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CSS.

(Cascading style sheet)

Introduction:

- It describes the HTML element how it display.
- HTML: What to display

CSS: How to display.

Syntax:

```
selector ← P {  
    ↑  
    property  
    color: blue;  
}  
    ↓  
    value.
```

```
P {  
    color: blue;  
    font-size: 12px;  
}
```

How to add CSS.

- External CSS make an other file of style.
- Internal CSS write ⁱⁿ style tag in head
- Inline CSS in every line by using attribute of style

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CSS Selectors:

- Element selector select directly to element
- ID selector select by ID
- Class selector select by class

Comments in CSS:

/* Comment's */

- It is ignored by browser
- for understanding code
- To point out.

Colors in CSS:

- Predefined color name
- RGB
- RGBA
- HEX
- HSL
- HSLA

Predefined color name:

→ Modern browsers support 140 named colors.

→ <https://htmlcolorcodes.com/color-names/>

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R G B:

- `rgb (red, green, blue)`
- color value between 0 and 255
- Black: `rgb (0, 0, 0)`
- White: `rgb (255, 255, 255)`
- Red: `rgb (255, 0, 0)`
- Green: `rgb (0, 255, 0)`
- Blue: `rgb (0, 0, 255)`

R G B A:

- `rgb (red, green, blue, alpha)`
- alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all)
- `rgba (255, 99, 71, 0.5)`

HEX:

- `# rrggbb`
- rr (red), gg (green), bb (blue)

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- hexadecimal values between 00 (e.g. ff) (same as decimal 0-255)
- Red: #000000
- Black: #000000
- White: #FFFFFF

HSL:

- hsl (hue, saturation, lightness)

→ hue is a degree on the color wheel from 0 to 360 is red; 120 is green (e.g. 240 is blue).

→ Saturation is a percentage value, 0% means a shade of gray and 100% is the full color.

→ Lightness is also a percentage, 0% is black, 50% is neither light nor dark, 100% is white

→ RED: hsl (0, 100%, 50%)

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HSLA:

It is same as the RGBA.

Backgrounds

color:

bg {

background-color: yellow;

}

1 merge:

bg {

background-image: url('1.png');

}

Repeat:

bg {

background-image: url('1.png');

background-repeat: no-repeat;

background-repeat: repeat-x;

background-repeat: repeat-y;

background

Position:

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bg {

background-position: right top;
: right bottom;
: right center;
: center center;
: 50px 100px;
u-and y-axis.

/* It calculate

. 10-10 20%;

/* It calculate with the help
of width & height of container */

Size:

{
 ba

background-size: 500px 700px;
: 50% 50%

attachment:

{

background-attachment: scroll;
: fixed;

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Size:

bg {

"It fills complete but cut" background-size: cover;

"It fills but not cut" background-size: contain;

Shorthand:

bg {

background: color image repeat attachment
position size;

Multiple background:

bg {

background-color: yellow;

background-image: url('image/1.png');

background-repeat: no-repeat;

background-size: cover;

bg {

background-color: yellow;

background-image: url('1.png'), url('2.png');

background-repeat: no-repeat;

background-position: left top, right bottom;

{ image }

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Border:

Style types of border or style.

borders {

border-style: solid;

: dotted;

: dashed;

: double;

: groove;

: outset;

: inset;

: ridge;

: none;

}

border to one or more sides.

top → Right → bottom → Left.

borders {

2nd

border-style: solid dashed & dotted

border width

borders {

border-style: solid

border-width: 5px;

5px 10px

2px 5px 10px

{

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border color.
#border {

border-color: red;

red green;

red blue green black;

Shortcut

#border {

size style color
border: 5px solid green;

styling only one side

#border {

border-top-style: solid;

width = 10px;

color = blue;

border-radius;

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border {

border: 5px solid green;

border-radius: 10px;

40%; 20%;

For circle

border-radius: 50%;

It can also applied to

The separate corners.

= 10px 20px;

left = 20px top 10px 10px;

border-top-radius = 20px;

}

Height & Width
style

div1 {

background-color: blue;

height: 500px;

width: 500px;

height: 500px;

width: 20%;

}

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Max Cg Min

#div2 {

old default

11 11 11 11

max-width: 500px;

max-height: 300px;

min-width: 400px;

min-height: 300px

; Height Cg width take percentage
of his parent. It take space
according to his parent.

Padding:-

Gap between content

Cg border.

#div1 {

border: 1px solid red;

padding-top: 50px;

padding-bottom: 20px;

padding-left: 10px;

padding-right: 30px;

also give in percentage %

}

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shortcut:

#div1 {

border: 1px solid red;

padding: 25px;

/* It take 25px from all sides */
= 25px 10px;/* First parameter is top and bottom
second is left right */

Padding = 25px 40px 39px 42px;

Margin:

/* The area between the
outside the border and
other content.The area after border where
no element comes. */

-div1 {

border: 1px solid red;

padding: 25px 50px 30px 70px;

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body {

}

border: 5px dotted black;

mary {

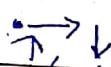
}

margin-top: 5px;

margin-bottom: 20px;

- left: 6px;

- right: 10px;



short cut.

margin: 25px 12px 4px 6px;

we can also give (-)minus values

margin

(-) work only in margin.

mary {

width: 200px;

"To move center" margin: auto;

: 20px auto;

/* Margin collapse: */

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margin {

margin-top: 80px;

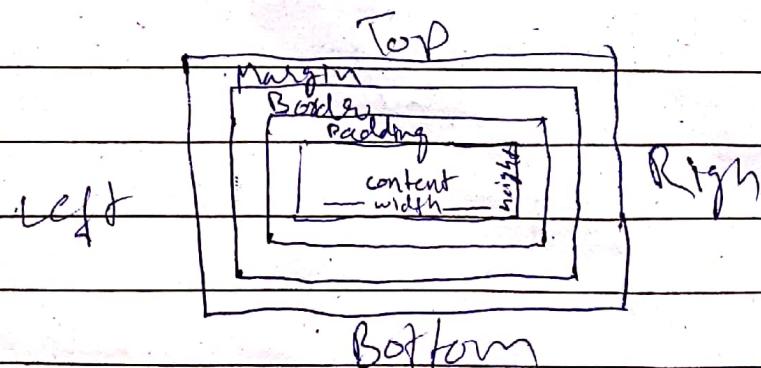
/* In this case it picks
that ~~both~~ margin which is greater.
In both */

colps {

margin-bottom: 30px;

/* It works only for
top & bottom not for
left & right */

Box Model:



When you set the width & height properties of an element with CSS, you just set the width & height of the content area. To calculate the full size of an element, you must also add padding, border & margins.

① Total element width = width + left padding + right padding + left border + Right border + left margin + Right margin.

• Total element height = height + ---

Text:

#text {

width: 50px;

border: 1px Solid black;

color: blue;

text-align: Right;

: center;

: justify;

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if
right to
left:

}

vertical alignment;

text {

width = 500px;

height: 300px;

border: 1px solid black;

}

Place an image in the

text

img {

border: 1px solid red;

vertical-align: top;

: middle;

}

Decor decoration;

text {

* as it is *

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text-decoration: underline;

: overline;

: none;

: line-through;

}

Text transformation

#text {

/* As it is */

text-transform: uppercase;

: lowercase;

: capitalize;

line-height: 30px;

/* If it is two text overlap */

text-indent: 50px;

/* Text will start after leaving 50px */

letter-spacing: 10px;

word-spacing: 10px;

wide

white-space: pre;

/* This is used to write text as
if it is */

: nowrap;

Text shadow:

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shadow {

font-size: 70px;

text-shadow: 50px 10px 5px ~~vertical~~;

vertical blur.

}

To write vertically.

text {

width: 500px;

border: 1px solid black;

writing-mode: vertical-rl;
-rl;

}

Link

Links:a {link
normal

text-decoration: none;

}

visitor

a :link {never
active

color: yellow;

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}

a: visited {

color: black;

}

a: hover {

color: blue;

}

a: active {

color: green;

}

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n1{

Font-weight: bold;

}

p{

Font-size: 30px;

Font-weight: bold;

Font-style: italic;

Font-variant: small-caps;

Use Google fonts:

Go to google fonts.

@font-face{

Font-family: ABC;

src: url('fonts/Aclonica.ttf'),

CSS Units-

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- we use length in width, height, margin, padding, font-size
- There are two types of unit in css
 - a) Absolute ^{Independent} Not dependent on other
 - b) Relative Dependent on other

Absolute

- 1) cm
- 2) mm
- 3) Inch
- 4) px ($1 \text{ inch} = 96 \text{ px}$) \rightarrow mostly used
- 5) pt ($1 \text{ inch} = 72 \text{ pt}$)
- 6) PC ($1 \text{ pc} = 12 \text{ pt}$)

Relative

- 1) Em - em is relative to the size of its parent.
- 2) Rem - rem is only relative to root (html tag) size
- 3) Vh \rightarrow 1% of view port height
- 4) Vw \rightarrow 1% of view port width
- 5) % - relative to parent

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CSS Cursor

div {

border: 1px solid red;

cursor: auto;

: all-scroll;

: cell;

: col-size;

: crosshair;

: e-size;

: grab;

: help;

: not-allowed;

: pointer;

: progress;

: wait;

: zoom-in;

: zoom-out;

}

CSS important

div {

border: 1px solid black; !important;

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}

div {

}; border: 1px solid green;

box Shadow:

div {

border: 1px solid red;

width: 50px;

background-color: yellowgreen;

margin: 10px;

padding: 20px;

box-shadow: 10px 20px grey;
yaxis. xaxis.

: 10px 20px 15px grey;
blur.

: 10px 20px 15px 3px grey;
spread.

inside shadow:

= 10px 20px 15px 3px grey; inside;

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box-shadow: 10px 20px 15px 3px grey, -10px 20px 10px
3px red;

}

CSS Opacity

Make element transparent

#color-box {

background-color = green;

height = 200px

width = 500px;

margin-bottom: 20px;

opacity: 0;

; 0.5;

}

img {

opacity: 0.3;

}

img:hover {

}

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```
# scroll-box {  
    height: 300px;  
    width: 200px;  
    background-color: #ccc;  
    margin-top: -100px;  
    opacity: 0.5;
```

CSS Filters:

```
img {  
    filter: blur(10px);  
    : brightness(50%);  
    : contrast(70%);  
    : drop-shadow(8px 6px 3px 8px red);  
    : grayscale(30%);  
    : hue-rotate(90deg);  
    : invert(100%);  
    : opacity(30%);  
    : saturation(30%);  
    : sepia(30%);
```

Image sprites:

when we make small images for one images but then that one image

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is converted into again small images to use is called image sprites.

```
#sprite {
```

```
    height: 128px;
```

```
    background-image: url('sprite.png');
```

```
    repeat - repeat: no-repeat;
```

```
    background-position: 0px -160px;
```

```
: 0px -288px;
```

```
/* It is used only as the  
background image */
```

```
}
```

CSS Gradients:

Mixing two colours smoothly called gradient.

→ Linear gradients → work as line

→ Radial gradients → work as circles

```
#div1 {
```

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height: 500px;

border: 1px solid grey;

background: -image linear-gradient(green, blue);
= linear-gradient(green, red, blue);

= (to right, green, blue, red);
= (to bottom right, red, blue);
= (120deg, red, green, blue);

*

= radial gradient(blue, red);

= circle(blue, green, red);

= circle(blue, green, red);

= circle(blue 20%, green 30%, red 50%);

}

CSS Overflow

overflow {

background-color: white smoke;

border: 2px solid grey;

width: 500px;

height: 300px;

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overflow: visible;

: hidden;

: scroll;

overflow-x: hidden;

overflow-y: scroll;

overflow: auto

resize: both;

CSS Resize

text area {

resize: none;

}

We can use it only
in block element.

In this overflow should
be scroll, hidden & auto.

CSS List

1) Use unordered list.

2) Use ordered list.

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ul {

list-style-type: none;

: disc;

: circle;

: square;

list-style-image: url('img.png');

list-style-position: outside;

: inside;

ol {

list-style-type: upper-alpha;

: lower-alpha;

: lower-roman;

: upper-roman;

: decimal-leading-zero;

}

li {

border: 1px solid black;

}

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CSS Tables:

make a table in HTML
give a caption (Table.CSS)

table {

border: 1px solid black;

border-collapse: collapse;

: separate

border-spacing: 15px 25px;

empty-cell: hide;

width: 300px; / 100%.

Table-layout: auto;

: fixed;

}

Th {

border: 1px solid black;

}

Td {

border: 1px solid black;

height: 25px;

padding: 5px;

text-align: right;

: center

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vertical-align: bottom;

: Top;

: middle;

}

* CSS Functions

```
; root { --primary-color: teal; --button-color: blue volte; text-color: white; }
```

```
#Fun { background-color: teal; var(--primary-color); height: 200px; width: 70%; : calc(100% - 200px); }
```

}

a {

padding: 10px 30px;

margin: 20px;

background-color: lightblue; blue valet.

color: white;

text-decoration: none; }

}

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Box Sizing

#div1 {

background-color: blue violet;
width: 600px
height: 200px

}

#div2 {

background-color: chocolate
width: 600px
height: 200px
padding: 50px;
border: 10px solid black;
box-sizing: content-box;
border: 5px;

}

Initial vs Inherit:

make those links in div.

#

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green {

color: green;

}

blue {

color: red

}

initial {

color: initial;

}

inherit {

color: inherit;

}

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Object fit

It is on image as red.

img {

border: 1px solid red;

width: 500px;

height: 400px

object-fit: contain;

: fill; / contain

: cover;

object-position: top center;

left