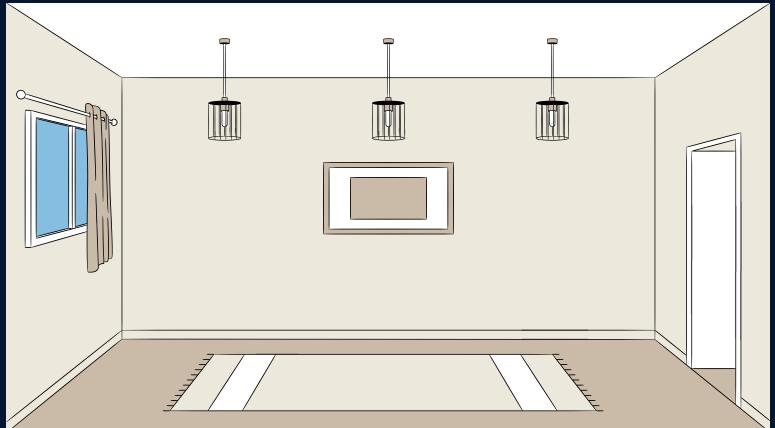


HTML

CSS

JS

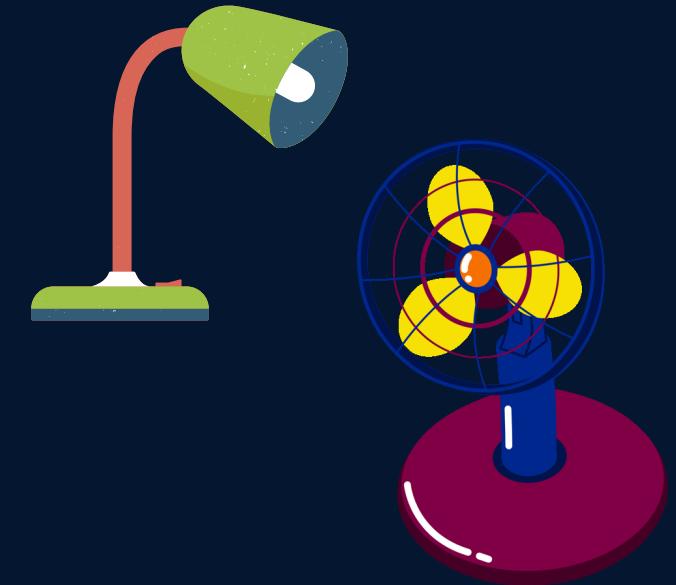
Structure/layout



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Style

Logic



Level 1



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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

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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



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)

$96\text{px} = 1 \text{ inch}$

`font-size: 2px;`

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Text Properties

line-height

line-height : 2px

line-height : 3

line-height : normal

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Text Properties

text-transform

text-transform : uppercase / lowercase / capitalize / none

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Level 2

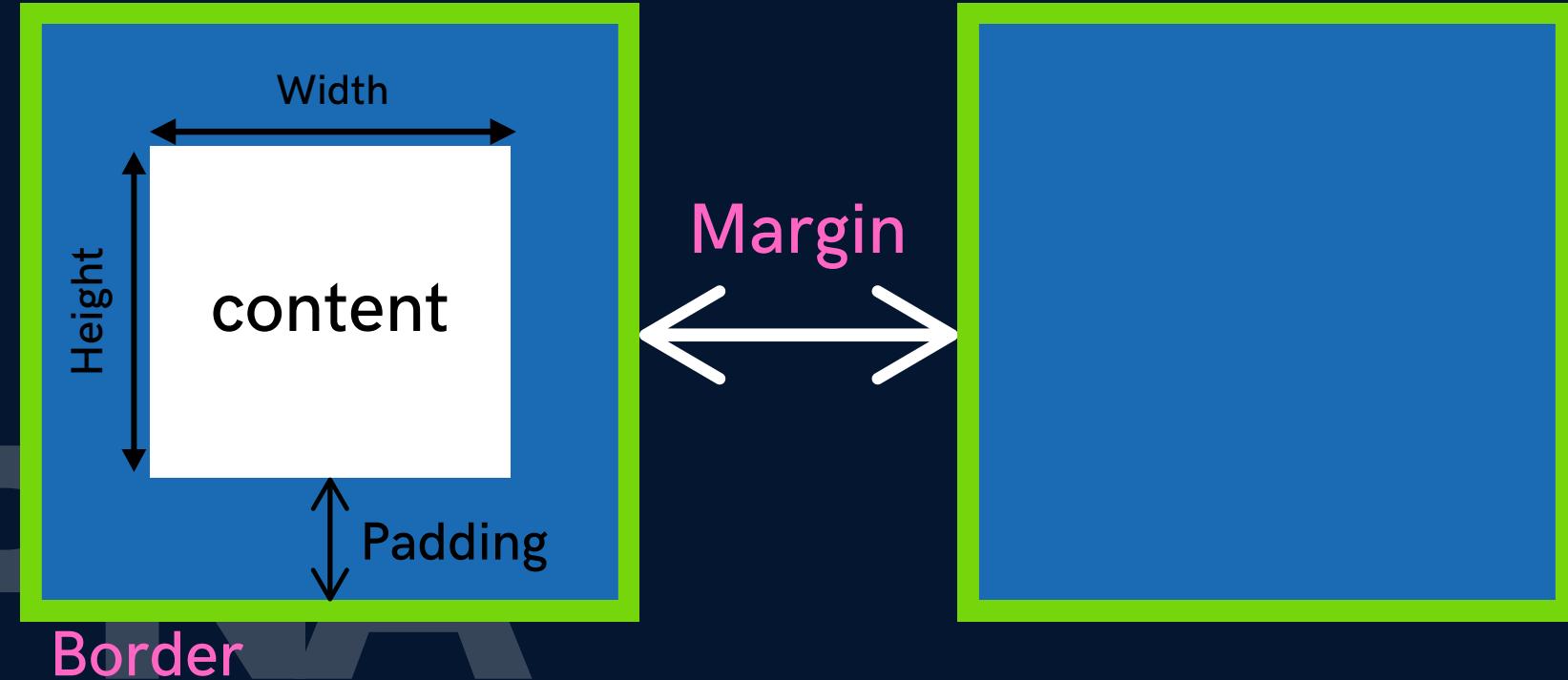


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Box Model in CSS

- Height
- Width
- Border
- Padding
- Margin

A
F
COLLEGE

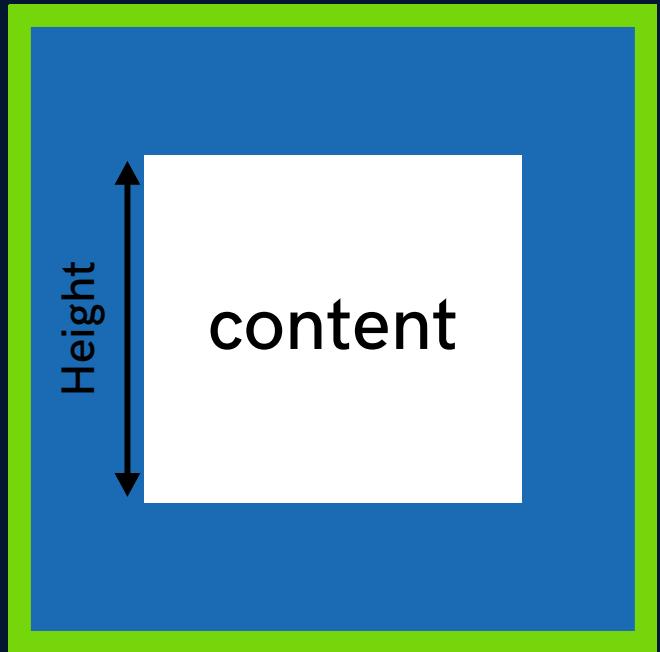


Height

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

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

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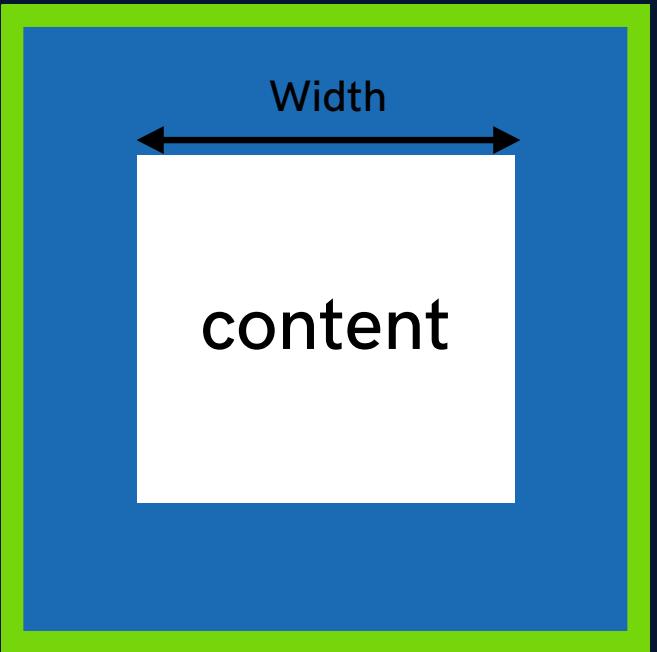


Width

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

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

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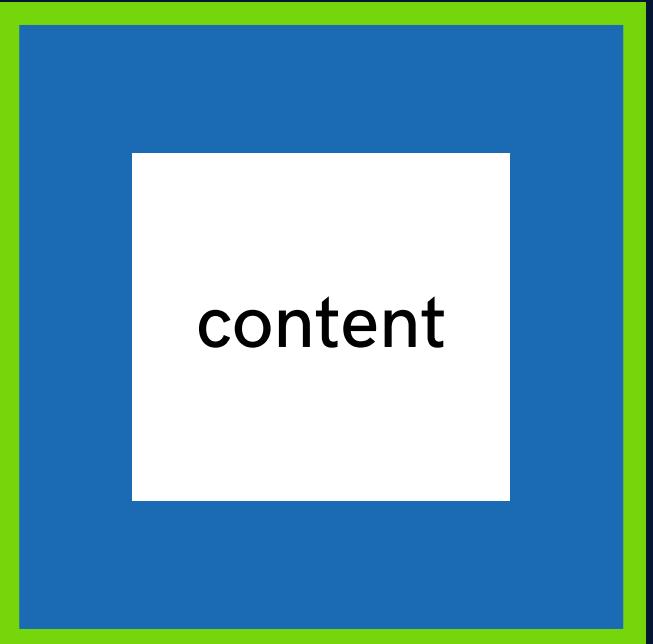
Border

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

border-width : 2px;

border-style : solid / dotted / dashed

border-color : black;



content

Border

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;

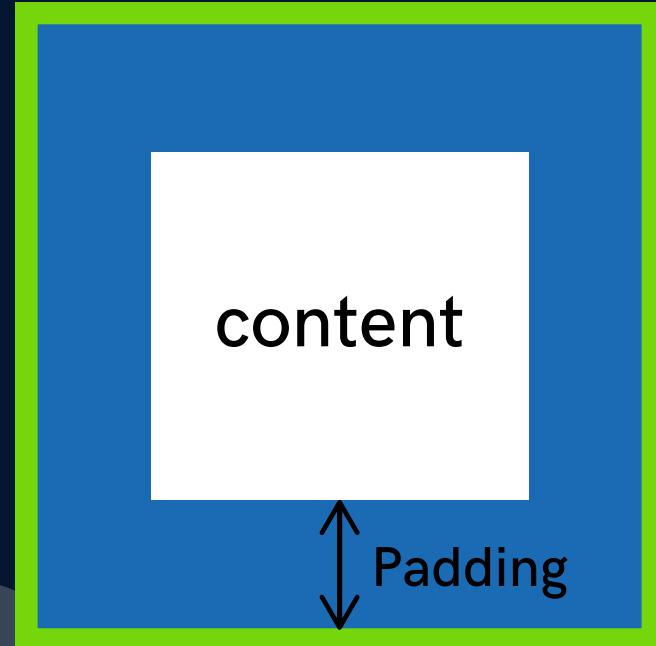
border-radius : 50%;

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Padding

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

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Padding

Shorthand

padding: 50px;



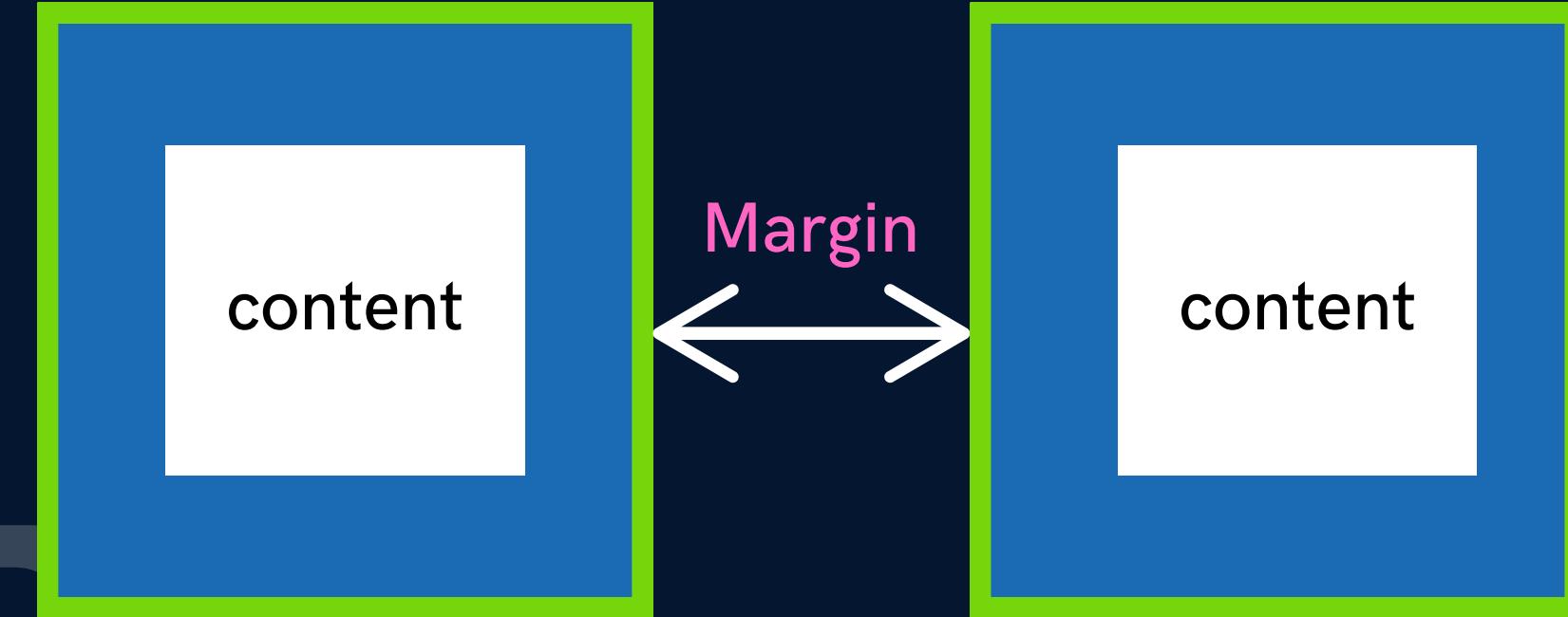
padding: 1px 2px 3px 4px;

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)

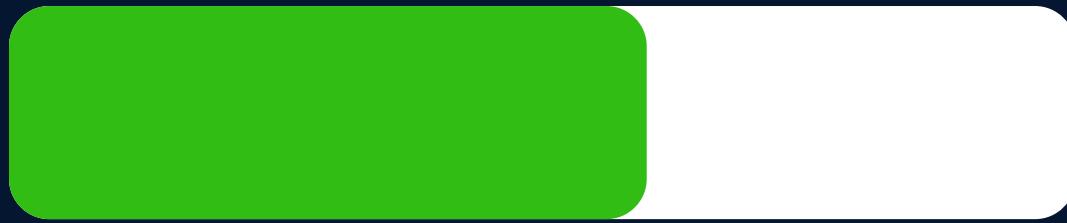
- RGBA

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

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

Level 3



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position

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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Rem (Root Em)

Unit	Relative to
rem	Font size of the root element.



Others

vh: relative to 1% viewport height

vw : relative to 1% viewport width



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)

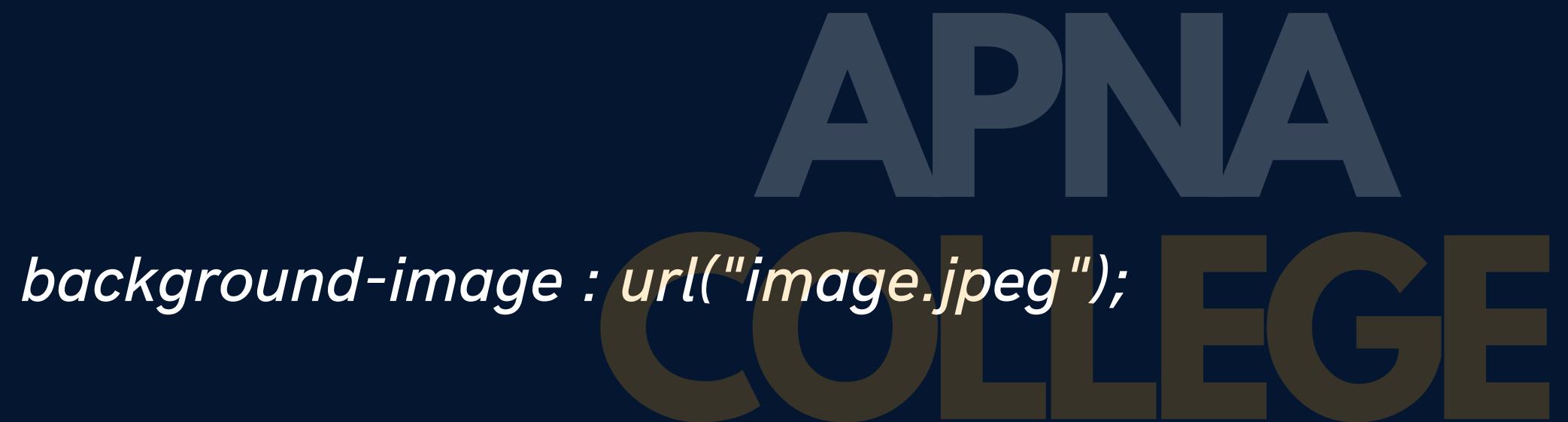
z-index : 1 / 2 / ...

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



Background Image

Used to set an image as background



Background Size

background-size : cover / contain / auto

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Level 4



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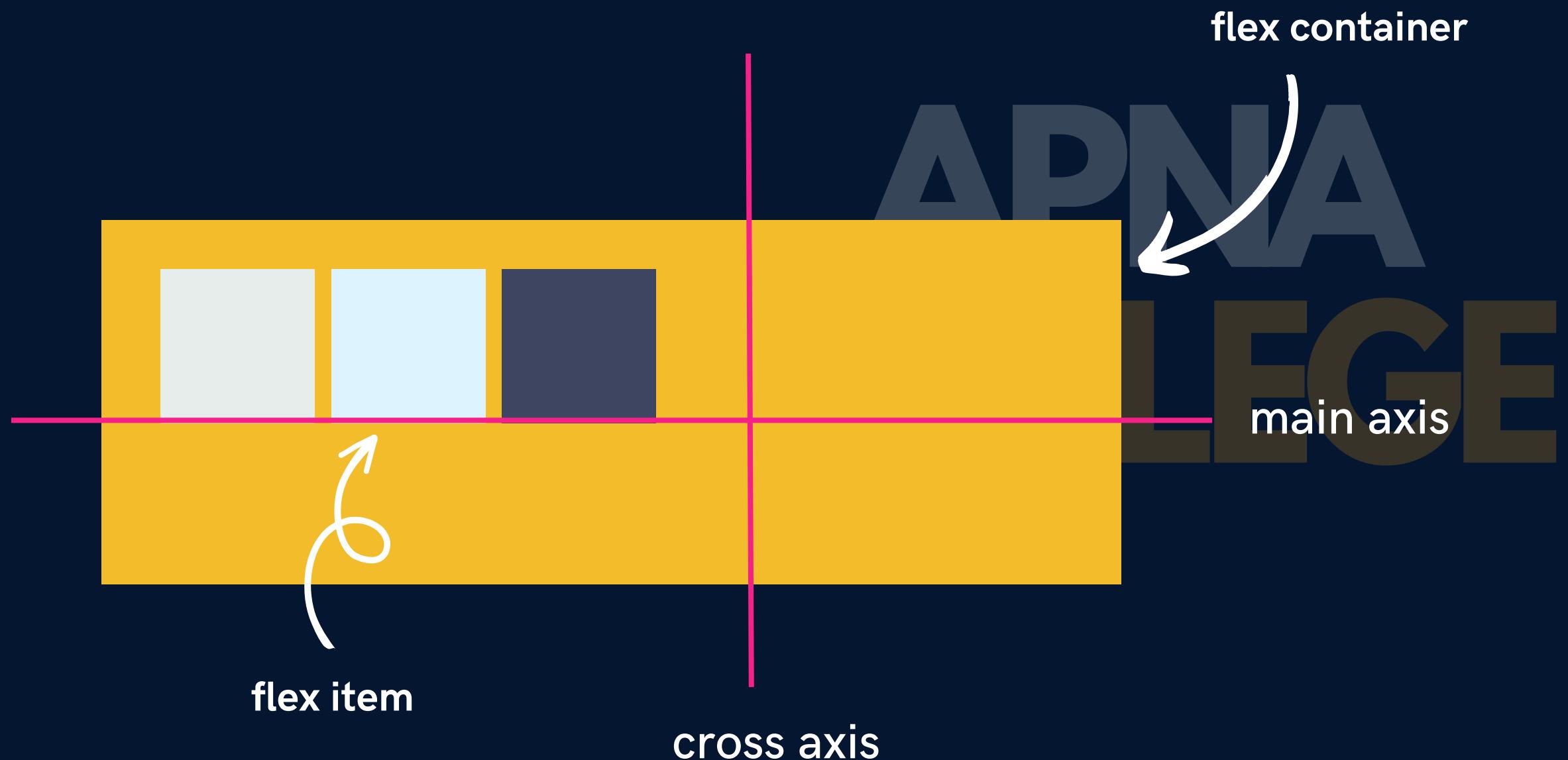
Flexbox

Flexible Box Layout

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

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The Flex Model



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

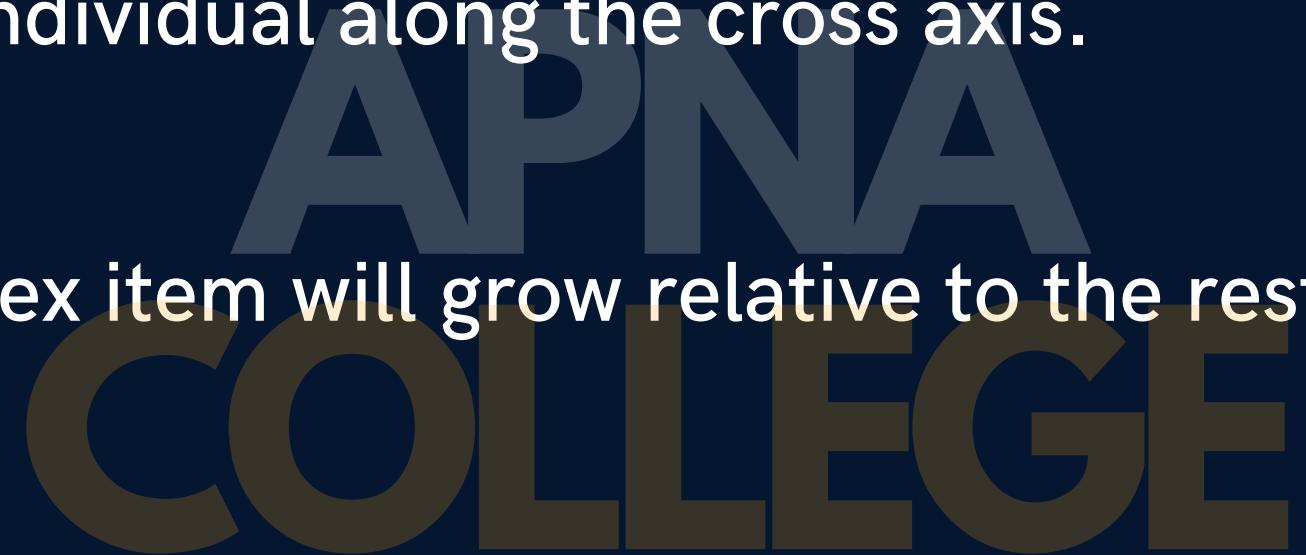
for Flex Container

- **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



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;
```

```
}
```

```
}
```



Level 5



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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);

transform: scaleX(0.5);

transform: scaleY(0.5);

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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; }  
}
```

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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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