element that has a position other than static is positioned.*
* *If no parent element is position, then the element's position is relative to the webpage's body element.*
* *You can use the top, right, bottom, and left properties to adjust the element's position relative to its positioned parent element.*

1. *Fixed.*

* *The fixed position properly helps to fix the position of an element to a particular fixed spot on the browser.*
* *This fixed element is positioned relative to the browser window, and doesn't move even you scroll the window.*
* *You can use the top, right, bottom, and left properties to adjust the element's position relative to the view point.*

*CSS Table*

* *A table in css is used to apply the various styling properties to the HTML Table element to control the appearance of the table, its rows and its cells.*
* *The following are css properties that are widely used in designing Table:*

1. *border*
2. *border-collapse*
3. *background-color*
4. *Color*
5. *Font-family*
6. *text-align*
7. *vertical align*
8. *padding*
9. *width*
10. *height*
11. *Border: This property is used to set border for the table, rows and cells.*

*For example:*

*<style>*

*table, th, td {*

*Border: 1px solid red;*

*}*

*</style>*

1. *Border-collapse: This property specifies whether the borders of adjacent cells should be collapsed into a single border or not. This property can have two values collapse and separate*

*For example:*

*<style>*

*Table, td, th {*

*Border: 2px solid black;*

*Border-collapse: Collapse;*

*}*

*</style>*

1. *background-color: Sets the background color of the table, rows and cells.*

*For example:*

*<style>*

*Table {*

*Background-color: #f2f2f2;*

*}*

*</style>*

1. *Color: Sets the font color of the text in the table, rows, and cells.*

*Example:*

*td*

*{*

*Color: red;*

*}*

1. *font-family: Sets the font family for the text in the table, rows and cells.*
2. *text-align: Align the text within the cells horizontally*
3. *vertical-align: Aligns the text within the cells vertically.*
4. *Padding: sets the space between the content and the border of the table, rows and cells.*

*For example: th, td {*

*Padding: 10px;}*

1. *Width: Sets the width of the table or a specific cell.*
2. *Height: sets the height of the table or a specific cell.*

*Border properties*

1. *border-color:*
2. *border-style: solid/dotted/dashed/double /groove /ridge*
3. *border-width:*
4. *border: width/style/color;*
5. *border-image: url (" ")*
6. *border-radius:*

*Float property*

* *The float property places an element on the left or right side of its container or image.*
* *Float specifies whether the box should float or not*

*float: left/right/none*

* *Clear used to avoid or remove floating property of element*

*clear: left/right/both/none*