

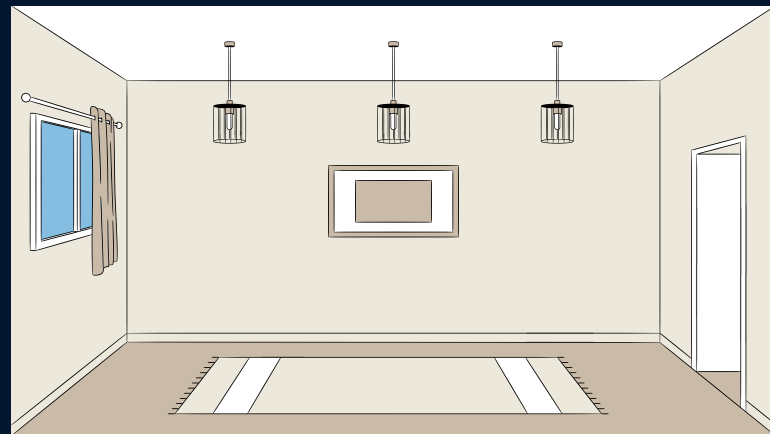
cascading ka mtlb jo baad me likhajata hai uski  
jyada priority hogi

# HTML

# CSS

# JS

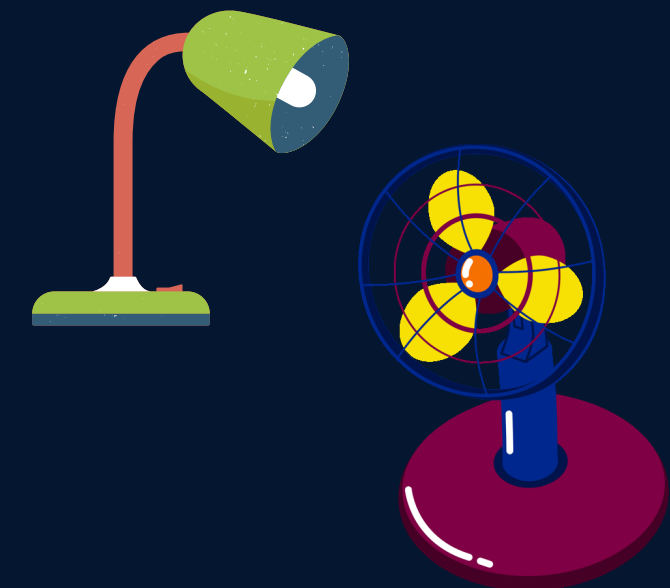
## Structure/layout



## Style



## Logic



# Level 1



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# CSS

## Cascading Style Sheet

html

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

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# 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

1. inline
2. <style>
3. stylesheet

inline is prioritized if conflict occurs isliye isme nhi likhna

# Color Property

*Used to set the color of foreground*

100+ colors  
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**;

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# Color Systems

- RGB

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

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



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# Color Systems

- Hex (Hexadecimal)

color: **#ff0000**;

color: **#00ff00**;

contains 16 digits

R	G	B
0-255	0-255	0-255
00-ff	00-ff	00-ff

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for red=	ff	00	00
	R	G	B

# Selectors

- Universal Selector

`* { }`

- Class Selector

`.myClass { }`

\* is asterisk  
& is ampersand

- Element Selector

`h1 { }`

- Id Selector

`#myId { }`

css me jo baad me likha hoga usko priority di jaati hai

# Practice Set 1

Q1: Create a simple div with an id "box".  
Add some text content inside the div.  
Set its background color to blue.

shortcuts  
.myclass this will create div whose class is  
of this names  
#myid this will create div whose id is  
#box of this names

Q2: Create 3 headings with h1, h2 & h3.  
Give them all a class "heading" & set color of "heading" to red.

Q3: Create a button & set its background color to :

- green using css stylesheet
- blue using <style> tag
- pink using inline style

style tag me uski suni jaati hai jo head atg me  
baad me likha jata hai

sbse jyada priority inline ko milti hai

lekin krna hme css me jake  
hai shi tarika yhi hai

\*ptr :- hme multiple tarike se style nhi add krni kyuki dikkat hogi ki konsa pehle  
likha tha konsa baad me

# Text Properties

text-align

text-align : left / right / center

css 3 pe jo advancement aya hai:-  
left=start, right=end in hindi and english  
but in urdu left=end right=start

# Text Properties

text-decoration

text-decoration : underline / overline / line-through

even we have dotted underline

wavy underline

red underline

blue underline

# Text Properties

font-weight

font-weight : normal / bold / bolder / lighter

font-weight : 100-900

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id cant be a number

# Text Properties

font-family

font-family : arial

font-family : arial, roboto ,,,,,,

this is known as fallback mechanism  
mtlb ek fail ho jae koi browser me toh  
dursri chle..

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- **Generic font families:** Generic font families are determined by font family properties such as serifs—which are decorative strokes on the ends of letters—or cursive strokes. The generic font family name will specify the attribute that all fonts within that family share, like serif, sans-serif, or monospace.
- **Specific font families:** Specific font families are specific fonts with different styles within the one font family name, such as Arial, Times New Roman, and Tahoma.

## 5 Generic Font Families

Here is an overview of the generic font families found in many word processing programs:

1. **Serif:** Serif fonts are traditional typefaces using characters that have serifs which are small winged or flared tips extending off the tips of a letter. Serif fonts are typically used in printed books, newspapers, and magazines. Some popular serif fonts include Times New Roman, Garamond, Palatino, and Georgia.
2. **Sans-Serif:** Sans-serif fonts use characters without serifs and are more commonly seen in digital formats. A sans-serif font will typically be the default font in digital word processing programs. Sans-serif fonts include Arial, Helvetica, Verdana, Trebuchet MS, and Gill Sans.
3. **Cursive:** Cursive fonts use characters that have connective strokes which give the font a handwritten appearance. Cursive fonts include Comic Sans MS, Adobe Poetica, Sanvito, and Zapf-Chancery.
4. **Fantasy:** Fantasy fonts are stylized fonts that still maintain the characteristics of non-cursive, traditional alphabet glyphs. Examples include Cottonwood, Critter, and Alpha Geometrique.
5. **Monospace:** Fonts in the monospace font family have characters that are all the same width, giving text the appearance of a manual monospaced typewriter. Examples of monospaced fonts include Courier New, Monaco, Lucida Console, Consolas, and Everson Mono.

# Units in CSS

***Absolute***

ek Absolute hota hai

ek Relative hota hai

pixels (px)

96px = 1 inch = 2.54cm

font-size: 2px;

para, achor, heading ki ka bhi hm px change kr skte hn

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# Text Properties

line-height

line-height : 2px

line-height : 3

line-height : normal

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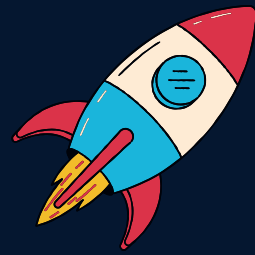
# Text Properties

text-transform

text-transform : uppercase / lowercase / capitalize / none

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## Practice Set 2



Q1: Create a heading centred on the page with all of its text capitalized by default.

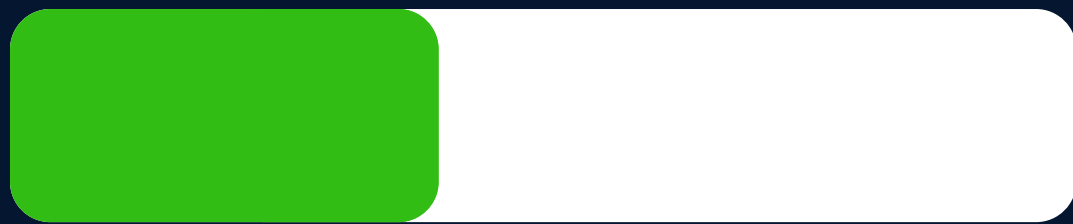
Q2: Set the font family of all the content in the document to "Times New Roman".

Q3: Create one div inside another div.

Set id & text "outer" for the first one & "inner" for the second one.

Set the outer div text size to 25px & inner div text size to 10px.

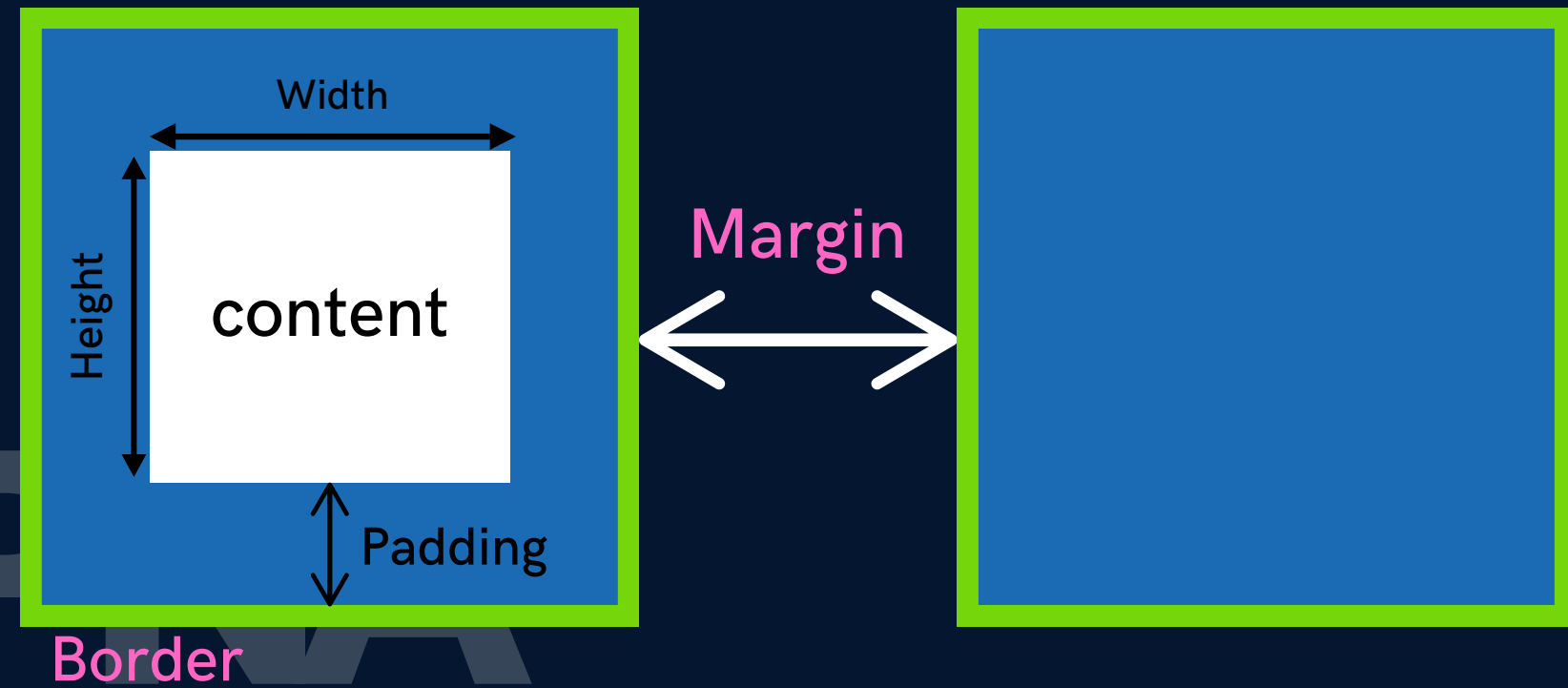
# Level 2



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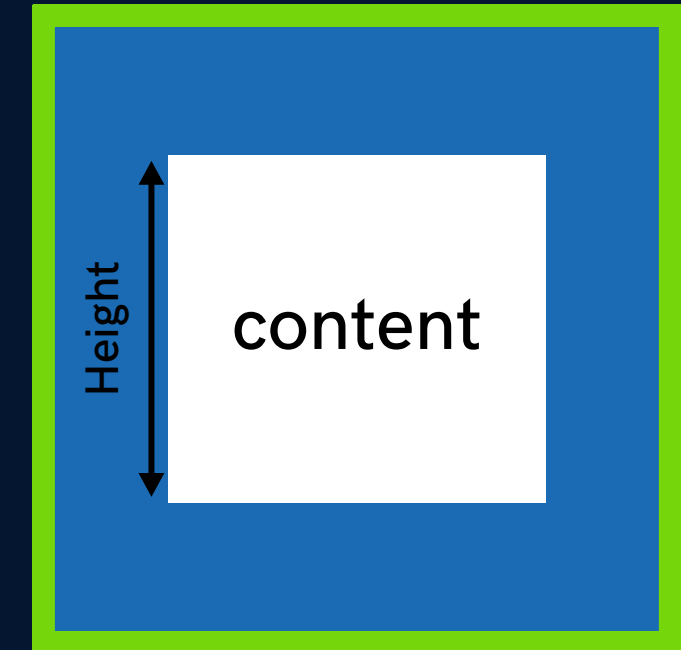
# Box Model in CSS

- Height
- Width
- Border
- Padding
- Margin



# Height

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



```
div {
```

```
    height: 50px;
```

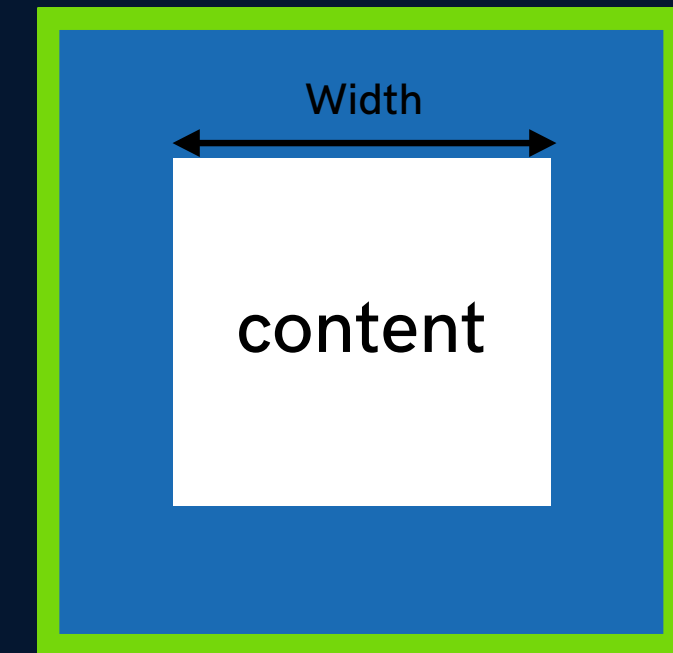
```
}
```

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# Width

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



```
div {
```

```
  width: 50px;
```

```
}
```

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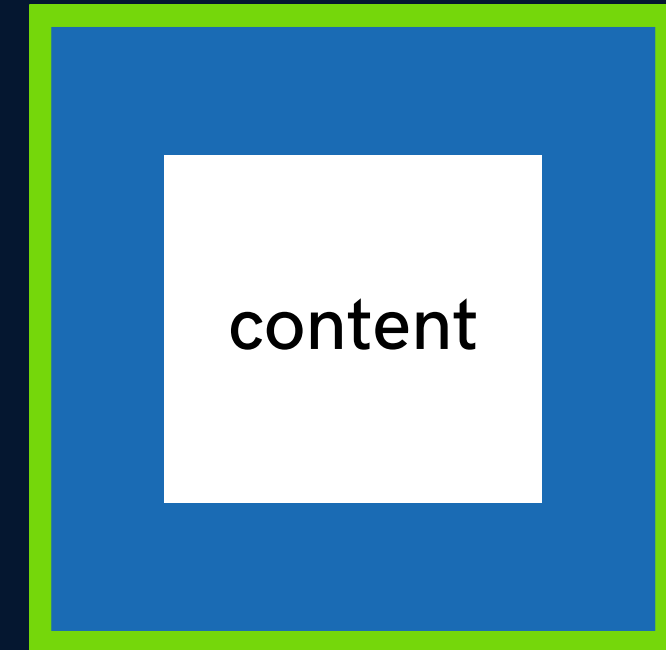
# Border

Used to set an element's border

*border-width : 2px;*

*border-style : solid / dotted / dashed*

*border-color : black;*



Border

# Border

## Shorthand

*border : 2px solid black;*

width style color

# Border

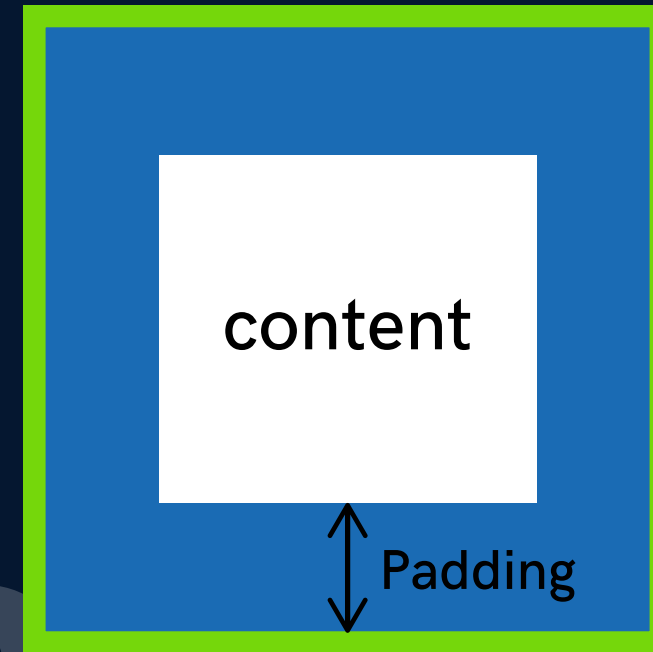
Used to **round the corners** of an element's outer border edge

*border-radius : 10px;*

*border-radius : 50%;* for creating circle

# Padding

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



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# Padding

## Shorthand

*padding: 50px;*

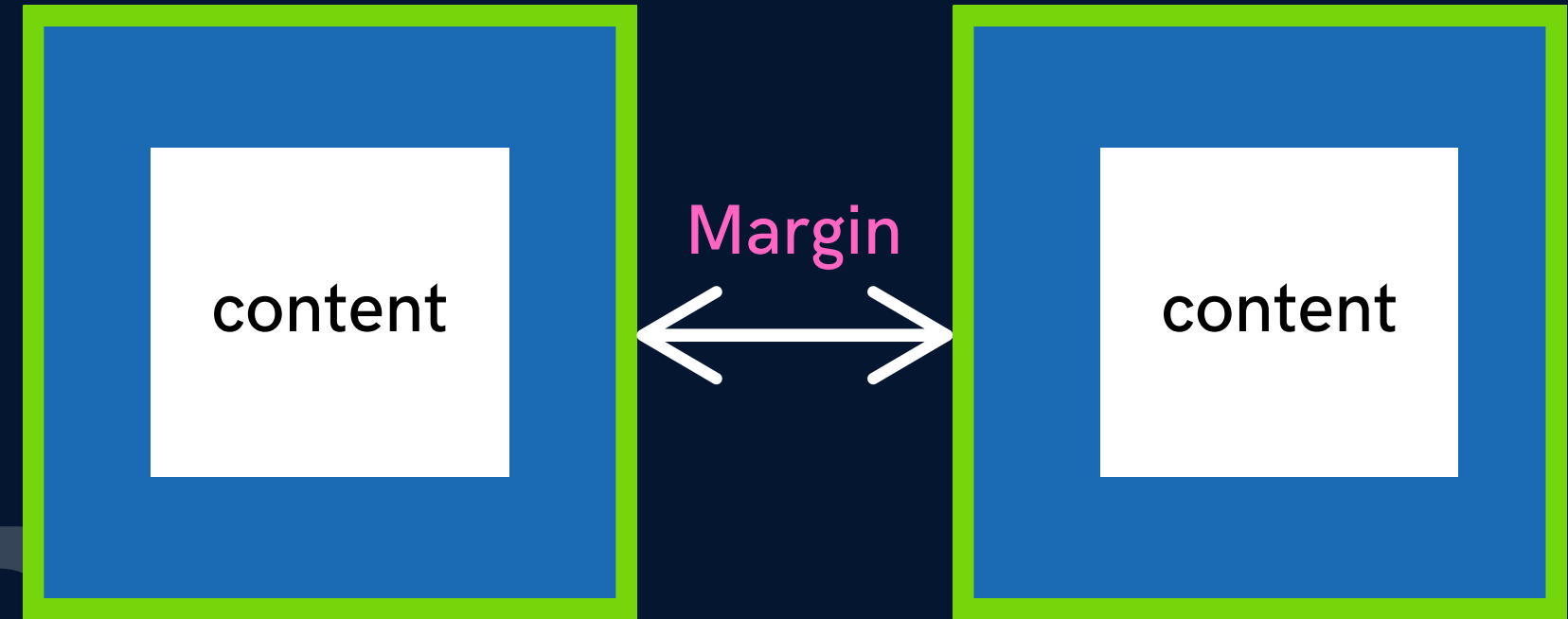
*padding: 1px 2px 3px 4px;*

top | right | bottom | left -> clockwise

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# Margin

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



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# Margin

## Shorthand

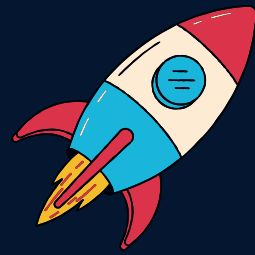
*margin: 50px;*

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

top | right | bottom | left -> clockwise

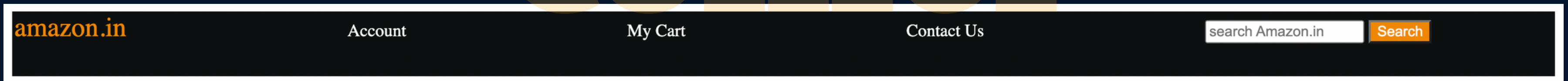


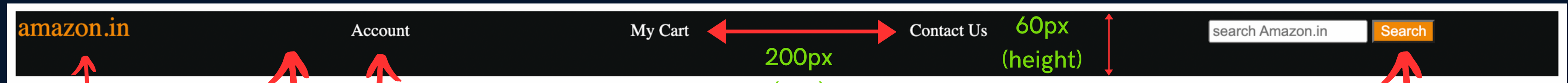
# Practice Set 3



Q1: Create a div with height & width of 100px.  
Set its background color to green & the border radius to 50%.

Q2: Create the following navbar.





25px  
(text)

#0f1111  
(black)

anchor tags  
(links)

200px  
(gap)

60px  
(height)

#f08804  
(yellow)

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# Display Property

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

inline se set krne me top and bottom se set nhi hoti  
even likhne vali jgh ka height and width bhi nhi set kr pa rhe

- **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.  
gayab ho jaega or koi space allot nhi hoga iske liye

# 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)

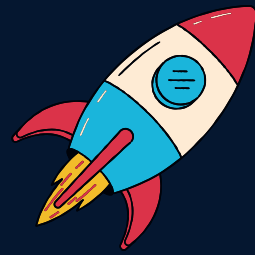
- RGBA

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

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

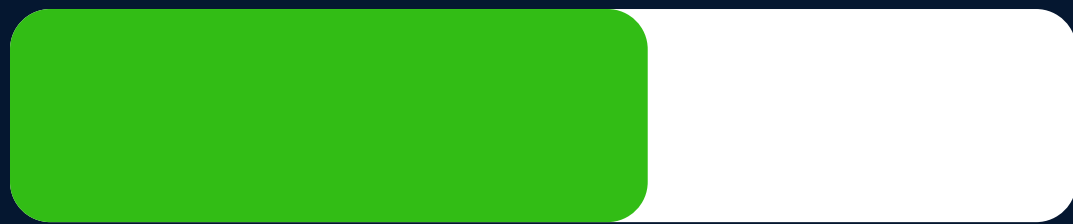
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## Practice Set 4



- Q1: Create a webpage layout with a header, a footer & a content area containing 3 divs.  
Set the height & width of divs to 100px.  
(add the previous navbar in the header)
- Q2: Add borders to all the divs.
- Q3: Add a different background color to each div with an opacity of 0.5
- Q4: Give the content area an appropriate height.

# Level 3



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# 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% ;*

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# Em

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

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# 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 / sticky*

top

bottom

left

right

z

these all do not work with static

# 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** comes from 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 / ...*

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# Background Image

website :- unsplash

Used to set an image as background

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

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# Background Size

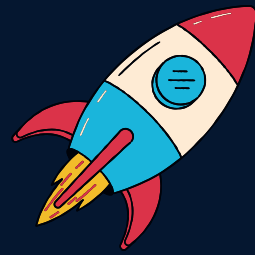
*background-size : cover / contain / auto*

cover me image kt skti hai

contain me puri image aa jaegi bhle khali space me kuch or a jae  
background-repeat se bhi hta skte hn contain me background repeat hota hai (isliye  
km istemal krte hn)

auto me default hota hai i.e enlarged image

# Practice Set 5



Qs: Create the following layout using the given html.

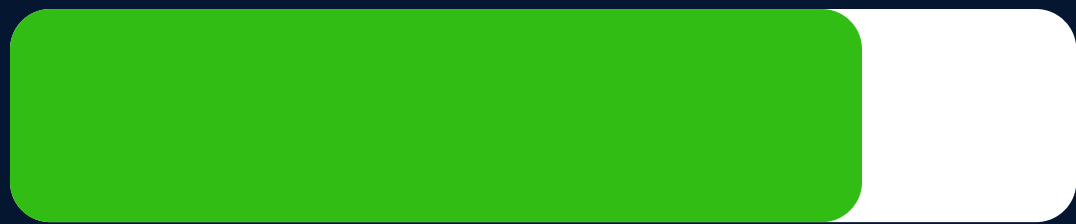
- Give the div a height, width & some background image.
- Use the appropriate position property for the div element to place it at the right end of the page. (The div should not move even on scroll)
- Use z-index to place the div on top of page.

```
<p> lorem*5 </p>
```

```
<div> Love Nature </div>
```

```
<p> lorem*5 </p>
```

# Level 4



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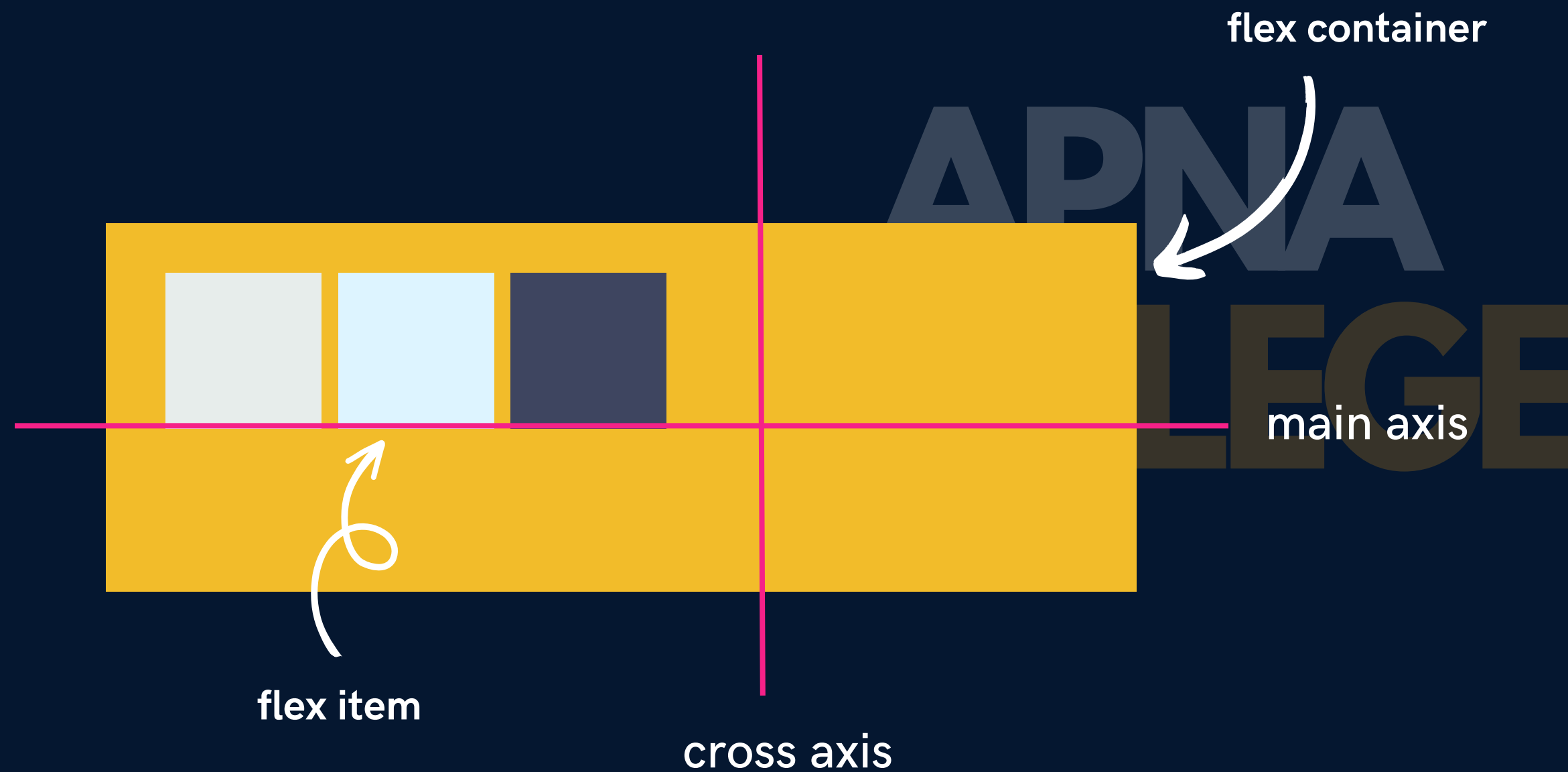
# Flexbox

## 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.

jb tk inka font size allow krta hai tb tk ye apne aap fit kr leta hai container me bhle uske liye size andr ke div kachota kyu na krna pade

- flex-direction : row; (default)

row means left to right

- flex-direction : row-reverse;

- flex-direction : column;

- flex-direction : column-reverse;

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# Flex Properties

for Flex Container

- **justify-content** : alignment along the main axis.  
flex-start / flex-end / centre / space-evenly / space-around, etc
- **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

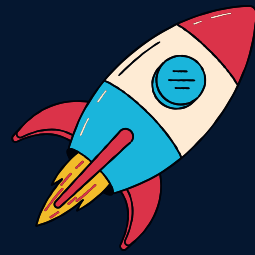
# Flex Properties

for Flex Item

- **align-self** : alignment of individual along the cross axis. iski priority jyada hogi
- **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.

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;  
  }  
}
```

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

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# Media Queries

```
@media (min-width : 200px) and (min-width : 300px) {  
  div {  
    background-color : red;  
  }  
}
```

# Practice Set 7

Qs: Add a media query to implement the following:

- the color of a div changes to green for viewport width less than 300px
- the color of a div changes to pink for width between 300px & 400px
- the color of a div changes to red for width between 400px & 600px
- the color of a div changes to blue for width above 600px

# 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);*

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# 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*

name duration timing fun delay iteration cnt direction

# % in Animation

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

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# Practice Set 8



Qs: Create a simple loader using CSS

**Step1** : create a div with circular shape & a thick border from one end (top/bottom/left/right)

**Step2** : To make it spin create an animation which transforms it from 0deg to 360deg

**Step3** : Add the animation property to the loader with infinite duration