What is CSS?

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files

InlineCss

```
<h1style="color:blue;">HelloWorld</h1>

<pstyle="color:tomato;">Loremipsum...</p>
```

InternalCss

```
<Style>

       h1 {
                 color:Blue;


         }

        p {
                   color:Tomato;


          }

      </Style>

      <h1>HelloWorld</h1>

      <p>Loremipsum...</p>
```

ExternalCss

```
<!Doctypehtml>
<html>
<head>
        <title>ExternalCss</title>
        <linkhref=”css/text.css” rel=”stylesheet”>
</head>
<body>
        <h1>HelloWorld</h1>
        <p>Loremipsum...</p>
</body>
</html>h
1 {
   color:blue;
  }
p {
   color:tomato;
}
```

Color

```
<h1style="color:blue;">HelloWorld</h1>
<pstyle="color:tomato;">Loremipsum...</p>
```

type:

RGB,HEX,HSL.

RGB:

```
<h1style=”color:rgb(255,165,0);”>rgb(255,165, 0)</h1>
```

HEX:

```
<h1style=”color:#ee82ee;”>rgb(255,0,0)</h1>
```

HSL:

```
<h1style=”color:hsl(300,76%,72%);”>hsl(300, 76%,72%)</h1>
```

Background

```
<Style>

        h1{


                background-image: url(“img_flwr.gif”);

                background-position:rightbottom,lefttop;

                background-repeat: no-repeat, repeat;

                background-size: 100px 80px;

                background-color: Tomato;

                background-origin: border-box;

                background-clip: content;

                background-blend-mode:darken;

                background-attachment: fixed;
        }

</Style>
```

```
<h1>Loremipsum...</h1>
```

Property:

<table>
<tr><td colspan="2">Background-Color
White</td><td colspan="2">Background-clip
Border-box,content-box,padding-box.</td><td colspan="2">Background-image
None</td><td>Background-size
Auto,contain,Cover</td></tr>
<tr><td rowspan="2">Background-blend-mode
Color,color-burn,color-image,darken,difference, exlusion, hard-light, hue, lighten,luminosity, multiply,normal,overlay, saturation,screen,soft,light</td><td colspan="3">Background-position
Bottom,center,left,right, top</td><td colspan="2">Background-repeat
No-repeat,repeat,round,space</td><td>Background-origin
Border-box,content-box,padding-box</td></tr>
<tr><td>Background-position-x
Center,left, right</td><td colspan="2">Background-position-y
Bottom,top, center</td><td>Background-repeat -x
No-repeat, repeat</td><td>Background-repeat -y
No-repeat, repeat</td><td>background-attachment
fixed,local,scroll, unset</td></tr>
</table>

Border

```
<Style>
    h1{
        border:2pxsolidblack;
        border-radius: 5px;
    }
    h2{
        border-top: 2pxsolidred;
        border-bottom:2pxdottedblue;
    }
    p{
        border-style:dotted;
        border-width: 2px;
        border-color: black;
    }
```

```
          .text{
                    border-image:url("border.png")30round;
                    border-collapse: separate;
                    border-spacing: 15px 50px;
                    border-top-right-radius: 25px;
                    border-right-bottom-radius:25px;
          }
          .text{
            border:10pxsolidtransparent; padding:
            15px;
            border-image:url(„image.png')30round;
          }
</Style>
<divclass="text">
          <h1>Hello World</h1>
          <h2>Heading2</h2>
          <p>text </p>
</div>
```

Property:

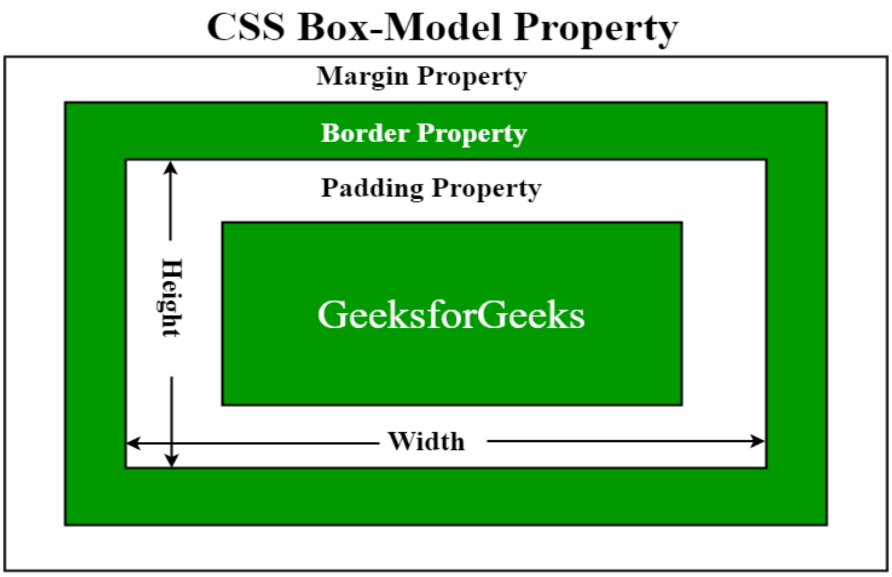
Border-style	Border-width	Border-Image					Border-Color
Solid,Dashed,Dotted, Double,Groove, Hidden,Inset,None, Outset,Ridge.	Medium,Think,Thin.	None,Repeat,Round,Space,Starch.					
		Border Image Source	Border Image Slice	Border Image Outset	Border Image Repeat	Border Image Width	
		None	Number px,%.	Number px,%.	Repeat round space starch	Auto	

Border-radius	Border-inline-start	Border-inline-end	Border-block-Start	Border-block-end
revert,unset,initial, inherit	None,revert, unset,initial, inherit	None,revert,unset, initial, inherit	None,revert,unset,initial, inherit	None,revert,unset, initial, inherit

Width	Style	Color
Medium,thinck,thin	Dashed,dotted,double,groove,hidden, insert, none, outset, ridge, solid	

Border-left	Border-right	Border-bottom	Border-top
Dashed, dotted, double, groove, hidden, insert, medium,none,outset, ridge,solid,thick,thin	Dashed, dotted, double, groove, hidden, insert, medium,none,outset,ridge, solid, thick, thin	Dashed,dotted,double,groove, hidden, insert, medium, none, outset, ridge, solid, thick, thin	Dashed,dotted,double,groove, hidden, insert, medium, none, outset, ridge, solid, thick, thin

Width	Style	Color
Medium,think,thin	Dashed,dotted,double,groove,hidden,insert, none, outset, ridge, solid	



Margin

```
<Style>
        h1{
                margin:10px;
                margin-top:25px;
                margin:left:10px;
                margin:25px10px;
                background-color:yellow;
        }
        .text{
                background-color:green;
        }
 </Style>
 <divclass=”text”>
        <h1>Hello World</h1>
        <h2>Heading2</h2>
        <p>text </p>
 </div>
```

Property:

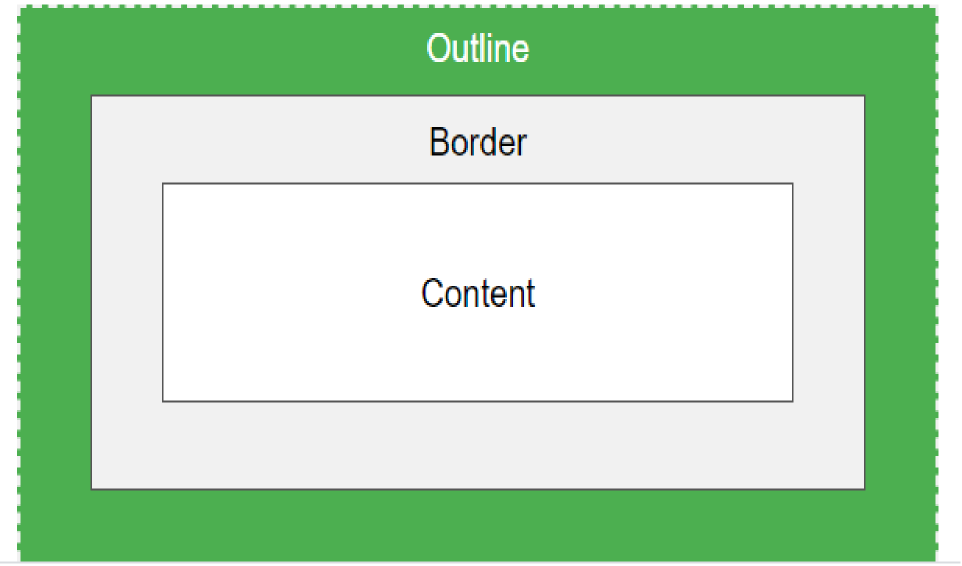
margin–top,right,bottom, left.

Padding

```
 <Style>
        h1{
                padding:10px;
                padding-top:25px;
                padding:left:10px;
                padding:25px10px;
                background-color:yellow;
        }
        .text{
                background-color:green;
        }
</Style>
<divclass=”text”>
        <h1>Hello World</h1>
        <h2>Heading2</h2>
        <p>text </p>
</div>
```

Property:

padding– top,right, bottom, left.



Outline

```
<Style>
        .text{
                border: 2px solid black;
                outline:10pxsolid #ff0;

        }
</Style>
```

```
<divclass=”text”>
        <h1>Hello World</h1>
</div>
```

Property:

Outline			
Outline-style	Outline-color	Outline-width	Outline-offset

Text

```
<Style>
        .h1{

                text-align:center;
                text-shadow:2px2pxyellow;
                text-align:uppercase;
        }
        .text{
                width: 300px;
                height:100px;
                background-color:green;
                box-shadow:10px10px5px2pxgrey;
        }
</Style>
<divclass=”text”>
        <h1>Hello World</h1>
        <p></p>
</div>
```

Property:

Color	Direction	Text-align	Decoration	White-space
	rtl,ltr	top,left,right,center,	blink,dashed,dotted,double,line-	break-spaces,none,

		justify,start,end,	through,none,overline,unset,wavy,solid		normal,no-wrap,pre,pre-line, pre-wrap
Transformation		Spacing	Shadow		Text-indent
uppercase, lowercase,capitalize		letter-spacing, line-height,word-spacing	text	box	
			none,h-offset,v-offset,blur,spread,color, inset		

Definition:

text-indent: Specifiestheindentationofthefirst line in atext-block.

Font

```
<Style>
        .h1{
              font-family:"Sofia";
              font-size: 22px;
        }
        P{
              font:italicsmall-capsbold12px/30pxGeorgia,serif;
        }
  </Style>
  <divclass=”text”>
        <h1>Hello World</h1>
        <p>This pragraph</p>
  </div>
```

Property:

font –family	font-style	font-size	font-weight	font-variant
sans-serif,serif, serif(red serifs,	normal,italic, oblique	(number)px,%, em, rem, vw	normal,100,200,300,400,500,600,700, 800,900,bold,bolder, lighter	normal,small-caps

Lists

```
<Style>
            .ul{
                  list-style:squareinsideurl("sqpurple.gif");
                  list-type: upper-alpha;

            }
      </Style>
      <ul>
            <li>Coffee</li>
            <li>Tea</li>
            <li>CocaCola</li>
      </ul>
```

Property:

List-style Square		
List-style-type circle,square,upper-roman,lower-alpha	List-style-image url, none	List-style-position outside,inside

Table

```
<Style>
      caption-side:bottom;
</Style>
<tableid="example1"border="1">
      <caption>Table1.1 Customers</caption>
            <thead>
                  <tr>
                        <th>Company</th>
                        <th>Contact</th>
                        <th>Country</th>
                  </tr>
            </thead>
```

```
                <tbody>
                        <tr>
                                <td>Alfreds Futterkiste</td>
                                <td>MariaAnders</td>
                                <td>Germany</td>
                        </tr>
                </tbody>
        </table>
```

Property:

Caption-side
Top,bottom

Display

```
    <Style>
            ulli{
                    display:flex;
                    display-none;
            }
        </Style>
        <ul>
                <li>Coffee</li>
                 <li>Tea</li>
                <li>CocaCola</li>
        </ul>
```

Property:

1.Display:flex

The flex property sets the flexible length on flexible items.

. flex-direction: row, row-reverse, column, column-reverse, initial, inherit;

. flex-wrap: nowrap, wrap, wrap-reverse ,initial , inherit;

. flex-flow: row-reverse wrap;

Positional alignment

justify-content: center, left, right, space-between, space-around, space-evenly, unset;

align-items: center,baseline,start,end,unset;

gap: 20px;

order:

```
<div>
        <div style="order: 2">Item 1</div>
        <div style="order: 3">Item 2</div>
        <div style="order: 1">Item 3</div>
</div>
```

2.Display:grid

A grid can be defined as an intersecting set of vertical and horizontal lines. CSS Grid layout separates a page into major sections.

grid-template-columns: none, auto, repeat(3,1fr), also give in percentage(%);

grid-template-rows: none, auto, repeat(3,1fr), also give in percentage(%);

grid-column: 1 / span 2;

Positional alignment

justify-content: center, left, right, space-between, space-around, space-evenly, unset;

align-items: center,baseline,start,end,unset;

gap: 20px;

grid-column-gap: 50px;

grid-row-gap: 10px;
order:

```
<div>
        <div style="order: 2">Item 1</div>
        <div style="order: 3">Item 2</div>
        <div style="order: 1">Item 3</div>
</div>
```

3.Display: block

Displays an element as a block element (like <p>). It starts on a new line, and takes up the whole width

4.Display: inline

Displays an element as an inline element (like <span>). Any height and width properties will have no effect. This is default.

5.Display: inline-block

Displays an element as an inline-level block container. The element itself is formatted as an inline element, but you can apply height and width values.

6.Display: none

The element is completely removed.

Visibility

```
<Style>
        ul li{

        }        visibility:visible;
</Style>
<ul>
        <li>Coffee</li>

        <li>Tea</li>

        <li>CocaCola</li>

</ul>
```

Property:

visiblity visible,hidden,collapse

Z-index

```
<Style>
        .text{
                z-index:1;

        }
</Style>
<divclass=”text”>
        <h1>Hello World</h1>
        <p></p>
</div>
```

Overflow

```
<Style>
        table{
                overflow:auto;
        }
```

```
</Style>
<tableid="example1"border="1"style=”min-width:750px;”>
        <caption>Table1.1 Customers</caption>
                <thead>
                        <tr>
                                <th>Company</th>
                                <th>Contact</th>
                                <th>Country</th>
                        </tr>
                        <tr>
                                <th>Company</th>
                                <th>Contact</th>
                                <th>Country</th>
                        </tr>
                </thead>
                <tbody>
                        <tr>
                                <td>Alfreds Futterkiste</td>
                                <td>MariaAnders</td>
                                <td>Germany</td>
                        </tr>
                        <tr>
                                <td>Alfreds Futterkiste</td>
                                <td>MariaAnders</td>
                                <td>Germany</td>
                        </tr>
                        <tr>
                                <td>Alfreds Futterkiste</td>
                                <td>MariaAnders</td>
                                <td>MariaAnders</td>
                        </tr>
                </tbody>
</table>
```

Property:

overflow			
visible	hidden	scroll scroll-x,scroll-y	auto

Float

```
<Style>
        h1{
                float:left;

        }
        p{
                float:right;
        }
</Style>
<divclass=”text”>
        <h1>Hello World</h1>
        <p></p>
</div>
```

Property:

Float
Left,right,none

Clear

```
<Style>
        h1{
                float:left;
        }
        p{
                clear:left;
        }
</Style>
```

```
<divclass=”text”>
        <h1>Hello World</h1>
        <p></p>
</div>
```

Property:

clear
Left,right,none,both

Opacity

```
  <Style>
        img{
                opacity: 0.5;
        }
</Style>
<divclass=”text”>
        <imgsrc="img_forest.jpg"alt="Forest"width="170px"height="100px">
</div>
```

Position

```
<Style>
        div{

        }
        h2 {    position:relative;


                position:absolute;
        }       left:100px;
</Style>        top:150px;
<divclass=”text”>
        <h2>Thisisaheadingwithanabsolute position</h2>
</div>
```

Property:

Position				
position-relative top,bottom,left, right	Position-absolute top,bottom,left, right	position-sticy top,bottom,left, right	position-fixed top,bottom,left, right	position-static default

Object-fit

```
 <Style>
        .fill{
               object-fit:fill;
        }
        .contain{
               object-fit:contain;
        }
        .cover{
               object-fit:cover;
        }
        .scale-down{
               object-fit:scale-down;
        }
        .none{
               object-fit:none;
        }
</Style>
<divclass=”text”>
        <h1>Theobject-fitProperty</h1>
               <imgsrc="paris.jpg"alt="Paris"style="width:200px;height:400px";>
               <imgclass="fill"src="paris.jpg"alt="Paris"style="width:200px; height:400px;">
               <imgclass="contain"src="paris.jpg"alt="Paris"style="width:200px;height:400px;">
               <imgclass="cover"src="paris.jpg"alt="Paris"style="width:200px; height:400px;">
               <imgclass="scale-down"src="paris.jpg"alt="Paris"style="width:200px; height:400px;">
               <imgclass="none"src="paris.jpg"alt="Paris"style="width:200px;height:400px;">
       </div>
```

Property:

Object-fit
fill,contain,cover,none,scale-down

MultipleColumns

```
<Style>
    .newspaper{
        column-count:3;
        column-gap: 40px;
        column-rule-style:solid;
        column-rule-width:1px;
        column-rule-color:lightblue;
        column-width: 100px;
    }
    h2 {
        column-span: all;
    }
    .newspaper2{
        column-fill: balance;
    }
</Style>
<divclass="newspaper">
    <h2>Lorem IpsumDolorSitAmet</h2>
    Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh
    euismodtinciduntutlaoreetdoloremagnaaliquameratvolutpat.Utwisienimadminimveniam,quis
```

```
        nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi. Nam liber tempor cum soluta nobis eleifend option congue nihil imperdiet doming id quod mazim placerat facer possim assum.
</div>
<h2>column-fill:balance(default):</h2>
<divclass="newspaper2">
        Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat...
</div>
```

Property:

column
column-count,column-gap,column-rule-style,column-rule-width,column-rule-color,column-rule,column- span, column-width, column-fill, column-rule, columns

Input

```
<style>
        input[type=text]{
                border:2pxsolidred;
                border-radius: 4px;
        }
        input[type=text]:focus{
                background-color:lightblue;
        }
</style>
<form>
        <labelfor="fname">FirstName</label>
        <inputtype="text"id="fname"name="fname"value="John">
        <labelfor="lname">Last Name</label>
        <inputtype="text"id="lname"name="lname"value="Doe">
</form>
```

Property:

input[type=text]	input[type=password]	input[type=number]

Definition:

input[type=text] - will only select text fields.

input[type=password]-willonlyselectpasswordfields.

input[type=number] - will only select number fields.

Combinators

Basic:

```
<style>
        divp {
                background-color:yellow;
        }
        div>p {
                background-color:green;
        }
        div~p {
                background-color:red;
        }
        div+p {
                background-color:blue;
        }
</style>
<h2>DescendantSelector</h2>
<p>Thedescendantselector matchesall elementsthataredescendantsof aspecifiedelement.</p>
<div>
        <p>Paragraph1inthe div.</p>
```

```
            <p>Paragraph2inthe div.</p>
      </div>
      <section>
            <p>Paragraph3inthe div.</p>
      </section>
      <p>Paragraph4.Notina div.</p>
      <p>Paragraph5.Notina div.</p>
```

Type:

1. descendantselector(space)
2. childselector(>)
3. adjacentsiblingselector(+)
4. generalsiblingselector(~)

Selector

```
<style>
      text1,text2{Background-color:yellow;}
      .text,p{
            background-color:red;
      }
      h2:hover{
            background-color:blue;
      }
      p:active{
            background-color:orange;
      }
      p:nth-chlid(even){
            color:red;
      }
      p:nth-child(odd){
            Color:green;
      }
      p:nth-child(n+1){
            color:blue;
      }
      p:nth-child(2n+1){
            color:pink;
      }
```

```
</style>
<h2>DescendantSelector</h2>
<divclass=”text1”>
        <pclass=”text1”>Paragraph1inthediv.</p>
        <pclass=”text2”>Paragraph2inthe div.</p>
        <p>Pragraph3inthediv</p>
        <p>paragraph4inthediv</p>
        <p>paragraph5inthediv</p>
</div>
<p>Paragraph3inthe div.</p>
```

Type:

<table>
<tr><td>class</td><td>class1.class2</td><td>class1 class2</td><td>#id</td><td>*</td><td>element1</td><td>element2, class1</td><td>element1,element2</td><td>element1 element2</td><td colspan="2">element1>element2</td></tr>
<tr><td>element1+element</td><td>element1~element2</td><td>[attribute]</td><td>[attribute~=value]</td><td>[attribute|=value]</td><td>[attribute^=value]</td><td>[attribute$=value]</td><td>[attribute*=value]</td><td>:active</td><td colspan="2">::after</td></tr>
<tr><td>::before</td><td>:checked</td><td>:default</td><td>:default</td><td>:disabled</td><td>:empty</td><td>:enabled</td><td>:first-child</td><td>::first-child</td><td colspan="2">::first-letter</td></tr>
<tr><td>::first-letter</td><td>::first-line</td><td>:first-of-type</td><td>:focus</td><td>:full screen</td><td>:hover</td><td>:in-range</td><td>:indeterminate</td><td>:invalid</td><td colspan="2">:lang(language)</td></tr>
<tr><td>:last-child</td><td>:last-of-type</td><td>:link</td><td>:not(selector)</td><td>:nth-child(n)</td><td>:nth-last-child(n)</td><td>:nth-last-of-type(n)</td><td>:nth-of-type(n)</td><td>:only-of-type</td><td colspan="2">:only-child</td></tr>
<tr><td>:optional</td><td>:out-of-range</td><td>::placeholder</td><td>:read-only</td><td>:read-write</td><td>:required</td><td>:root</td><td>::selection</td><td>:target</td><td>:valid</td><td>:visited</td></tr>
</table>

AttributeSelectors

```
<style>
        a[target]{
                background-color:yellow;
        }
        [class^="test"]{
                 background:#ffff00;
        }
        [lang|=en]{
                background-color:red;
        }
</style>
<h2>DescendantSelector</h2>
```

```
<divclass=”text1”>
        <a href="http:// https://sohamsolution.com/"lang=”en” class=”text_en”>soham.com</a><a
        href="http://www.facebok.com"target="_blank"class=”text”lang=”hindi”>facebook.com</a>
        <ahref="http://www.wikipedia.org"target="_top" class=”text2”>wikipedia.org</a>
</div>
```

Type:

[attribute],[attribute=value],[attribute~=value],[attribute|=value],[attribute^=value], [attribute$=value], [attribute*=value]

PseudoClasses

```
        <style>
                divp:first-child {
                        background-color:yellow;
                }
                divp:last-child {
                        background-color:yellow;
                        color:white;
                }
                sectionp{
                        background-color:red;
                }
                sectionp:hover{
                        background-color:blue;
                }
                p:active{
                        background-color:orange;
                }
```

:has() selector for border styling

```
                ul li:has(input:checked) {
                                border: 2px solid #f806e4;
                 }
```

is() is used for selecting multiple elements in more compact form.

```
 .contain :is(h1, h2, h3,) {
     color: red;
   }
```

`:focus-:focus`: to bring attention to the element that currently has the focus.

```
  .element:focus-visible {

    background-color: pink;

    }
```

```
</style>

<h2>DescendantSelector</h2>
<p>Thedescendantselector matchesall elementsthataredescendantsof aspecifiedelement.</p>
```

```
<div>
        <p>Paragraph1inthe div.</p>
        <p>Paragraph2inthe div.</p>
</div>
<section>
        <p>Paragraph3inthe div.</p>
</section>
```

Type:

active,:checked,:disabled,:empty,:enabled,:first-child,:first-of-type,:focus,:hover,:in-range, :invalid,:lang(language),:last-child,:link,:not(selector),:nth-child(n),:nth-last-child(n),:nth-of-type(n),:only-of-type,:only-child,:optional,:out-of-range,:read-only,:read-write,:required,:root, :target,:valid, :visited

PseudoElements

```
<style>
        p::first-line{
                color:#ff0000;
                font-variant:small-caps;
        }
        p::first-letter{
                color: #ff0000;
                font-size:xx-large;
        }
        h1::before{
                content:url(smiley.gif);
        }
        ::selection{
                color: red;
                background:yellow;
        }
    </style>

    <h2>DescendantSelector</h2>
        <p>Thedescendantselectormatchesallelementsthataredescendantsofaspecified element.</p>
        <div>
            <p>Paragraph1inthe div.</p>
            <p>Paragraph2inthe div.</p>
            <p>Paragraph3inthe div.</p>
        </div>
    <p>Paragraph4.Notina div.</p>
    <p>Paragraph5.Notina div.</p>
```

Type:

::after,::before,::first-letter,::first-line, ::selection

Dropdown

```
    <style>
        .dropdown{
            position: relative;
            display:inline-block;
        }
        .dropdown-content{
            display: none;
            position:absolute;
            background-color:#f9f9f9;
            min-width: 160px;
            box-shadow:0px8px16px0pxrgba(0,0,0,0.2); padding:
            12px 16px;
            z-index:1;
        }
        .dropdown:hover.dropdown-content{
```

```
                        display:block;
                }
        </style>
        <divclass="dropdown">
                <span>Mouseoverme</span>
                <divclass="dropdown-content">
                        <p>HelloWorld!</p>
                </div>
        </div>
```

Tooltip

```
        <style>
                .tooltip {
                         position:relative;display:inline-block;border-bottom:1px dottedblack;
                }
                .tooltip.tooltiptext{
                        visibility:hidden;
                        width: 120px;
                        background-color:black;
                        color: #fff;
                        text-align: center;
                        border-radius:6px;
                        padding: 5px 0;
                        position: absolute;
                        z-index: 1;
                        top: 25px;
                        right:-15px;
                }
                .tooltiptext::after{
                        content: "";
                        position:absolute;
                        bottom: 100%;
                        left:50%;
                margin-left: -5px;
                border-width:5px;
                border-style:solid;
                border-color:transparenttransparent#555 transparent;
        }
        .tooltip:hover.tooltiptext{
                visibility:visible;
        }
</style>
<divclass="tooltip">Hoveroverme
        <spanclass="tooltiptext">Tooltip text</span>
</div>
```

Gradients

```
<style>
        #grad1{
                height: 55px;
                background-color:red;
                background-image:linear-gradient(toright,red,orange,yellow,green,blue,indigo, violet);

        }
        h1{     text-align:center;
                margin:auto;
                color:#888888;
                font-size:40px;
                font-weight:bold;
                background:repeating-radial-gradient(red, yellow10%,green15%);

        }
        #grad2{
                background:radial-gradient(farthest-sideat60%55%,red,yellow, black);
        }
</style>


<divid="grad1">
```

```
        <h1class>Rainbow Background</h1>
</div>
<divid="grad2">
        <h1class>Rainbow Background</h1>
</div>
```

Property:

linear gradients	repeating linear-gradient	radial gradients closest-side,farthest-side,closest-corner, farthest-corner	repeating-radial gradient

Transforms

Basic:

```
<style>
        #div1 {
                height:150px;width:150px;margin-left:60px; border:
                1px solid black;
                perspective: 100px;
                perspective-origin:left;
        }
        #div2 {
                padding:50px;
                background:rgba(100,100,100,0.5);
                transform: rotateX(45deg);
        }
</style>

<h1>TherotateZ() Method</h1>
        <p>TherotateZ()methodrotatesanelementarounditsZ-axisata given degree.</p>
        <divid="div1">DIV1
        <divid="div2">DIV2</div>
        </div>
                <divid="myDiv">
                Thisdiv elementis rotated90 degrees.
        </div>
```

PropertyandMethod:

Transform transform,transform-origin,transform-style,perspective,perspective-origin,backface-visibility	
2d Transform translate(), rotate(), rotateX(), rotateY(), scaleX(), scaleY(),scale(),skewX(),skewY(),skew(),matrix()	3d Transform translate(),rotate(),rotateX(),rotateY(),rotateZ(),scaleX(),scaleY(), scaleZ(),scale(),skewX(),skewY(),skewZ(),skew(),matrix()

Transition

```
<style>
        div {
                width: 100px;
                height: 100px;
                background:red;
                transition: width 2s,height 4s;
                transition-timing-function:ease;
        }
        div:hover{
                width: 300px;
                height:300px;
        }
</style>
<div>
        <h1style=”color:white;”>ThetransitionProperty</h1>
</div>
```

PropertyandMethod:

Transition			
transition-delay	transition-duration	transition-property	transition-timing-function

			ease,linear,ease-in,ease-out,ease,in- out, cubic-bezier (n,n,n)

Definition:

ease-specifiesatransition effectwith aslowstart, then fast,then end slowly(this is default)

linear-specifies atransitioneffectwiththesame speedfromstartto end

ease-in-specifiesatransitioneffectwithaslowstart

ease-out-specifies atransitioneffectwithaslowend

ease-in-out-specifiesatransitioneffectwithaslowstartand end

cubic-bezier(n,n,n,n)-letsyoudefineyour ownvaluesinacubic-bezier function

Animation

```
<style>
        div {
                width: 100px;
                height:100px;
                background-color: red;
                position: relative;
                animation-name:example;
                animation-duration: 4s;
        }
        @keyframesexample{
                0%{background-color:red; left:0px; top:0px; }
                50%{background-color:blue;left:200px;top:200px;} 100% {
                background-color:green; left:0px; top:0px; }
        }
</style>
<div>
        <h1style=”color:white;font-size:14px;”>ThetransitionProperty</h1>
</div>
```

PropertyandMethod:

Animation

@keyframes,animation-name,animation-duration, elay,animation-iteration-count, animation-direction, animation-timing-function, animation-fill-mode, animationanimation-d

Definition:

ease-specifiesatransition effectwith aslowstart, then fast,then end slowly(this is default)

linear-specifies atransitioneffectwith thesame speedfromstartto end

ease-in-specifiesatransitioneffectwithaslowstart

ease-out-specifies atransitioneffectwithaslowend

ease-in-out-specifiesatransitioneffectwithaslowstartand end

cubic-bezier(n,n,n,n)-lets youdefineyourown valuesinacubic-bezierfunction

---

Variables-Thevar()Function

```
<style>
        :root {
                --blue: #1e90ff;
                --white:#fff;
        }
        body{
                background-color:var(--blue);
        }
        h2 {
                border-bottom:2pxsolidvar(--blue);
        }
        .container{
                color:var(--blue);
                background-color:var(--white);
                padding: 15px;
        }
        button {
                background-color:var(--white);
                color:var(--blue);
                border:1pxsolidvar(--blue); padding:
                5px;
        }
</style>
<h1>Usingthevar()Function</h1>
        <divclass="container">
                <h2>LoremIpsum</h2>
                <p>Loremipsumdolorsitamet,consecteturadipiscingelit.Etiamsemperdiamat erat
                pulvinar, at pulvinar felis blandit.</p>
                <p><button>Yes</button><button>No</button></p>
        </div>
```

Responsive-MediaQueries

```
<style>
                background-color:lightgreen;
        body{

        }
        @mediaonlyscreenand(max-width:1200px){ body {
                        background-color:lightblue;
                        }
        }
</style>

<!DOCTYPEhtml>
<html>
        <head>
                <metaname="viewport"content="width=device-width, initial-scale=1.0">
        </head>
        <body>
```

```
                <p>Resizethebrowserwindow.Whenthewidthofthisdocumentis600pixelsor less, the
                background-color is "lightblue", otherwise it is "lightgreen".</p>
        </body>
    </html>
```

<table>
<tr>
<td>@media
(max-width:1200px)
(containerwidth:960px;)</td>
<td>@media
(max-width: 991px)
(containerwidth:750px;)</td>
<td>@media
(max-width:767px)
(containerwidth:550px;)</td>
<td>@media
(max-width:575px)
(containerwidth:100%;
padding;0 15px;)</td>
</tr>
<tr>
<td colspan="2">@media(max-width:375px)
(containerwidth:100%;padding:015px;)</td>
<td colspan="2">@media(max-width: 320px)
(containerwidth:100%;padding:015px;)</td>
</tr>
</table>

MediaTypes:

All,print,screen,speech

MediaFeatures:

any-hover,any-pointer,aspect-ratio,color,color-gamut,color-index,grid,height, hover, inverted-colors, light-level, max-aspect-ratio, max-color, max-color-index, max-height, max-monochrome, max-resolution, max-width, min-aspect-ratio, min-color, min-color-index, min-height, min-monochrome, min-resolution, min-width, monochrome, orientation, overflow-block, overflow-inline, pointer, resolution, scan, scripting, update, width

Definition:

All-Default.Usedforallmediatype devices

Print- Usedforprinters

screen-Usedforcomputerscreens,tablets,smart-phonesetc.

speech-Used forscreen readers that "reads"the pageout loud

webkit-scrollbar

```
<style>
    body {
    font-family: Tahoma, Arial, sans-serif;
    font-size: 15px;
```

```
  }
  p { margin-top: 0; }
  html {
    overflow: auto;
}

body {
    position: absolute;
    top: 10px;
    left: 20px;
    bottom: 10px;
    right: 0;
    padding: 30px;
    overflow-y: scroll;
    overflow-x: hidden;
}

div { height: 1000px; }

/* Scrollbar Styling */
::-webkit-scrollbar {
    width: 10px;
}

::-webkit-scrollbar-track {
    background-color: #ebebeb;
    -webkit-border-radius: 10px;
    border-radius: 10px;
}

::-webkit-scrollbar-thumb {
    -webkit-border-radius: 10px;
    border-radius: 10px;
    background: #6d6d6d;
}
```

```
</style>
</head>
<body>
  <div>
    <p>Note this only works for webkit browsers (Chrome and Safari). Here's how you make your own custom scrollbar...</p>
    <ol>
      <li>Set html to overflow: auto</li>
      <li>Set body to overflow-y: scroll</li>
      <li>Create a div with a height larger than the window (just for testing)</li>
      <li>Set a width for ::-webkit-scrollbar</li>
      <li>Set a background-color for ::-webkit-scrollbar-track</li>
      <li>Set a background-color for ::-webkit-scrollbar-thumb</li>
    </ol>
    <p>Optional: Put a border-radius on the scrollbar and track for a nicer look</p>
  </div>
 </body>
```

-webkit-mask-image

```
<style>
.mask1 {
 -webkit-mask-image: url(w3logo.png);
 mask-image: url(w3logo.png);
 -webkit-mask-repeat: no-repeat;
 mask-repeat: no-repeat;
}
</style>
</head>
<body>

<h1>The mask-image Property</h1>

<h3>An image with a mask layer image:</h3>
<div class="mask1">
<img src="img_5terre.jpg" alt="Cinque Terre" width="600" height="400">
```

```
</div>

<h3>Original image:</h3>
<img src="img_5terre.jpg" alt="Cinque Terre" width="600" height="400">

</body>
```

Text-overflow

```
<style>
div.a {
  white-space: nowrap;
  width: 50px;
  overflow: hidden;
  text-overflow: clip;
  border: 1px solid #000000;
}

div.b {
  white-space: nowrap;
  width: 50px;
  overflow: hidden;
  text-overflow: ellipsis;
  border: 1px solid #000000;
}

div.c {
  white-space: nowrap;
  width: 50px;
  overflow: hidden;
  text-overflow: "----";
  border: 1px solid #000000;
}
</style>
</head>
```

```
<body>

<h1>The text-overflow Property</h1>

<p>The following two divs contains a text that will not fit in the box.</p>

<h2>text-overflow: clip (default):</h2>
<div class="a">Hello world!</div>

<h2>text-overflow: ellipsis:</h2>
<div class="b">Hello world!</div>

<h2>text-overflow: "----" (user defined string):</h2>
<div class="c">Hello world!</div>

<p><strong>Note:</strong> The text-overflow: "<em>string</em>" only works in
Firefox.</p>

</body>
```