

# CSS

## Cascading Style Sheet

*It is a language that is used to describe the style of a document.*



# Basic Syntax

```
Selector →  
h1 {  
    color: red;  
}  
          ↑      ↑  
          Property Value
```

The APNA COLLEGE logo is displayed in large, bold, dark blue and brown letters. The word "APNA" is in blue, and "COLLEGE" is in brown. The letters are slightly overlapping.

# Including Style

- Inline

```
<h1 style="color: red"> Apna College </h1>
```



- <style> tag

```
<style>
  h1 {
    color : red;
  }
</style>
```

# Including Style

- External Stylesheet

Writing CSS in a separate document & linking it with HTML file



# Color Property

*Used to set the color of foreground*

color: red;

color: pink;

color: blue;

color: green;

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# Background Color Property

*Used to set the color of background*

background-color: red;

background-color: pink;

background-color: blue;

background-color: green;



# Color Systems

- RGB

color: `rgb(255, 0, 0);`

color: `rgb(0, 255, 0);`



# Color Systems

- Hex (Hexadecimal)

color: #ff0000;

color: #00ff00;

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# Selectors

- Universal Selector

`* {}`

- Element Selector

`h1 {}`

- Id Selector

`#myId {}`

- Class Selector

`.myClass {}`



# Text Properties

text-align

text-align : left / right / center

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# Text Properties

text-decoration

text-decoration : underline / overline / line-through

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# Text Properties

## font-weight

font-weight : normal / bold / bolder / lighter

font-weight : 100-900

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# Text Properties

font-family

font-family : arial

font-family : arial, roboto

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# Units in CSS

## *Absolute*

**pixels (px)**

96px = 1 inch

font-size: 2px;

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# Text Properties

line-height

line-height : 2px

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line-height : 3

line-height : normal

# Text Properties

text-transform

text-tranform : uppercase / lowercase / capitalize / none

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# Box Model in CSS

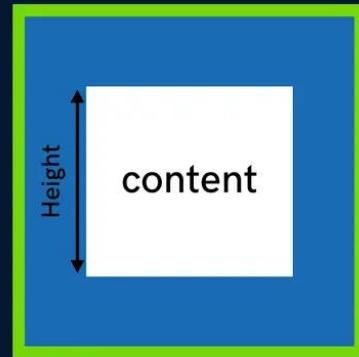
- Height
- Width
- Border
- Padding
- Margin



# Height

By default, it sets the content area **height** of the element

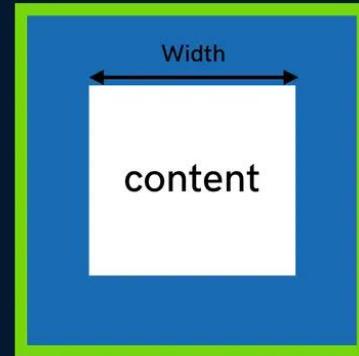
```
div {  
    height: 50px;  
}  
  
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```



# Width

By default, it sets the content area **width** of the element

```
div {  
    width: 50px;  
}  
  
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```



# Border

Used to set an element's **border**

*border-width : 2px;  
border-style : solid / dotted / dashed  
border-color : black;*

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# Border

Shorthand

*border : 2px solid black;*

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# Border

Used to **round the corners** of an element's outer border edge

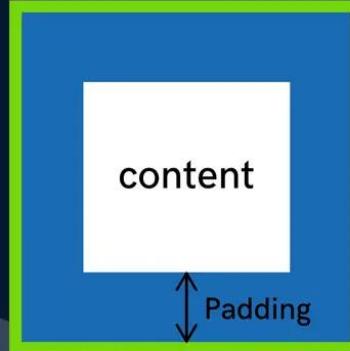
*border-radius : 10px;*

*border-radius : 50%;*



# Padding

- padding-left
- padding-right
- padding-top
- padding-bottom



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# Padding

Shorthand

*padding: 50px;*



*padding: 1px 2px 3px 4px;*

top | right | bottom | left -> clockwise

# Margin

- margin-right
- margin-left
- margin-top
- margin-bottom



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# Margin

Shorthand

*margin: 50px;*



*margin: 1px 2px 3px 4px;*

top | right | bottom | left -> clockwise

# Display Property

*display: inline / block / inline-block / none*

- **inline** - Takes only the space required by the element. (no margin/ padding)
- **block** - Takes full space available in width.
- **inline-block** - Similar to inline but we can set margin & padding.
- **none** - To remove element from document flow.

# Visibility

*visibility: hidden;*

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**Note :** When visibility is set to none, space for the element is reserved.

But for display set to none, no space is reserved or blocked for the element.

# Alpha Channel

opacity (0 to 1)

- RGBA

color: `rgba(255, 0, 0, 0.5);`

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color: `rgba(255, 0, 0, 1);`

# Units in CSS

*Relative*

%

em

rem

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# Percentage (%)

It is often used to define a **size** as relative to an element's **parent** object.

*width : 33% ;*

*margin-left : 50% ;*



# Em

Unit	Relative to
em	Font size of the parent, in the case of typographical properties like <code>font-size</code> , and font size of the element itself, in the case of other properties like <code>width</code> .

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t.

# Rem (Root Em)

Unit	Relative to
rem	Font size of the root element.

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## Others

vh: relative to 1% viewport height

vw : relative to 1% viewport width

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# Position

The position CSS property sets **how an element is positioned** in a document.

*position : static / relative / absolute / fixed*

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# Position

- **static** - default position (The top, right, bottom, left, and z-index properties have no effect)
- **relative** - element is relative to itself. (The top, right, bottom, left, and z-index will work)
- **absolute** - positioned relative to its closest positioned ancestor. (removed from the flow)
- **fixed** - positioned relative to browser. (removed from flow)
- **sticky** - positioned based on user's scroll position

# **z-index**

It decides the **stack level** of elements

Overlapping elements with a larger z-index cover those with a smaller one.

*z-index : auto (0)*

*z-index : 1 / 2 / ...*

*z-index : -1 / -2 / ...*



# Background Image

Used to set an image as background

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

# Background Size

*background-size : cover / contain / auto*

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# Flexbox

Flexible Box Layout

It is a one-dimensional layout method for arranging items in rows or columns.

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# Flexbox Direction

It sets how flex items are placed in the flex container, along which axis and direction.

- `flex-direction : row;` (default)
- `flex-direction : row-reverse;`
- `flex-direction : column;`
- `flex-direction : column-reverse;`



# Flex Properties

for Flex Container

- **justify-content** : alignment along the main axis.

flex-start / flex-end / centre / space-evenly /

- **flex-wrap** : nowrap / wrap / wrap-reverse

- **align-items** : alignment along the cross axis.

- **align-content** : alignment of space between & around the content along cross-axis

# Flex Properties

for Flex Item

- **align-self** : alignment of individual along the cross axis.
- **flex-grow** : how much a flex item will grow relative to the rest of the flex items if space is available
- **flex-shrink** : how much a flex item will shrink relative to the rest of the flex items if space is available



## Practice Set 6



Qs: Create a navbar with 4 options in the form of anchor tags inside list items.  
Now, use flexbox to place them all spaced equally in a single line.

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Qs: Use flexbox to center one div inside another div.

Qs: Which has higher priority - align-items or align-self?

# Media Queries

Help create a **responsive** website

```
@media (width : 600px) {  
    div {  
        background-color : red;  
    }  
}
```

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```
@media (min-width : 600px) {  
    div {  
        background-color : red;  
    }  
}
```

# Media Queries

```
@media (min-width : 200px) and (min-width : 300px) {
```

```
    div {
```

```
        background-color : red;
```

```
    }
```

```
}
```



# Transitions

Transitions enable you to define the transition between two states of an element.

- **transition-property** : property you want to transition (font-size, width etc.)
- **transition-duration** : 2s / 4ms ..
- **transition-timing-function** : ease-in / ease-out / linear / steps ..
- **transition-delay** : 2s / 4ms ..

# Transition Shorthand

property name | duration | timing-function | delay

*transition: font-size 2s ease-in-out 0.2s;*

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# CSS Transform

Used to apply **2D & 3D transformations** to an element

- rotate

*transform: rotate(45deg);*

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# CSS Transform

- scale

*transform: scale(2);*

*transform: scale(0.5);*

*transform: scale(1, 2);*

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*transform: scaleX(0.5);*

*transform: scaleY(0.5);*

# CSS Transform

- translate

*transform: translate(20px);*

*transform: translate(20px, 50px);*

*transform: translateX(20px);*

*transform: translateY(20px);*



# CSS Transform

- skew

*transform: skew(30deg);*

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# Animation

To animate CSS elements

```
@keyframe myName {  
    from { font-size : 20px; }  
    to { font-size : 40px; }  
}
```



# Animation Properties

- animation-name
- animation-duration
- animation-timing-function
- animation-delay
- animation-iteration-count
- animation-direction

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# Animation Shorthand

*animation : myName 2s linear 3s infinite normal*

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# % in Animation

```
@keyframe myName {  
    0% { font-size : 20px; }  
    50% { font-size : 30px; }  
    100% { font-size : 40px; }  
}
```

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