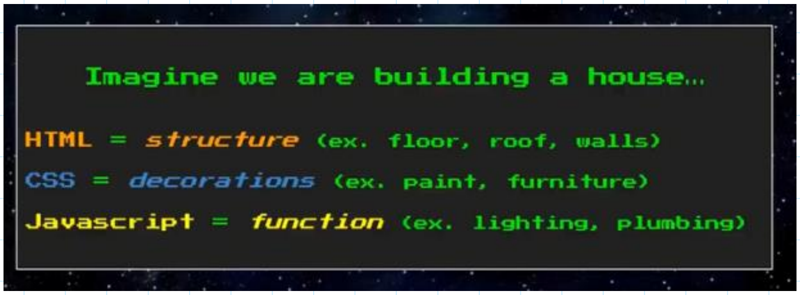
CSS

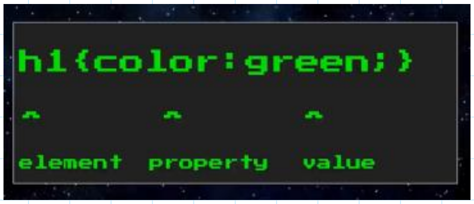


Imagine we are building a house…

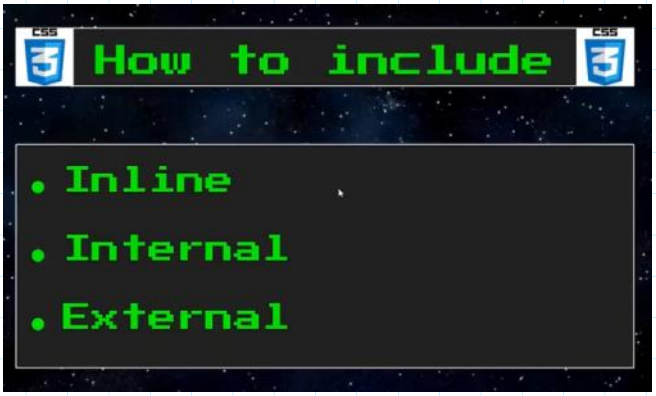
HTML = *structure* (ex. floor, roof, walls)

CSS = *decorations* (ex. paint, furniture)

Javascript = *function* (ex. lighting, plumbing)



```
h1{color:green;}
^        ^        ^
element  property  value
```



How to include

- Inline
- Internal
- External

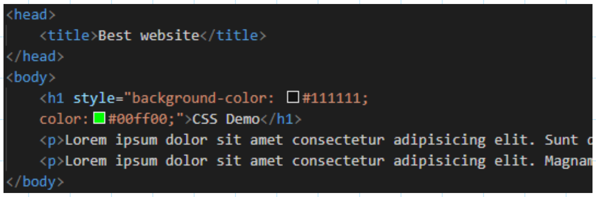
https://ui.glass/generator/

Id ⇒ #Idname

Class ⇒ .classname

Inline CSS styling

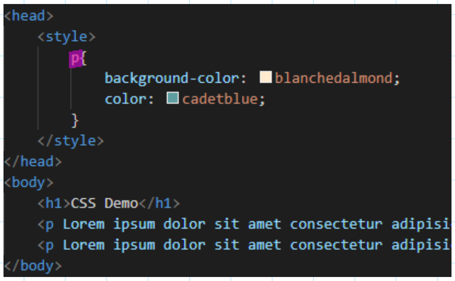
— We can find an element that we want to edit by styling it



```
<head>
    <title>Best website</title>
</head>
<body>
    <h1 style="background-color: □#111111;
    color: 🟩#00ff00;">CSS Demo</h1>
    <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Sunt c
    <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Magnam
</body>
```

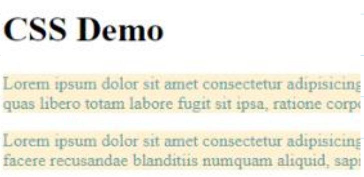
Internal CSS styling

— We can target all instances of a certain tag whatever CSS properties we list



```
<head>
    <style>
        p{
            background-color: □blanchedalmond;
            color: ■cadetblue;
        }
    </style>
</head>
<body>
    <h1>CSS Demo</h1>
    <p Lorem ipsum dolor sit amet consectetur adipisi
    <p Lorem ipsum dolor sit amet consectetur adipisi
</body>
```

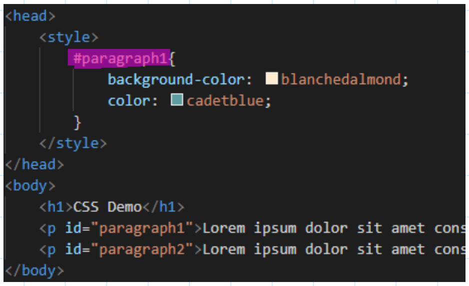
Targets all paragraphs



CSS Demo

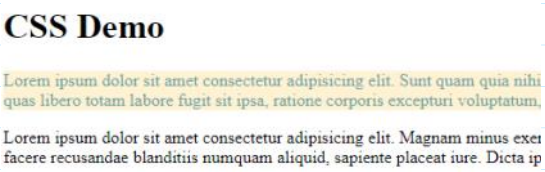
Lorem ipsum dolor sit amet consectetur adipisicing
quas libero totam labore fugit sit ipsa, ratione corp

Lorem ipsum dolor sit amet consectetur adipisicing
facere recusandae blanditiis numquam aliquid, sap



```
<head>
    <style>
        #paragraph1{
            background-color: □blanchedalmond;
            color: ■cadetblue;
        }
    </style>
</head>
<body>
    <h1>CSS Demo</h1>
    <p id="paragraph1">Lorem ipsum dolor sit amet cons
    <p id="paragraph2">Lorem ipsum dolor sit amet cons
</body>
```

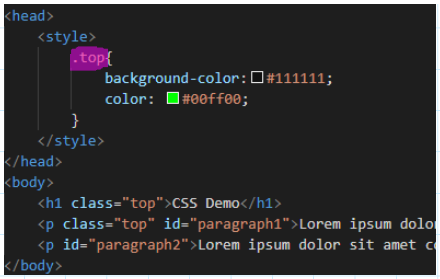
Targets only specific id



CSS Demo

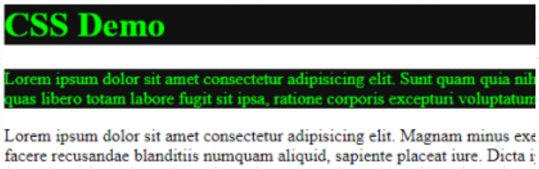
Lorem ipsum dolor sit amet consectetur adipisicing elit. Sunt quam quia nihi
quas libero totam labore fugit sit ipsa, ratione corporis excepturi voluptatum,

Lorem ipsum dolor sit amet consectetur adipisicing elit. Magnam minus exer
facere recusandae blanditiis numquam aliquid, sapiente placeat iure. Dicta ip



```
<head>
    <style>
        .top{
            background-color: □#111111;
            color: 🟩#00ff00;
        }
    </style>
</head>
<body>
    <h1 class="top">CSS Demo</h1>
    <p class="top" id="paragraph1">Lorem ipsum dolor
    <p id="paragraph2">Lorem ipsum dolor sit amet co
</body>
```

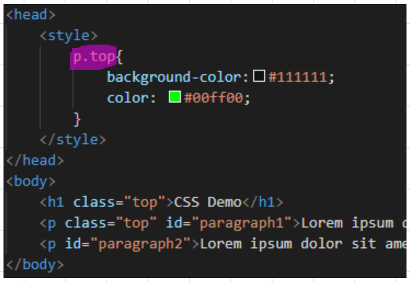
Targets only specific class



CSS Demo

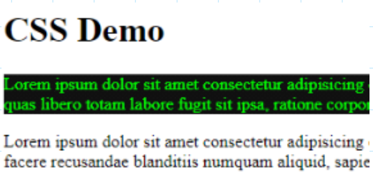
Lorem ipsum dolor sit amet consectetur adipisicing elit. Sunt quam quia nih
quas libero totam labore fugit sit ipsa, ratione corporis excepturi voluptatum

Lorem ipsum dolor sit amet consectetur adipisicing elit. Magnam minus exe
facere recusandae blanditiis numquam aliquid, sapiente placeat iure. Dicta i



```
<head>
    <style>
        p.top{
            background-color: □#111111;
            color: 🟩#00ff00;
        }
    </style>
</head>
<body>
    <h1 class="top">CSS Demo</h1>
    <p class="top" id="paragraph1">Lorem ipsum d
    <p id="paragraph2">Lorem ipsum dolor sit ame
</body>
```

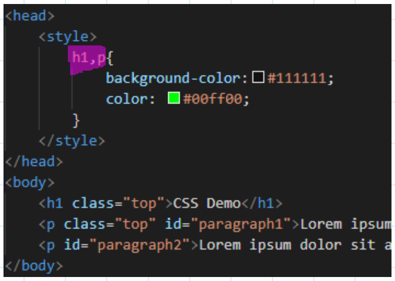
Targets only paragraph with in specific class



CSS Demo

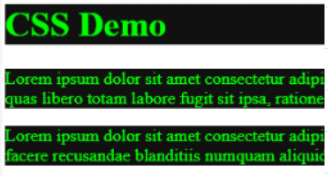
Lorem ipsum dolor sit amet consectetur adipisicing
quas libero totam labore fugit sit ipsa, ratione corpo

Lorem ipsum dolor sit amet consectetur adipisicing
facere recusandae blanditiis numquam aliquid, sapie



```
<head>
    <style>
        h1,p{
            background-color: □#111111;
            color: 🟩#00ff00;
        }
    </style>
</head>
<body>
    <h1 class="top">CSS Demo</h1>
    <p class="top" id="paragraph1">Lorem ipsum
    <p id="paragraph2">Lorem ipsum dolor sit a
</body>
```

Targets heading and all paragraphs



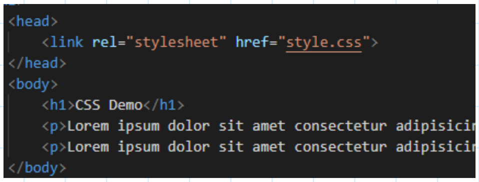
CSS Demo

Lorem ipsum dolor sit amet consectetur adipi
quas libero totam labore fugit sit ipsa, ratione

Lorem ipsum dolor sit amet consectetur adipi
facere recusandae blanditiis numquam aliquid

External CSS styling

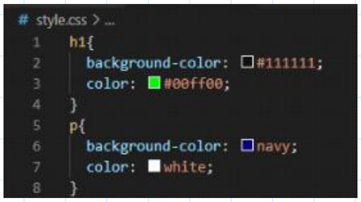
— Create a separate CSS file where we going to list all the different elements we have to target and the CSS properties that we want to apply



```
<head>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <h1>CSS Demo</h1>
    <p>Lorem ipsum dolor sit amet consectetur adipisicir
    <p>Lorem ipsum dolor sit amet consectetur adipisicir
</body>
```

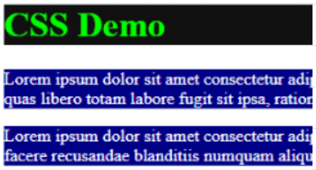
- rel - States the relationship between this document and mentioned document
- href - "file path or links"

  Hypertext reference



```
# style.css > ...
h1{
    background-color: □#111111;
    color: 🟩#00ff00;
}
p{
    background-color: 🟦navy;
    color: ⬜white;
}
```

— CSS properties

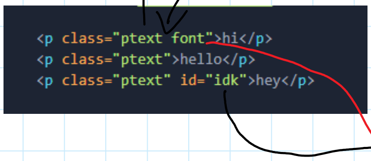


CSS Demo

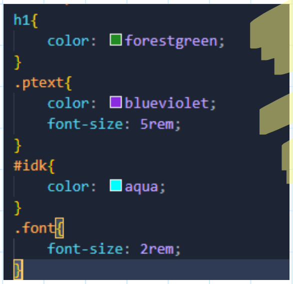
Lorem ipsum dolor sit amet consectetur adi
quas libero totam labore fugit sit ipsa, ratior

Lorem ipsum dolor sit amet consectetur adi
facere recusandae blanditiis numquam aliqu

Seperate class



```
<p class="ptext font">hi</p>
<p class="ptext">hello</p>
<p class="ptext" id="idk">hey</p>
```



```
h1{
    color: 🟩forestgreen;
}
.ptext{
    color: 🟪blueviolet;
    font-size: 5rem;
}
#idk{
    color: 🟦aqua;
}
.font{
    font-size: 2rem;
}
```

Id ⇒ #Idname

Class ⇒ .classname

diff Classes

diff Classes
are seperated by spaces.

① Id
② Class
③ Element

Priority

Ctrl + /
Comment

Fonts

Serif fonts have a small stroke at the edges of each letter. They create a sense of formality and elegance.

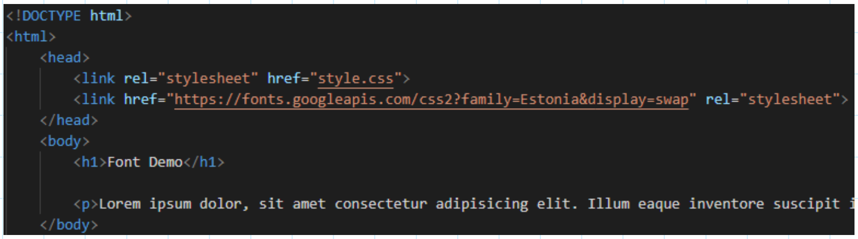
Sans-serif fonts have clean lines (no small strokes attached). They create a modern and minimalistic look.

Monospace fonts - here all the letters have the same fixed width. They create a mechanical look.

Cursive fonts imitate human handwriting.

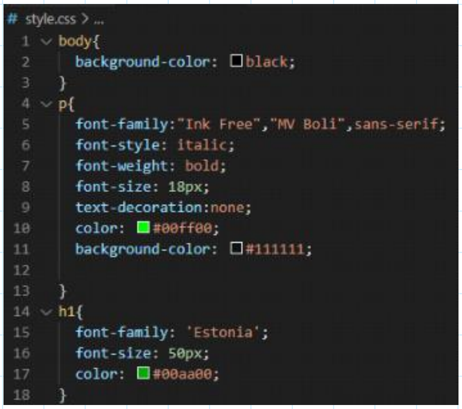
Fantasy fonts are decorative/playful fonts.

```
div {
    background: linear-gradient(to bottom, #33ccff 0%, #ff99cc 100%);
}
```



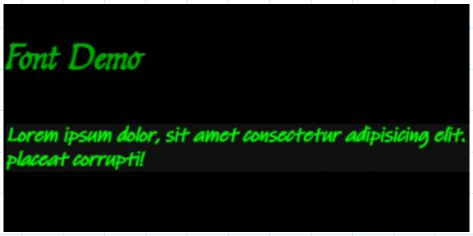
```
<!DOCTYPE html>
<html>
    <head>
        <link rel="stylesheet" href="style.css">
        <link href="https://fonts.googleapis.com/css2?family=Estonia&display=swap" rel="stylesheet">
    </head>
    <body>
        <h1>Font Demo</h1>

        <p>Lorem ipsum dolor, sit amet consectetur adipisicing elit. Illum eaque inventore suscipit i
    </body>
```

https://fonts.google.com/



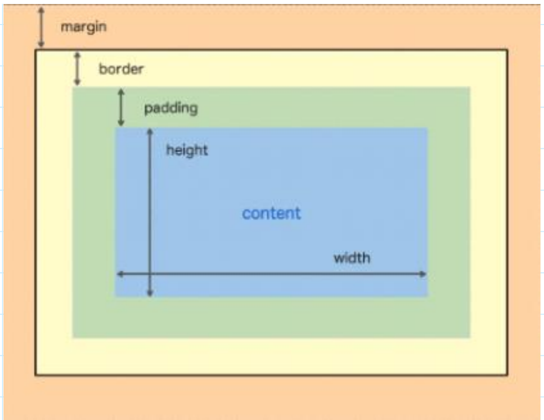
```
# style.css > ...
body{
    background-color: □black;
}
p{
    font-family:"Ink Free","MV Boli",sans-serif;
    font-style: italic;
    font-weight: bold;
    font-size: 18px;
    text-decoration:none;
    color: 🟩#00ff00;
    background-color: □#111111;

}
h1{
    font-family: 'Estonia';
    font-size: 50px;
    color: 🟩#00aa00;
}
```

Text-decoration: line/wave;



Font Demo

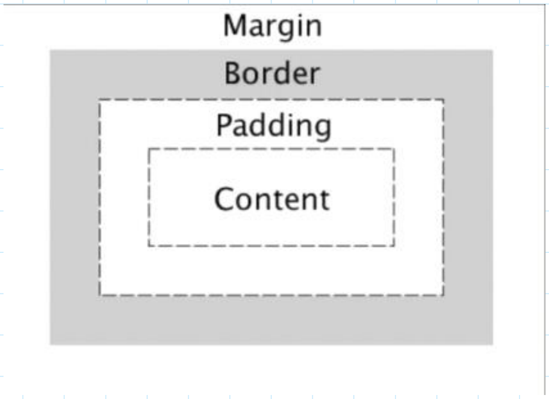
Lorem ipsum dolor, sit amet consectetur adipisicing elit.
placeat corrupti!



Padding ⇒ Inside the border

Margin ⇒ Outside the border

Box Model



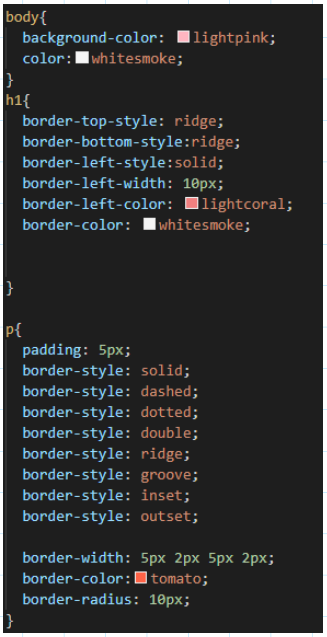
Justify ⇒ Takes whole space

☆ Text-Transform : Captalize

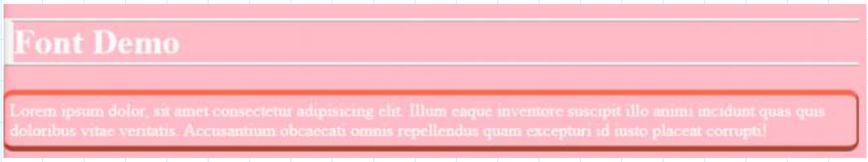
No wrap ⇒ single line

↖ text properties

Borders



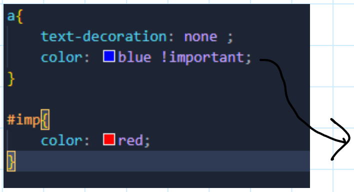
```
body{
   background-color: ■lightpink;
   color:■whitesmoke;
}
h1{
   border-top-style: ridge;
   border-bottom-style:ridge;
   border-left-style:solid;
   border-left-width: 10px;
   border-left-color: ■lightcoral;
   border-color: ■whitesmoke;


}

p{
   padding: 5px;
   border-style: solid;
   border-style: dashed;
   border-style: dotted;
   border-style: double;
   border-style: ridge;
   border-style: groove;
   border-style: inset;
   border-style: outset;

   border-width: 5px 2px 5px 2px;
   border-color:■tomato;
   border-radius: 10px;
}
```



Font Demo

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Illum eaque inventore suscipit illo animi incidunt quas quis doloribus vitae veritatis. Accusantium obcaecati omnis repellendus quam excepturi id iusto placeat corrupti!

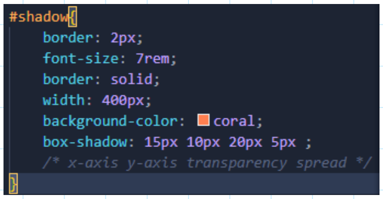
!! Important in CSS



```
a{
    text-decoration: none ;
    color: ■blue !important;
}

#imp{
    color: ■red;
}
```

Id have more priority but !important have more priority than id

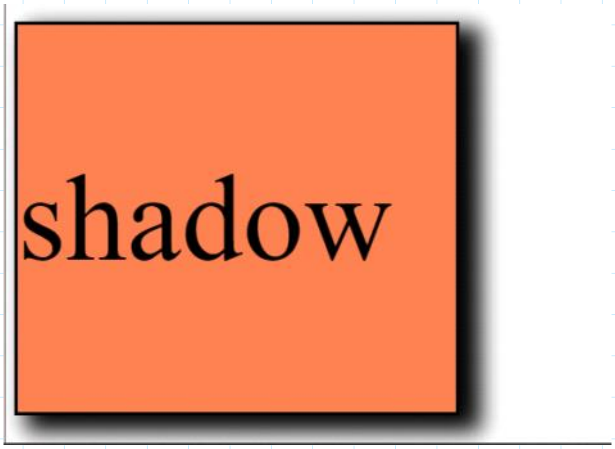
Chandra_Bose
google



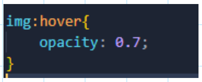
```css
#shadow{
    border: 2px;
    font-size: 7rem;
    border: solid;
    width: 400px;
    background-color: 🟧coral;
    box-shadow: 15px 10px 20px 5px ;
    /* x-axis y-axis transparency spread */
}
```

Box Shadow

X-axis y-axis transparency spread



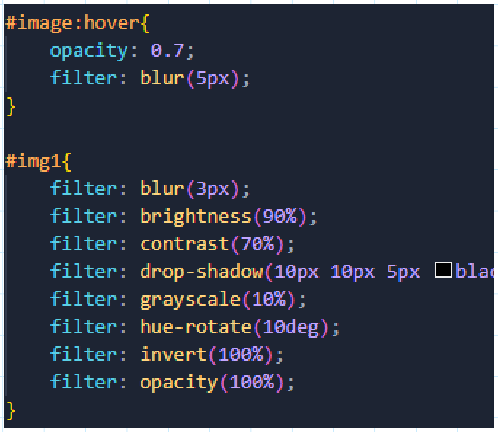
Opacity



```css
img:hover{
    opacity: 0.7;
}
```

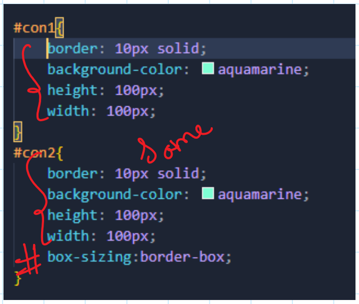
on hover img looses its opacity

Filters



```css
#image:hover{
    opacity: 0.7;
    filter: blur(5px);
}

#img1{
    filter: blur(3px);
    filter: brightness(90%);
    filter: contrast(70%);
    filter: drop-shadow(10px 10px 5px □blac
    filter: grayscale(10%);
    filter: hue-rotate(10deg);
    filter: invert(100%);
    filter: opacity(100%);
}
```

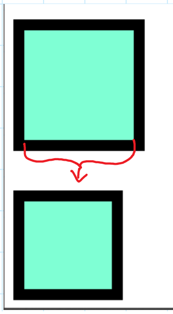
Box Sizing



```css
#con1{
    border: 10px solid;
    background-color: 🟩aquamarine;
    height: 100px;
    width: 100px;
}
#con2{
    border: 10px solid;
    background-color: 🟩aquamarine;
    height: 100px;
    width: 100px;
    box-sizing:border-box;
}
```

Some

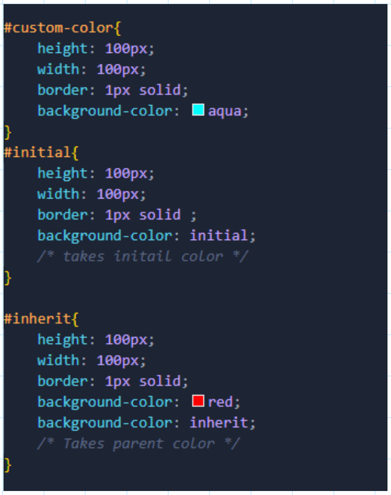
#



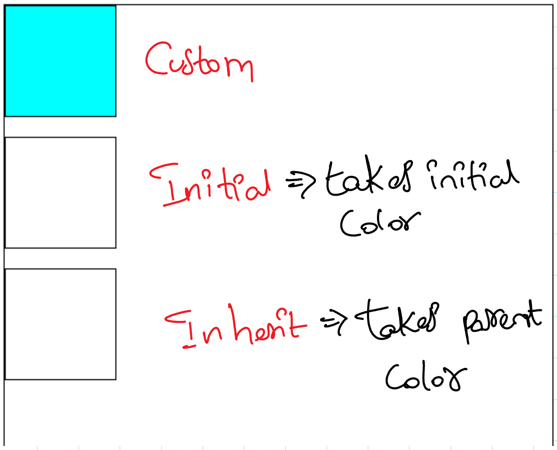
Sizes the box

Everything fits inside it

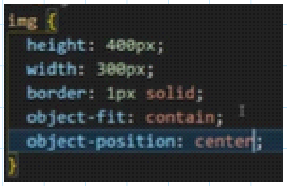
Inherit / Initial



```
#custom-color{
    height: 100px;
    width: 100px;
    border: 1px solid;
    background-color: 🟦aqua;
}
#initial{
    height: 100px;
    width: 100px;
    border: 1px solid ;
    background-color: initial;
    /* takes initail color */
}

#inherit{
    height: 100px;
    width: 100px;
    border: 1px solid;
    background-color: 🟥red;
    background-color: inherit;
    /* Takes parent color */
}
```



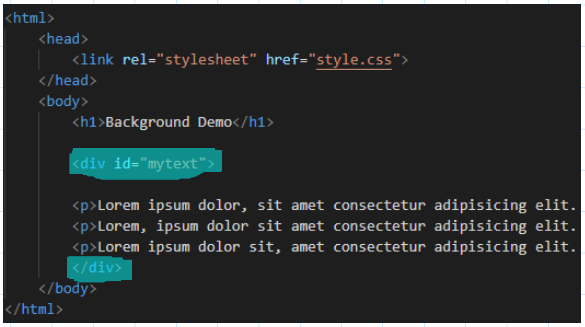
Object fit



```
img {
   height: 400px;
   width: 300px;
   border: 1px solid;
   object-fit: contain;
   object-position: center;
}
```

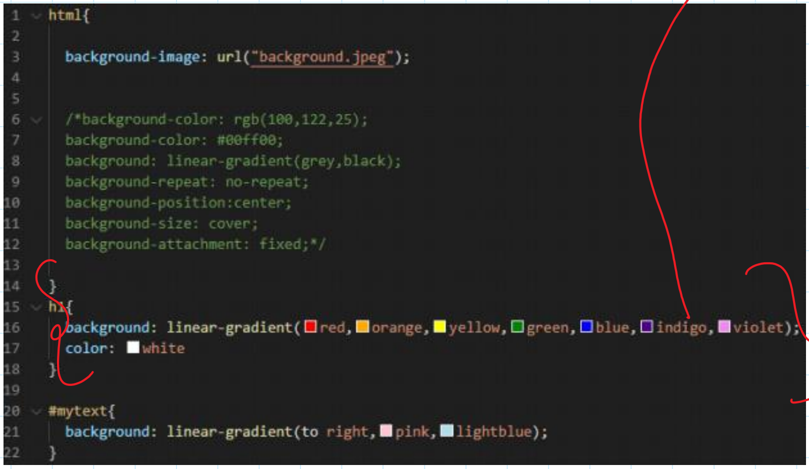
How an object/Img/video gonna fit.

Backgrounds



```
<html>
    <head>
        <link rel="stylesheet" href="style.css">
    </head>
    <body>
        <h1>Background Demo</h1>

        <div id="mytext">

        <p>Lorem ipsum dolor, sit amet consectetur adipisicing elit.
        <p>Lorem, ipsum dolor sit amet consectetur adipisicing elit.
        <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit.
        </div>
    </body>
</html>
```

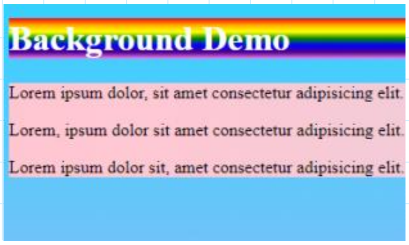
Gradient - progression of one color to another color/colors



```
html{

  background-image: url("background.jpeg");


  /*background-color: rgb(100,122,25);
  background-color: #00ff00;
  background: linear-gradient(grey,black);
  background-repeat: no-repeat;
  background-position:center;
  background-size: cover;
  background-attachment: fixed;*/

}
h1{
  background: linear-gradient(🟥red,🟧orange,🟨yellow,🟩green,🟦blue,🟪indigo,🟪violet);
  color: ⬜white
}

#mytext{
  background: linear-gradient(to right,🟪pink,🟦lightblue);
}
```

#33ccff

#ff99cc

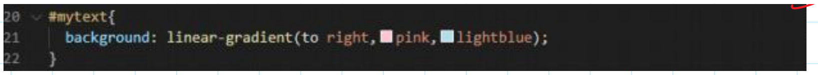


Background Demo

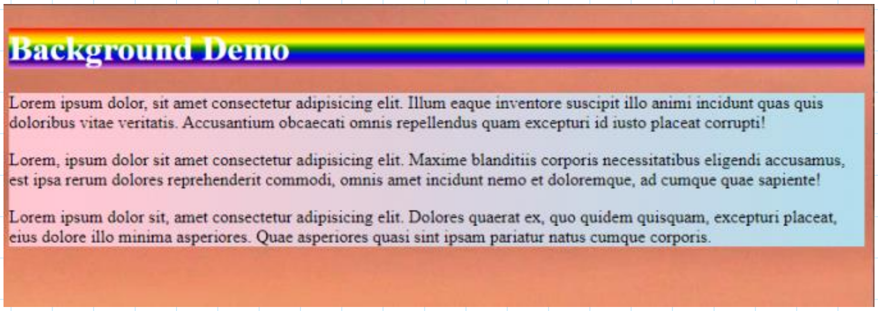
Lorem ipsum dolor, sit amet consectetur adipisicing elit.

Lorem, ipsum dolor sit amet consectetur adipisicing elit.

Lorem ipsum dolor sit, amet consectetur adipisicing elit.



```
#mytext{
    background: linear-gradient(to right, pink, lightblue);
}
```

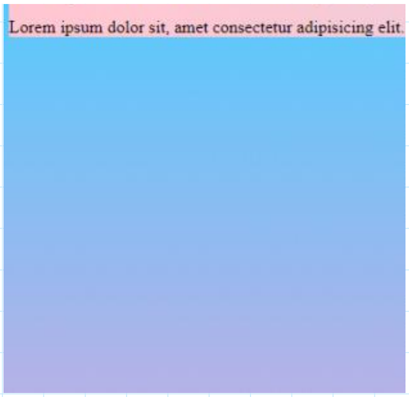


Background Demo

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Illum eaque inventore suscipit illo animi incidunt quas quis doloribus vitae veritatis. Accusantium obcaecati omnis repellendus quam excepturi id iusto placeat corrupti!

Lorem, ipsum dolor sit amet consectetur adipisicing elit. Maxime blanditiis corporis necessitatibus eligendi accusamus, est ipsa rerum dolores reprehenderit commodi, omnis amet incidunt nemo et doloremque, ad cumque quae sapiente!

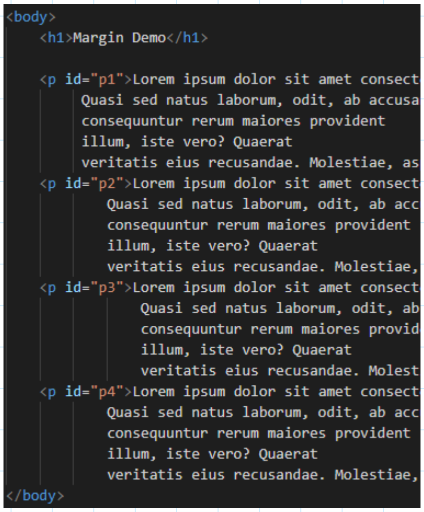
Lorem ipsum dolor sit, amet consectetur adipisicing elit. Dolores quaerat ex, quo quidem quisquam, excepturi placeat, eius dolore illo minima asperiores. Quae asperiores quasi sint ipsam pariatur natus cumque corporis.



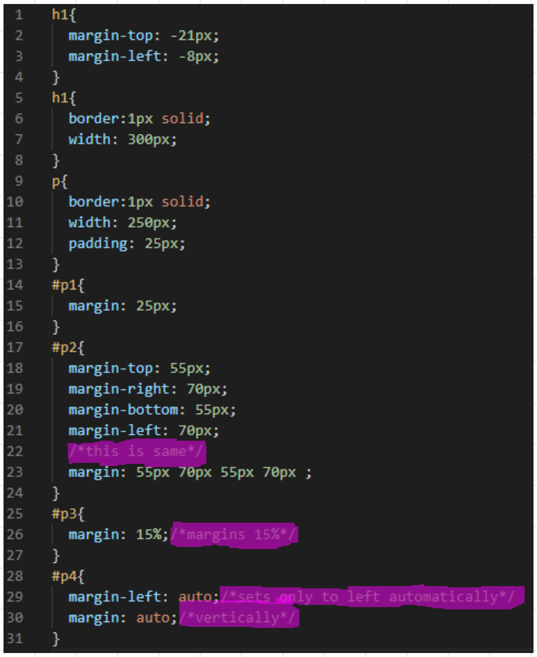
Lorem ipsum dolor sit, amet consectetur adipisicing elit.

Margins

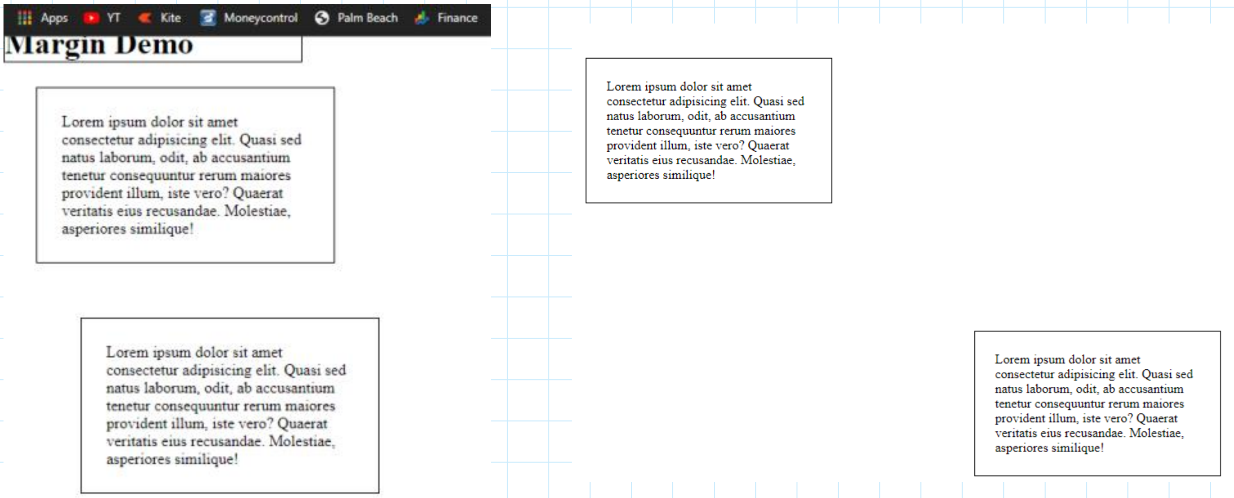
The part of a page or sheet outside the main body



```
<body>
    <h1>Margin Demo</h1>

    <p id="p1">Lorem ipsum dolor sit amet consect
         Quasi sed natus laborum, odit, ab accusa
         consequuntur rerum maiores provident
         illum, iste vero? Quaerat
         veritatis eius recusandae. Molestiae, as
    <p id="p2">Lorem ipsum dolor sit amet consect
            Quasi sed natus laborum, odit, ab acc
            consequuntur rerum maiores provident
            illum, iste vero? Quaerat
            veritatis eius recusandae. Molestiae,
    <p id="p3">Lorem ipsum dolor sit amet consect
                Quasi sed natus laborum, odit, ab
                consequuntur rerum maiores provid
                illum, iste vero? Quaerat
                veritatis eius recusandae. Molest
    <p id="p4">Lorem ipsum dolor sit amet consect
            Quasi sed natus laborum, odit, ab acc
            consequuntur rerum maiores provident
            illum, iste vero? Quaerat
            veritatis eius recusandae. Molestiae,
</body>
```



```
h1{
  margin-top: -21px;
  margin-left: -8px;
}
h1{
  border:1px solid;
  width: 300px;
}
p{
  border:1px solid;
  width: 250px;
  padding: 25px;
}
#p1{
  margin: 25px;
}
#p2{
  margin-top: 55px;
  margin-right: 70px;
  margin-bottom: 55px;
  margin-left: 70px;
  /*this is same*/
  margin: 55px 70px 55px 70px ;
}
#p3{
  margin: 15%;/*margins 15%*/
}
#p4{
  margin-left: auto;/*sets only to left automatically*/
  margin: auto;/*vertically*/
}
```



Margin Demo

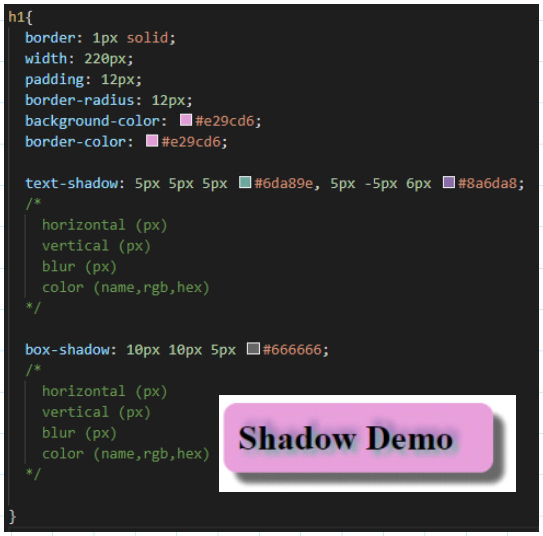
Lorem ipsum dolor sit amet consectetur adipisicing elit. Quasi sed natus laborum, odit, ab accusantium tenetur consequuntur rerum maiores provident illum, iste vero? Quaerat veritatis eius recusandae. Molestiae, asperiores similique!

Lorem ipsum dolor sit amet consectetur adipisicing elit. Quasi sed natus laborum, odit, ab accusantium tenetur consequuntur rerum maiores provident illum, iste vero? Quaerat veritatis eius recusandae. Molestiae, asperiores similique!

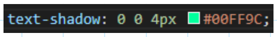
Lorem ipsum dolor sit amet consectetur adipisicing elit. Quasi sed natus laborum, odit, ab accusantium tenetur consequuntur rerum maiores provident illum, iste vero? Quaerat veritatis eius recusandae. Molestiae, asperiores similique!

Lorem ipsum dolor sit amet consectetur adipisicing elit. Quasi sed natus laborum, odit, ab accusantium tenetur consequuntur rerum maiores provident illum, iste vero? Quaerat veritatis eius recusandae. Molestiae, asperiores similique!

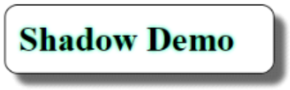
Shadows



```
h1{
  border: 1px solid;
  width: 220px;
  padding: 12px;
  border-radius: 12px;
  background-color: #e29cd6;
  border-color: #e29cd6;

  text-shadow: 5px 5px 5px #6da89e, 5px -5px 6px #8a6da8;
  /*
    horizontal (px)
    vertical (px)
    blur (px)
    color (name,rgb,hex)
  */

  box-shadow: 10px 10px 5px #666666;
  /*
    horizontal (px)
    vertical (px)
    blur (px)
    color (name,rgb,hex)
  */
}
```



```
text-shadow: 0 0 4px #00FF9C;
```

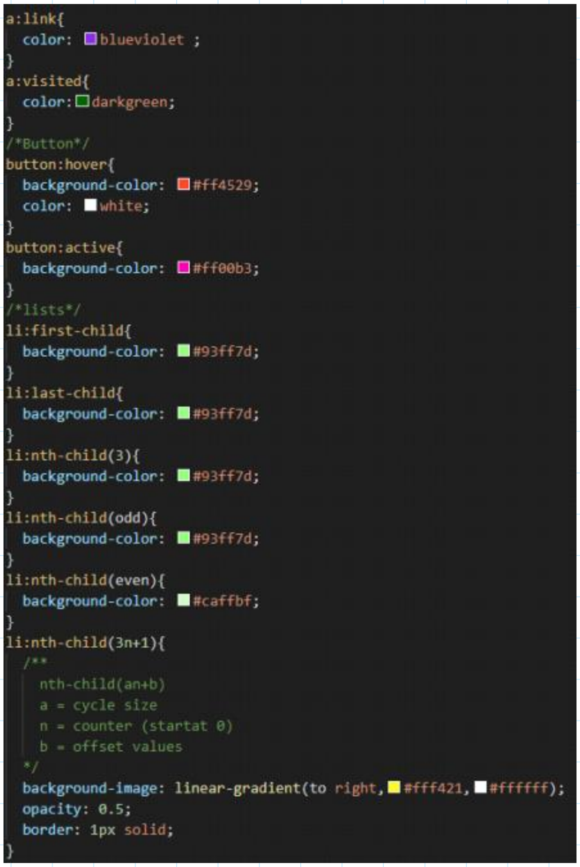


Text shadow - adds shadow to texts

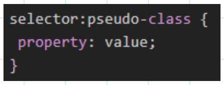
Box shadow - adds shadows to html elements

pseudo classes

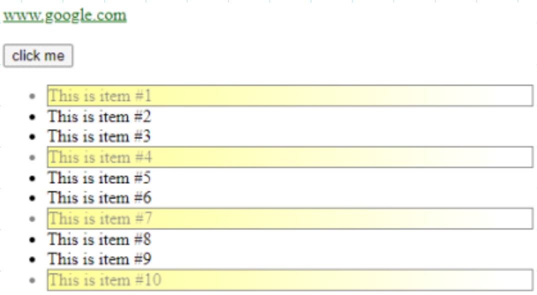
A CSS pseudo-class is a keyword added to selectors that specifies a special state of the element to be selected. For example :hover will apply a style when the user hovers over the element specified by the selector.



```
a:link{
  color: blueviolet ;
}
a:visited{
  color: darkgreen;
}
/*Button*/
button:hover{
  background-color: #ff4529;
  color: white;
}
button:active{
  background-color: #ff00b3;
}
/*lists*/
li:first-child{
  background-color: #93ff7d;
}
li:last-child{
  background-color: #93ff7d;
}
li:nth-child(3){
  background-color: #93ff7d;
}
li:nth-child(odd){
  background-color: #93ff7d;
}
li:nth-child(even){
  background-color: #caffbf;
}
li:nth-child(3n+1){
  /**
    nth-child(an+b)
    a = cycle size
    n = counter (startat 0)
    b = offset values
  */
  background-image: linear-gradient(to right, #fff421, #ffffff);
  opacity: 0.5;
  border: 1px solid;
}
```



```
selector:pseudo-class {
  property: value;
}
```



- This is item #1
- This is item #2
- This is item #3
- This is item #4
- This is item #5
- This is item #6
- This is item #7
- This is item #8
- This is item #9
- This is item #10

All pseudo classes

https://www.w3schools.com/css/css_pseudo_elements.asp

Selector : Pseudo class { . . . }

Selector :: Pseudo element{ . . . }

Display

Block level element

- New line
- Full width(100% screen)

Inline element

- Dose not start in new line
- Doesn't take full width

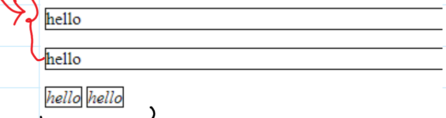
Inline-Block

- Dose not start in new line
- Doesn't take full width

- Full width(100% screen)
- Can apply height and width

- Doesn't take full width
- Cant specify height and width

- Doesn't take full width
- Can apply height and width

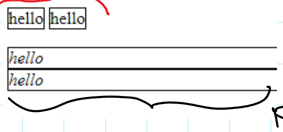


hello

hello

hello *hello*

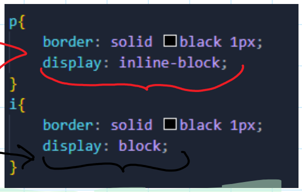
block changed to Inline block



hello hello

hello

hello



```
p{
    border: solid □black 1px;
    display: inline-block;
}
i{
    border: solid □black 1px;
    display: block;
}
```

Inline Changed to block

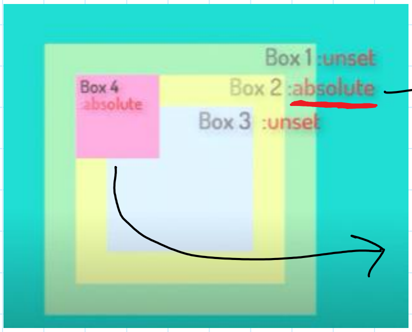
Positioning

- ◇ Static(Default)
- ◇ Relative
- ◇ Absolute
- ◇ Fixed

- Top
- Bottom
- Left
- Right

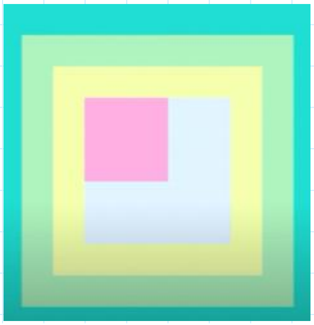
Absolute

Position itself to parent



Box 2 became Parent by positioning itself to absolute

Box 4 positioned itself to its Parent

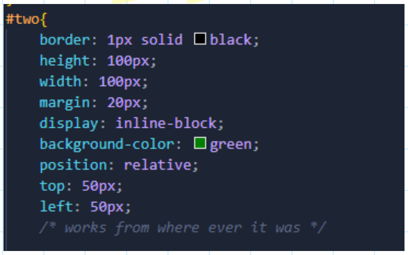


If Box 3 became absolute (Parent)

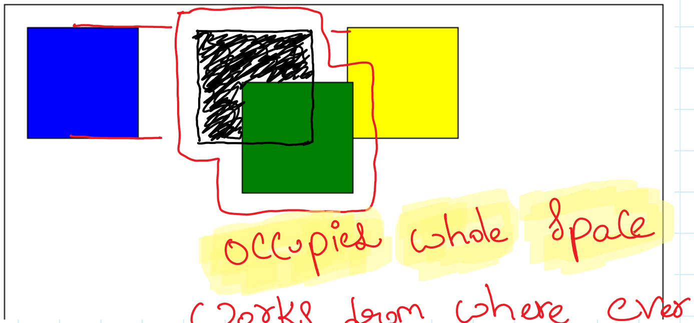
then

Box 4 position itself to Box 3

Relative



```
#two{
    border: 1px solid □black;
    height: 100px;
    width: 100px;
    margin: 20px;
    display: inline-block;
    background-color: 🟩green;
    position: relative;
    top: 50px;
    left: 50px;
    /* works from where ever it was */
```



occupies whole space

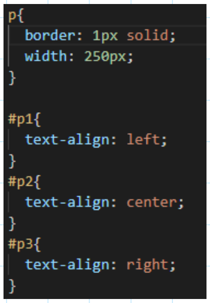
works from where ever it was

fixed

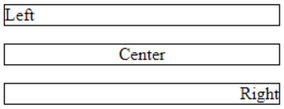
fixes itself to its position

sticky

sticky itself while scrolling



```
p{
   border: 1px solid;
   width: 250px;
}

#p1{
   text-align: left;
}
#p2{
   text-align: center;
}
#p3{
   text-align: right;
}
```

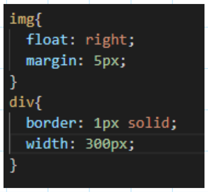


Left

Center

Right

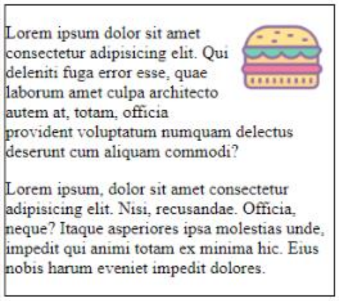
Text align



```
img{
   float: right;
   margin: 5px;
}
div{
   border: 1px solid;
   width: 300px;
}
```

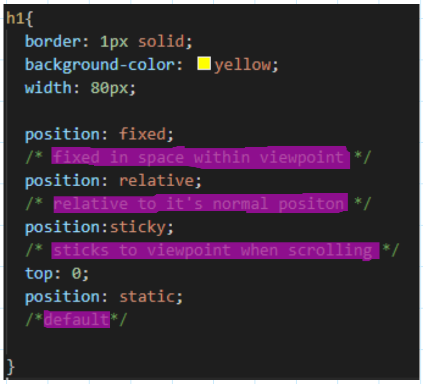
Float - sets elements can float beside and element and on which side

The float property is used for positioning and formatting content



Lorem ipsum dolor sit amet consectetur adipisicing elit. Qui deleniti fuga error esse, quae laborum amet culpa architecto autem at, totam, officia provident voluptatum numquam delectus deserunt cum aliquam commodi?

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Nisi, recusandae. Officia, neque? Itaque asperiores ipsa molestias unde, impedit qui animi totam ex minima hic. Eius nobis harum eveniet impedit dolores.

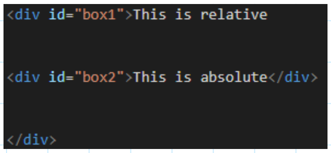


```
h1{
   border: 1px solid;
   background-color: 🟨yellow;
   width: 80px;

   position: fixed;
   /* fixed in space within viewpoint */
   position: relative;
   /* relative to it's normal positon */
   position:sticky;
   /* sticks to viewpoint when scrolling */
   top: 0;
   position: static;
   /*default*/

}
```

fixed

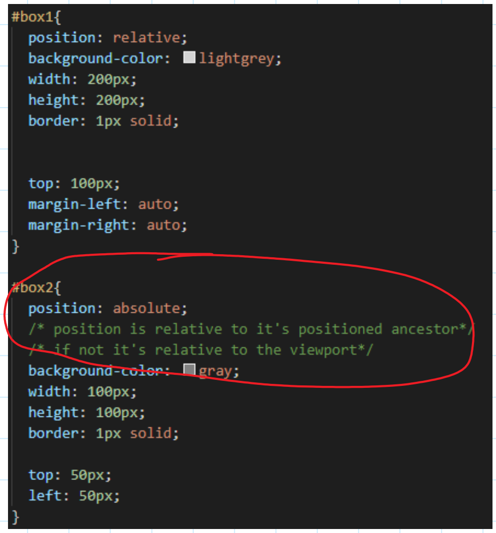
relative

sticky

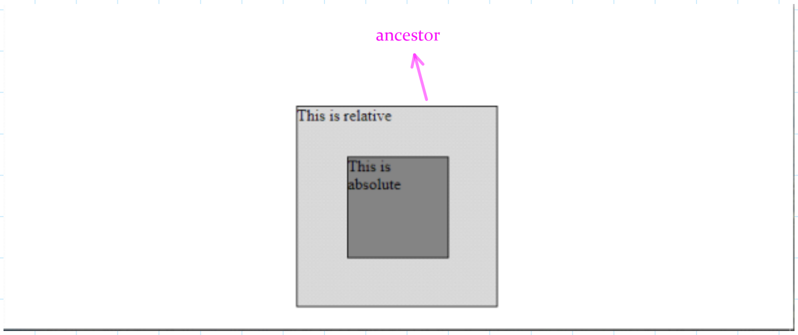


```
<div id="box1">This is relative


<div id="box2">This is absolute</div>


</div>
```

An element with position: absolute; is positioned relative to the nearest positioned ancestor (instead of positioned relative to the viewport, like fixed).



```
#box1{
  position: relative;
  background-color: ■lightgrey;
  width: 200px;
  height: 200px;
  border: 1px solid;


  top: 100px;
  margin-left: auto;
  margin-right: auto;
}

#box2{
  position: absolute;
  /* position is relative to it's positioned ancestor*/
  /* if not it's relative to the viewport*/
  background-color: ■gray;
  width: 100px;
  height: 100px;
  border: 1px solid;

  top: 50px;
  left: 50px;
}
```

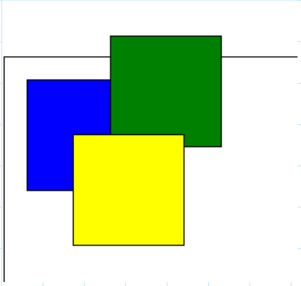


Relative positioned itself to its positioned ancestor

Position itself to Parent and Parent must be in

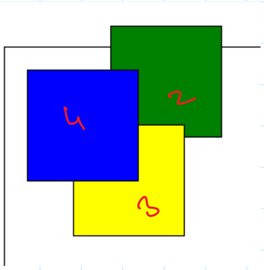
Positioned Absolute

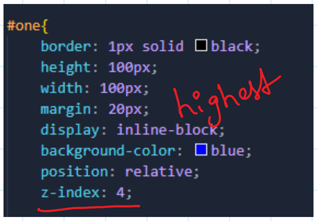
Z-index



Without Z index

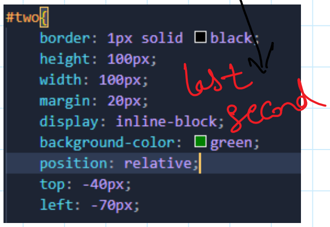
It follows Hirearchy





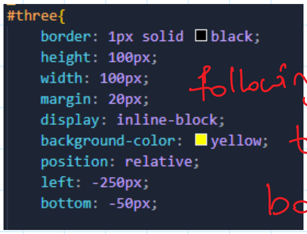
```
#one{
    border: 1px solid ■black;
    height: 100px;
    width: 100px;
    margin: 20px;
    display: inline-block;
    background-color: ■blue;
    position: relative;
    z-index: 4;
```

highest



```
#two{
    border: 1px solid ■black;
    height: 100px;
    width: 100px;
    margin: 20px;
    display: inline-block;
    background-color: ■green;
    position: relative;
    top: -40px;
    left: -70px;
```

last second



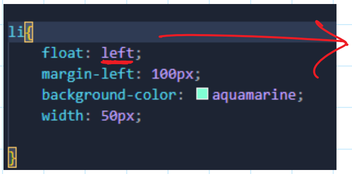
```
#three{
    border: 1px solid ■black;
    height: 100px;
    width: 100px;
    margin: 20px;
    display: inline-block;
    background-color: ■yellow;
    position: relative;
    left: -250px;
    bottom: -50px;
```

following from top to bottom

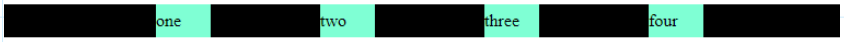
with Z axis & we can control layers

Float

Float

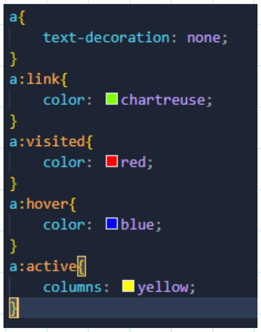


```
li{
    float: left;
    margin-left: 100px;
    background-color: aquamarine;
    width: 50px;
}
```



Converts Same like Block level Elements
to Inline elements

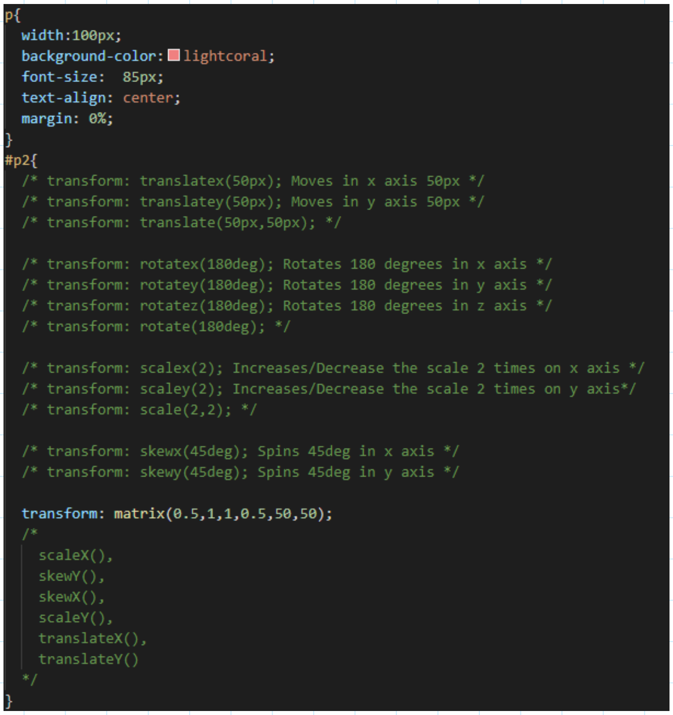
But we Can Set Side



```
a{
    text-decoration: none;
}
a:link{
    color: chartreuse;
}
a:visited{
    color: red;
}
a:hover{
    color: blue;
}
a:active{
    columns: yellow;
}
```

Anchor tag Properties

Transformations



```
p{
  width:100px;
  background-color: lightcoral;
  font-size:  85px;
  text-align: center;
  margin: 0%;
}
#p2{
  /* transform: translatex(50px); Moves in x axis 50px */
  /* transform: translatey(50px); Moves in y axis 50px */
  /* transform: translate(50px,50px); */

  /* transform: rotatex(180deg); Rotates 180 degrees in x axis */
  /* transform: rotatey(180deg); Rotates 180 degrees in y axis */
  /* transform: rotatez(180deg); Rotates 180 degrees in z axis */
  /* transform: rotate(180deg); */

  /* transform: scalex(2); Increases/Decrease the scale 2 times on x axis */
  /* transform: scaley(2); Increases/Decrease the scale 2 times on y axis*/
  /* transform: scale(2,2); */

  /* transform: skewx(45deg); Spins 45deg in x axis */
  /* transform: skewy(45deg); Spins 45deg in y axis */

  transform: matrix(0.5,1,1,0.5,50,50);
  /*
    scaleX(),
    skewY(),
    skewX(),
    scaleY(),
    translateX(),
    translateY()
  */
}
```

Translate - Moves on X or Y axis

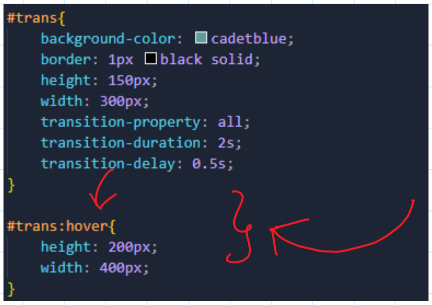
Rotate - Rotates on X, Y or Z axis

Scale - Increases/Decreases the scale on X and Y axis

Skew - Spins on X and Y axis

Matrix(scaleX, skewY ,skewX, scaleY, translateX, translateY)

Transitions



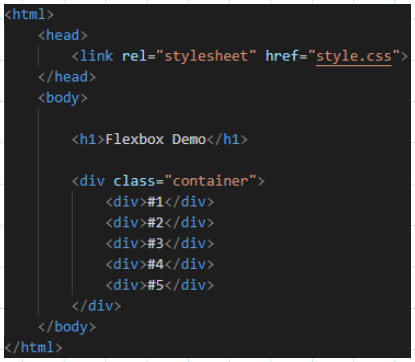
```
#trans{
    background-color: cadetblue;
    border: 1px black solid;
    height: 150px;
    width: 300px;
    transition-property: all;
    transition-duration: 2s;
    transition-delay: 0.5s;
}

#trans:hover{
    height: 200px;
    width: 400px;
}
```

For Smooth transformations

Before

on hover with
Smooth transition

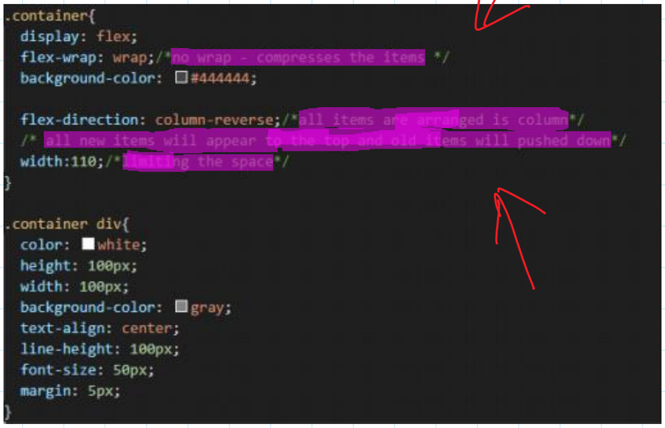
Flex Box



```
<html>
    <head>
        <link rel="stylesheet" href="style.css">
    </head>
    <body>

        <h1>Flexbox Demo</h1>

        <div class="container">
            <div>#1</div>
            <div>#2</div>
            <div>#3</div>
            <div>#4</div>
            <div>#5</div>
        </div>
    </body>
</html>
```

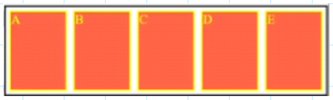
flex ⇒ Elements can be flexible

Flex direction ⇒ Arrange all items in specified order



```
.container{
  display: flex;
  flex-wrap: wrap;/*no wrap - compresses the items */
  background-color: #444444;

  flex-direction: column-reverse;/*all items are arranged is column*/
  /* all new items wiil appear to the top and old items will pushed down*/
  width:110;/*limiting the space*/
}

.container div{
  color: white;
  height: 100px;
  width: 100px;
  background-color: gray;
  text-align: center;
  line-height: 100px;
  font-size: 50px;
  margin: 5px;
}
```

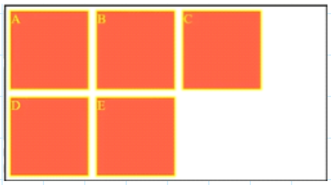
no wrap ⇒ Compresses the items/ squesed

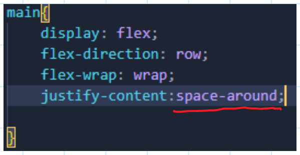


wrap ⇒ New elements will be pushed down

Justify content

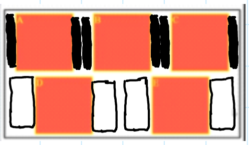
[Sets the items & Spaces]



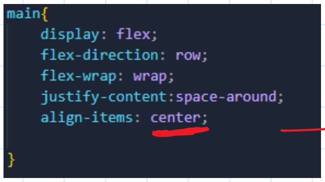


```
main{
    display: flex;
    flex-direction: row;
    flex-wrap: wrap;
    justify-content:space-around;
}
```

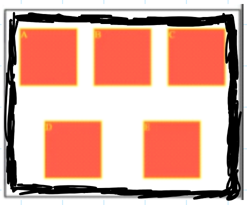
Sets the items & Spaces



Align

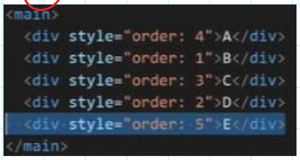


```
main{
    display: flex;
    flex-direction: row;
    flex-wrap: wrap;
    justify-content:space-around;
    align-items: center;
}
```



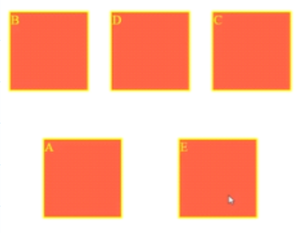
Align all items inside it

Flex Order

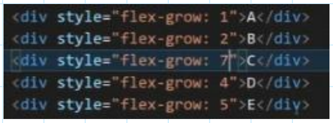


```
<main>
  <div style="order: 4">A</div>
  <div style="order: 1">B</div>
  <div style="order: 3">C</div>
  <div style="order: 2">D</div>
  <div style="order: 5">E</div>
</main>
```

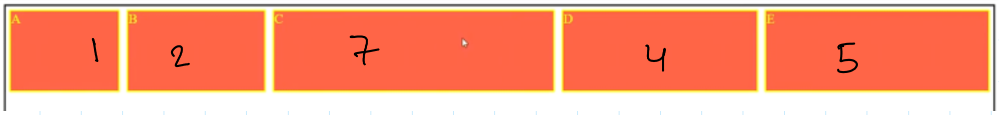
We Can Specify the order which element needs to be where



Flex-Grow



```
<div style="flex-grow: 1">A</div>
<div style="flex-grow: 2">B</div>
<div style="flex-grow: 7">C</div>
<div style="flex-grow: 4">D</div>
<div style="flex-grow: 5">E</div>
```



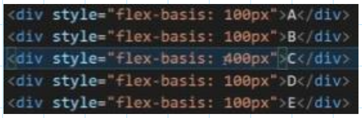
Its a number game

Increases as Compared to others

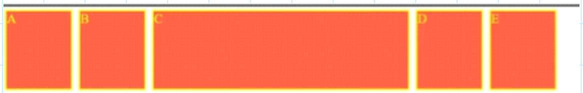
Increases as Compared to others

size

Flex-basis



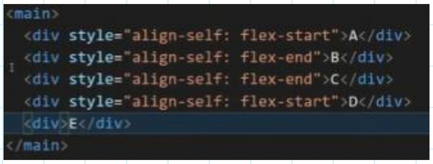
```
<div style="flex-basis: 100px">A</div>
<div style="flex-basis: 100px">B</div>
<div style="flex-basis: 400px">C</div>
<div style="flex-basis: 100px">D</div>
<div style="flex-basis: 100px">E</div>
```



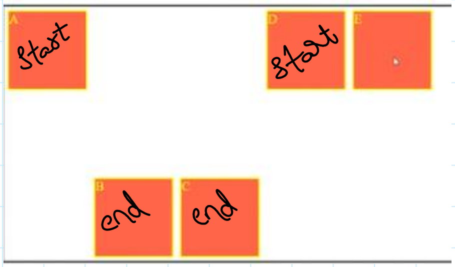
gives the width directly in HTML

Align-self ☆

Can align individual elements Seperately

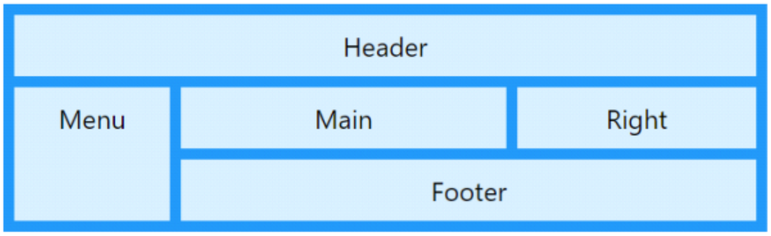


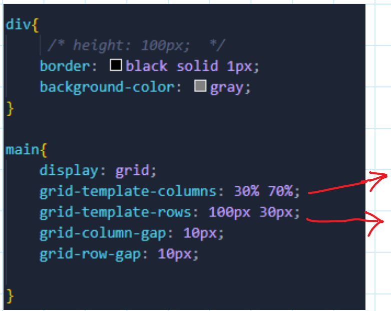
```
<main>
  <div style="align-self: flex-start">A</div>
  <div style="align-self: flex-end">B</div>
  <div style="align-self: flex-end">C</div>
  <div style="align-self: flex-start">D</div>
  <div>E</div>
</main>
```



Grid

Offers a grid based layout system with rows and Columns

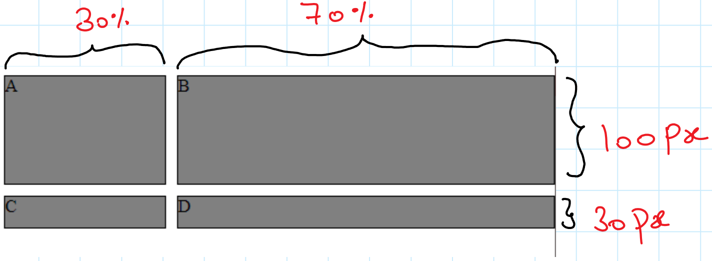




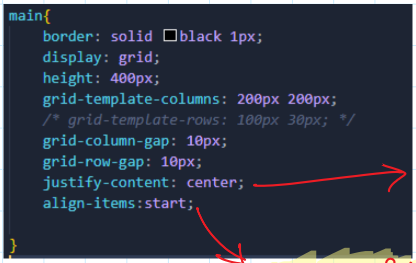
```
div{
    /* height: 100px;  */
    border: black solid 1px;
    background-color: gray;
}

main{
    display: grid;
    grid-template-columns: 30% 70%;
    grid-template-rows: 100px 30px;
    grid-column-gap: 10px;
    grid-row-gap: 10px;

}
```

Columns are 30% 70%

rows sizes are 100px 30px



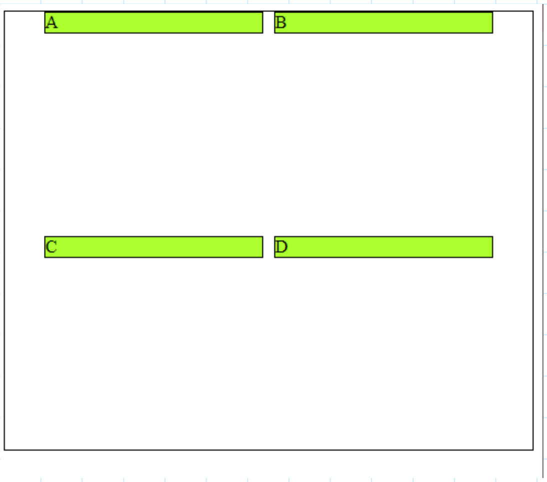
Align / Justify content

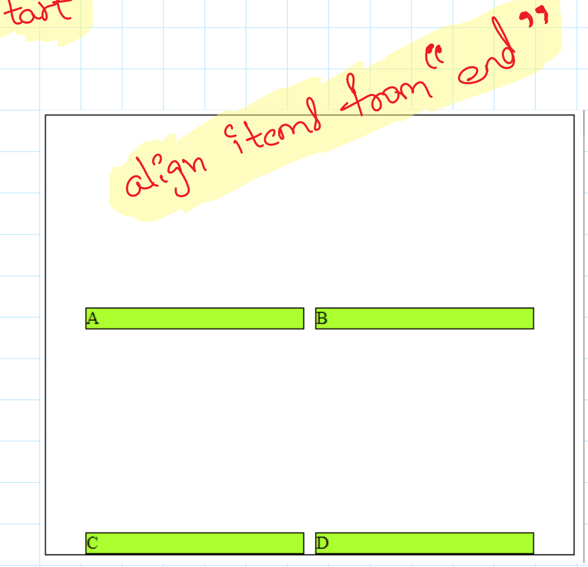


```
main{
    border: solid black 1px;
    display: grid;
    height: 400px;
    grid-template-columns: 200px 200px;
    /* grid-template-rows: 100px 30px; */
    grid-column-gap: 10px;
    grid-row-gap: 10px;
    justify-content: center;
    align-items:start;

}
```

Clips the Content in Center

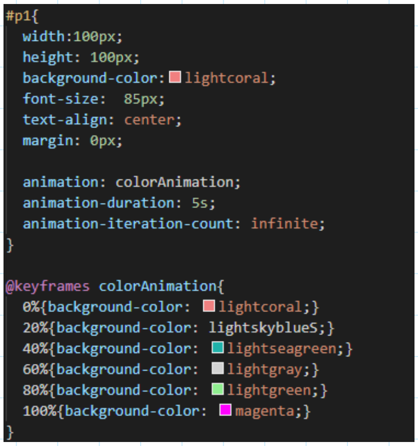
align items from "start"





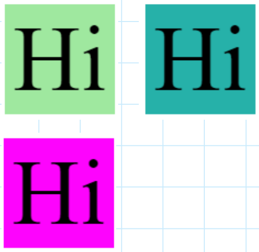
align items from "end"

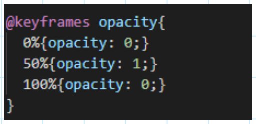
Animations



```
#p1{
  width:100px;
  height: 100px;
  background-color:🟥lightcoral;
  font-size:  85px;
  text-align: center;
  margin: 0px;

  animation: colorAnimation;
  animation-duration: 5s;
  animation-iteration-count: infinite;
}

@keyframes colorAnimation{
  0%{background-color: 🟥lightcoral;}
  20%{background-color: lightskyblueS;}
  40%{background-color: 🟦lightseagreen;}
  60%{background-color: ⬜lightgray;}
  80%{background-color: 🟩lightgreen;}
  100%{background-color: 🟪magenta;}
}
```

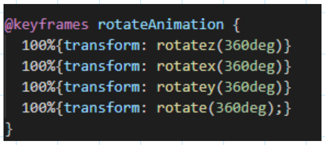
Color animations



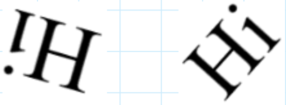


```
@keyframes opacity{
  0%{opacity: 0;}
  50%{opacity: 1;}
  100%{opacity: 0;}
}
```

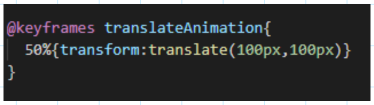
Rotate animation



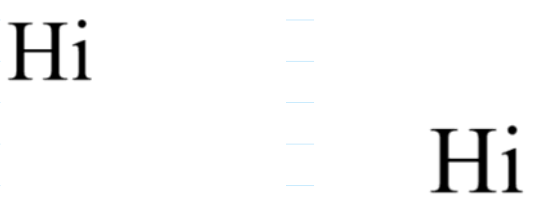
```
@keyframes rotateAnimation {
  100%{transform: rotatez(360deg)}
  100%{transform: rotatex(360deg)}
  100%{transform: rotatey(360deg)}
  100%{transform: rotate(360deg);}
}
```



Translate animation

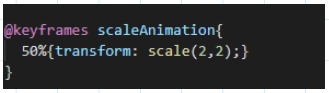


```
@keyframes translateAnimation{
  50%{transform:translate(100px,100px)}
}
```

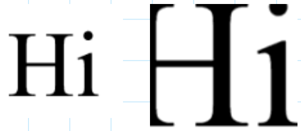


Moves diagonally for 2 values

Scale Animation

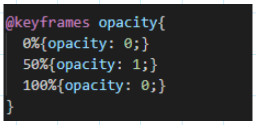


```
@keyframes scaleAnimation{
  50%{transform: scale(2,2);}
}
```



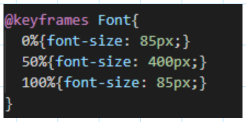
Scales 50% and returns for smooth animation

Opacity Animation

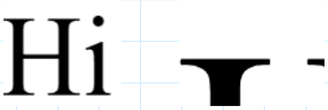


```
@keyframes opacity{
  0%{opacity: 0;}
  50%{opacity: 1;}
  100%{opacity: 0;}
}
```

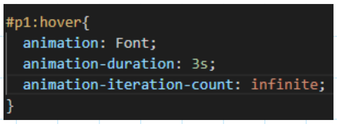
Font Animation



```
@keyframes Font{
  0%{font-size: 85px;}
  50%{font-size: 400px;}
  100%{font-size: 85px;}
}
```

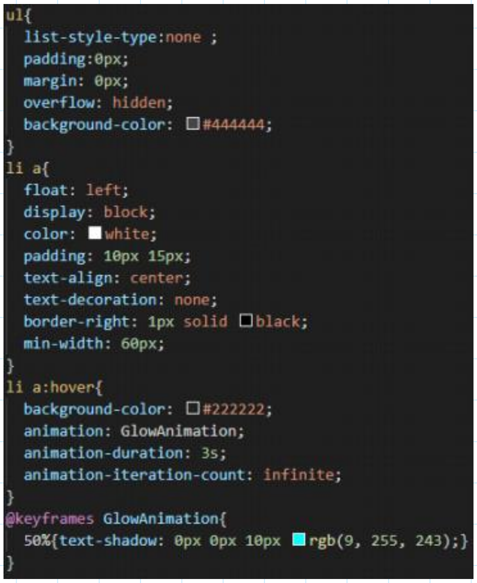


Only animates when we hover on to the font or object

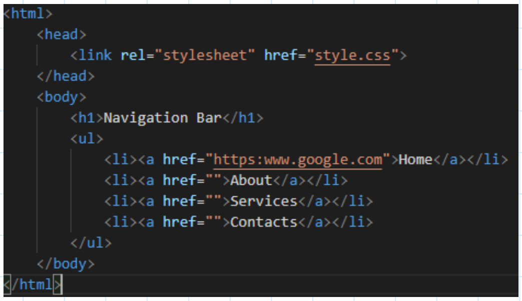


```
#p1:hover{
  animation: Font;
  animation-duration: 3s;
  animation-iteration-count: infinite;
}
```

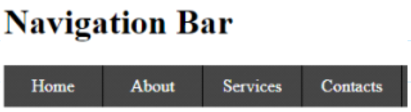
Navigation Bar

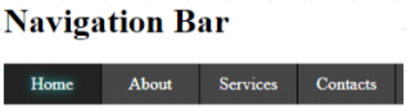


```
ul{
  list-style-type:none ;
  padding:0px;
  margin: 0px;
  overflow: hidden;
  background-color: □#444444;
}
li a{
  float: left;
  display: block;
  color: ■white;
  padding: 10px 15px;
  text-align: center;
  text-decoration: none;
  border-right: 1px solid □black;
  min-width: 60px;
}
li a:hover{
  background-color: □#222222;
  animation: GlowAnimation;
  animation-duration: 3s;
  animation-iteration-count: infinite;
}
@keyframes GlowAnimation{
  50%{text-shadow: 0px 0px 10px ■rgb(9, 255, 243);}
}
```

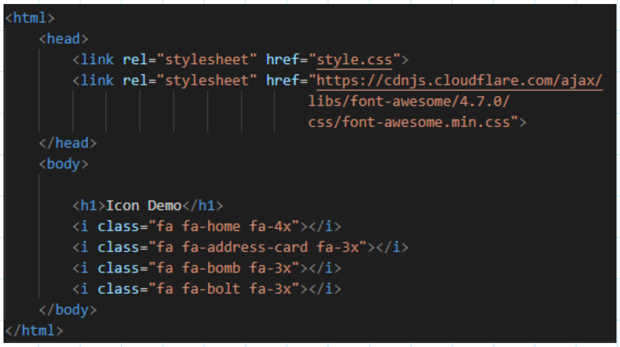


```
<html>
    <head>
        <link rel="stylesheet" href="style.css">
    </head>
    <body>
        <h1>Navigation Bar</h1>
        <ul>
            <li><a href="https:www.google.com">Home</a></li>
            <li><a href="">About</a></li>
            <li><a href="">Services</a></li>
            <li><a href="">Contacts</a></li>
        </ul>
    </body>
</html>
```

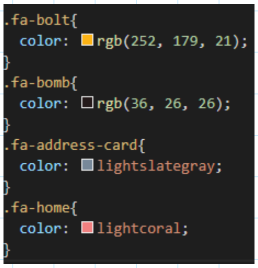




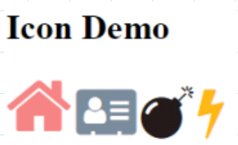
Icons



```
<html>
    <head>
        <link rel="stylesheet" href="style.css">
        <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/
                                     libs/font-awesome/4.7.0/
                                     css/font-awesome.min.css">
    </head>
    <body>

        <h1>Icon Demo</h1>
        <i class="fa fa-home fa-4x"></i>
        <i class="fa fa-address-card fa-3x"></i>
        <i class="fa fa-bomb fa-3x"></i>
        <i class="fa fa-bolt fa-3x"></i>
    </body>
</html>
```

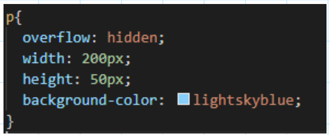


```
.fa-bolt{
  color: ■rgb(252, 179, 21);
}
.fa-bomb{
  color: □rgb(36, 26, 26);
}
.fa-address-card{
  color: ■lightslategray;
}
.fa-home{
  color: ■lightcoral;
}
```



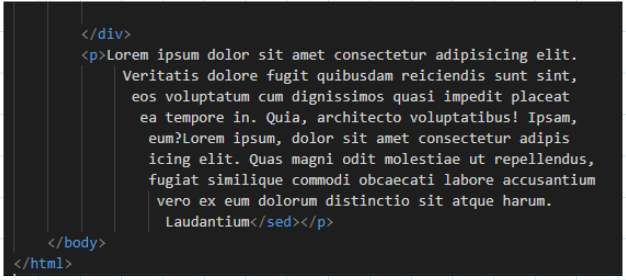
https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css

Over flow



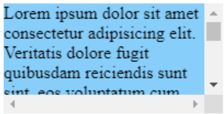
```
p{
  overflow: hidden;
  width: 200px;
  height: 50px;
  background-color: ■lightskyblue;
}
```

With the hidden value, the overflow is clipped, and the rest of the content is hidden:

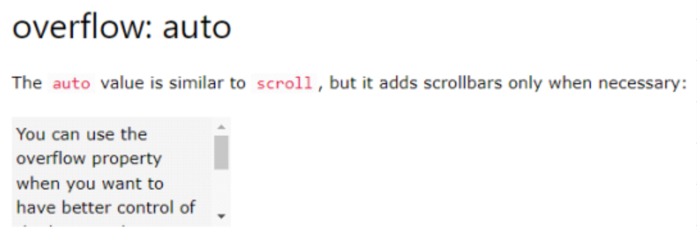


```
            </div>
            <p>Lorem ipsum dolor sit amet consectetur adipisicing elit.
                Veritatis dolore fugit quibusdam reiciendis sunt sint,
                 eos voluptatum cum dignissimos quasi impedit placeat
                  ea tempore in. Quia, architecto voluptatibus! Ipsam,
                   eum?Lorem ipsum, dolor sit amet consectetur adipis
                   icing elit. Quas magni odit molestiae ut repellendus,
                   fugiat similique commodi obcaecati labore accusantium
                    vero ex eum dolorum distinctio sit atque harum.
                     Laudantium</sed></p>
        </body>
</html>
```

Setting the value to scroll, the overflow is clipped and a scrollbar is added to scroll inside the box.



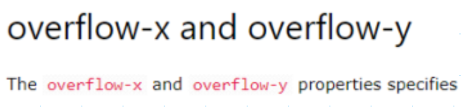
Lorem ipsum dolor sit amet consectetur adipisicing elit. Veritatis dolore fugit quibusdam reiciendis sunt sint, eos voluptatum cum



overflow: auto

The `auto` value is similar to `scroll`, but it adds scrollbars only when necessary:

You can use the overflow property when you want to have better control of



overflow-x and overflow-y

The `overflow-x` and `overflow-y` properties specifies