

What is CSS

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- CSS stands for Cascading Style Sheets
- If HTML is the structure of the house then CSS is the look and feel of the house
- It's the language to make our pages presentable
- Designed to make style sheets for web.
- Now let's try to break the acronym:

Cascading : Falling of styles

Style : Adding design / styling over HTML tags

Sheets : Working over tags style in different documents.

→ is a style sheet language used to describe the presentation of a document written in HTML

→ CSS describes how elements should be rendered on screens, on paper, in speech or on other media

History

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1994 : First Proposal by Hakon Wium Lie on 10th October



1996 : GSS was published on 17th November with influencers Bert Bos (co-author)



Later he became Co-author of GSS

1996 : GSS became official with GSS was published in December

1997 : Created GSS level 2 and 4th Nov,

1998 : Published on 12th May.

Editors

- Atom
- Brackets
- -Bs press a (Mac User)
- Notepad ++ (Great for HTML and CSS)
- Komodo Edit (Simple)
- Sublime Text

CSS in PW SKILLS

mainly job style given

→ CSS is a stylesheet language used to describe the look and formatting of a document written in HTML. It is used to define the styles of elements on a web page, such as the — font — color — size — layout of text and others.

Why CSS is important for web developer?

• Styling and Responsive Design

Responsive to change in Size of Dimensions

CSS give to support

• Separation of Concerns and appearance

→ not concerning in only single file

↳ beauty

by trivial some queries

• Reusability and animation

have ID and class

↳ animations

support have

↓
which used in multiple time

→ Selecting Multiple elements

```

p;
p;
h1 {
  color: red;
}

```

must use commas

apply rule to all of them

#

Reasons to learn CSS

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- ↓
- Fast Page Speed (load time)
- Better UX and Quick Dev time
- Easy formatting changes and Compatibility across devices. (maintain) → works compatible you can open with different devices

Bonus tips :- Create more things as possible, it improve your command on CSS

Anatomy of a CSS ruleset

Structure Called

P { Selector → each Selector wrapped in curly braces

Color: red;

} Property (key) Property Value contains many choices

Declaration

You can choose which properties you want to edit in the rule

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① Different ways to bring CSS into the HTML file.

Note :- In programming world every name is given with sense of meaning, so if you feel it's not understandable then search on google translate, slowly slowly you will understand that. \Rightarrow Fair

- (a) Inline styling
- (b) Internal styling
- (c) External styling

Inline

inline styling is a technique in HTML that allow you to apply style directly to an HTML element using the style attribute. It is called "HTML" "Inline" because the style is applied directly to the element in the same line of HTML code.

```
<p style = "color: blue violet" > Hello </p>
```

\rightarrow When you write code inside the HTML code — called inline

\rightarrow इसी element के अंदर

(b) Internal Styling

→ Internal styling refers to the practice of using a `<style>` element within the head of an HTML document to define styles for the elements on the page. The style element should contain a list of CSS rules that specify the styles for the elements on the page.

internal CSS → इसी File के अंदर
 inside the → head (पर)

(c) External Styling

External styling refers to the practice of linking to an external CSS file from an HTML document using the `<link>` element.

The `<link>` element should be placed within the head of the HTML document, and it should have a `rel` attribute with a value of "stylesheet" to indicate that it is linking to a style sheet.

inline :- only use when you need give inline style to the particular element.

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Single element

- If you have to give style in one particular part, then use inline, but if the same thing requires in multiple part so, inline is not a good method to use.

Advantage

- If you use all styling (inline, internal, external) then, the highest priority go the inline, if inline absent then it go the external.
- Inline is easy to apply
- There is no need to create an additional file.

Disadvantage :-

- difficult to update
- no provide browser cache advantage
- pseudo codes / classes cannot be styled with inline CSS
- no versatile — can be applied elsewhere
- if use it one place, then can't use this change in another place.

(b) Internal in detail

→ The internal CSS is used to add a unique style for a single document.

→ It is defined in <head> section of the HTML page inside the <style> tag.

used because tells the browser, we are now using internal CSS

Advantage :-

(1) ID and classes can be used, if you need to change, then apply it, no need to go on whole code of HTML

(2) you do not need to upload multiple files

Disadvantage :-

(1) ~~at once~~ they are useful for only the page they specified on. → you have to write same style in all pages
→ you can't update automatically other page.

(2) Internal style sheets increase page load times. — bulky — hard to understand code

③

External CSS

→ not ^{deletes} the single element.

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→ When you need to make changes to several pages, you often use the external style sheet.

→ It uses the link `<link>` tag on every page and the `<link>` tag should be put inside the head section.

example :- `<head>` → `Link: CSS - tab`
`<link`
`</head>`

Advantages :-

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Selectors in CSS

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Select correct tags or

①

Part 1.

Why we use selectors

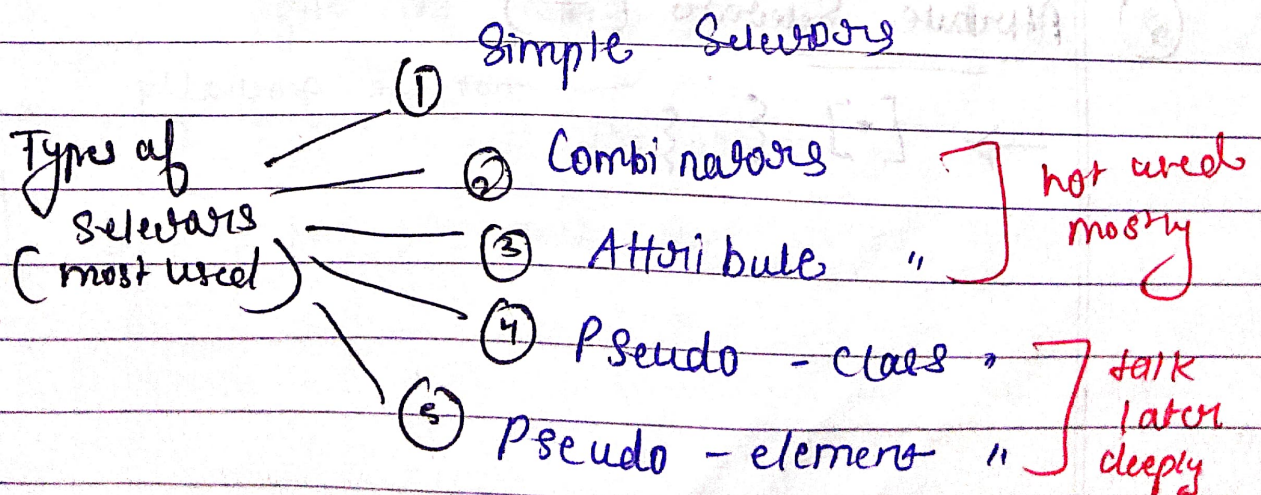
→ HTML Selector are so long, in real life, so it not possible or right option to tag every element to beauty.

Class is most use Selector in CSS

Selectors :- help you to manipulate HTML code,

→ If you want give different in two `<p>` & `<p>` different tag, so Selector solve this problem effectively

We will be using Internal CSS to demonstrate CSS Selectors



Note :- CSS Selectors cannot be used with inline CSS.

① Simple Selectors : — pretty straight forward.

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- ②
- ① Universal " →
 - ② Element " → `h1, p, etc`
 - ③ Class " → `(class = " ")` = `parent { }` } `child { }` } `more as more`
 - ④ ID " → `# (unique)` = `# IDs` } `multiple class`
 - ⑤ Selector list →
- Ex :- `.class1, .class7, .class10` } } → not used in multiple places.
- not for in long

Part 2

② Combinators

- ① Descendent → parent-child relation
 - ② child → `h1 > p { }` } `child selector are not parent selector`
 - ③ Adjacent Siblings → `section + p { }`
 - ④ General → `section ~ p { }` } `Section के बीच (आगे) then far off section (next)`
- almost same
- between the Simple Selectors
contain more than one Simple Selector.

③ Attribute Selector (+)

→ `[=] { }` } } — not use generally

③ Explore and Bring in Fonts :-

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→ In starting we all are using → default fonts but if you want specific (popins etc) so, how to use it.

→ So, how to apply // to another browser / website, there take CDN and apply in your HTML code. → Content delivery networks (CDN)

Fonts :- whatever we write text

Note :- 99% developers using Google fonts
→ Google fonts CDN have trust
→ speed in loading

always remember 2 things :-

① fonts ko lana head ke andar

② fonts ko use karne ke liye, .css file ko link krna hoga

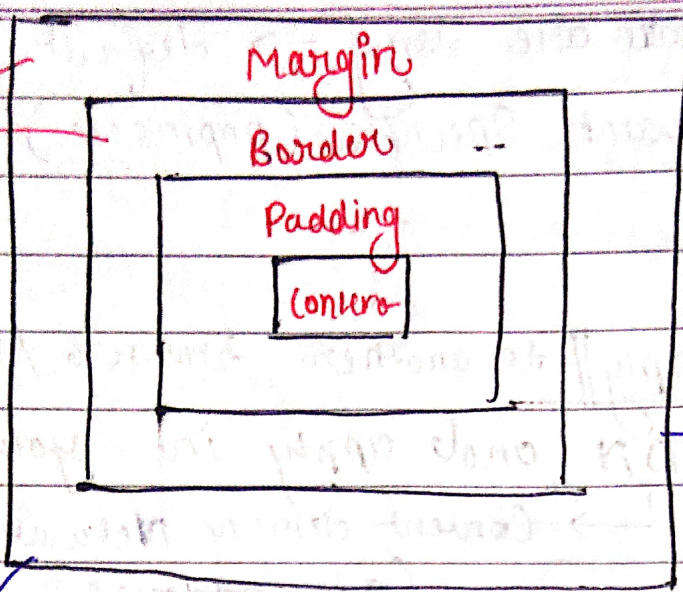
google
Fonts.

First link :- tell the browser

Second link :- tell the .css file

2
4

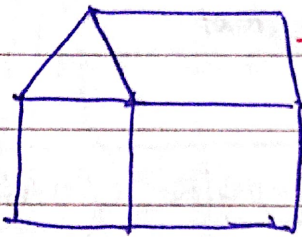
Box Model



take very less space

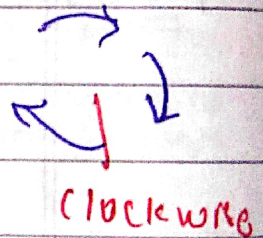
forms "box model" is used when designing a web application's design and layout.

box that wraps around every HTML element

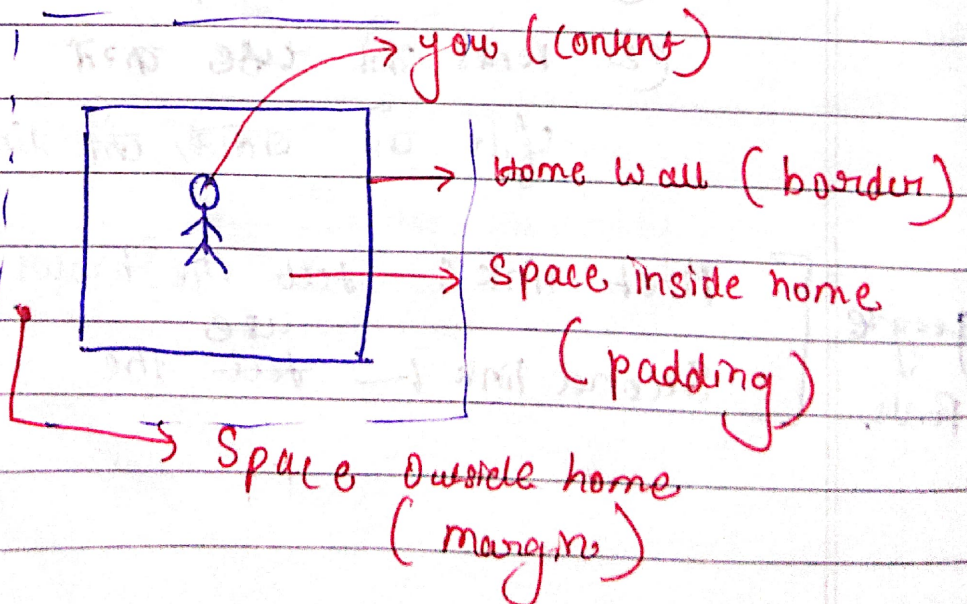


Bricks → wall → margin, padding etc (mixture of this make home (content))

insp → user agent stylesheet
 understand how it work



Also should know how to calculate! -
 350px



5

Colors and Styles in CSS

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↳ How take beautiful Colors in your browsers to beautify your web page.

Color → give great identity the brand, emotions, mood etc.

variation Red = google browser & mozilla
 (chances to show output)

There are different ways of taking Colors in your website.

Problem in that, every browser, treat different colors different way of same color.

3)

also explore this

- 1
- 2
- 3
- 4
- 5
- 6
- 7

- 1) using Predefined Color names
- 2) " hexadecimal Color Codes (99% percent used)
- 3) " RGB values
- 4) " HSL values
- 5) " the "rgba" function
- 6) " the "hsla" function
- 7) " the "transparent" keyword

also used most highly

Background in CSS

25 Feb

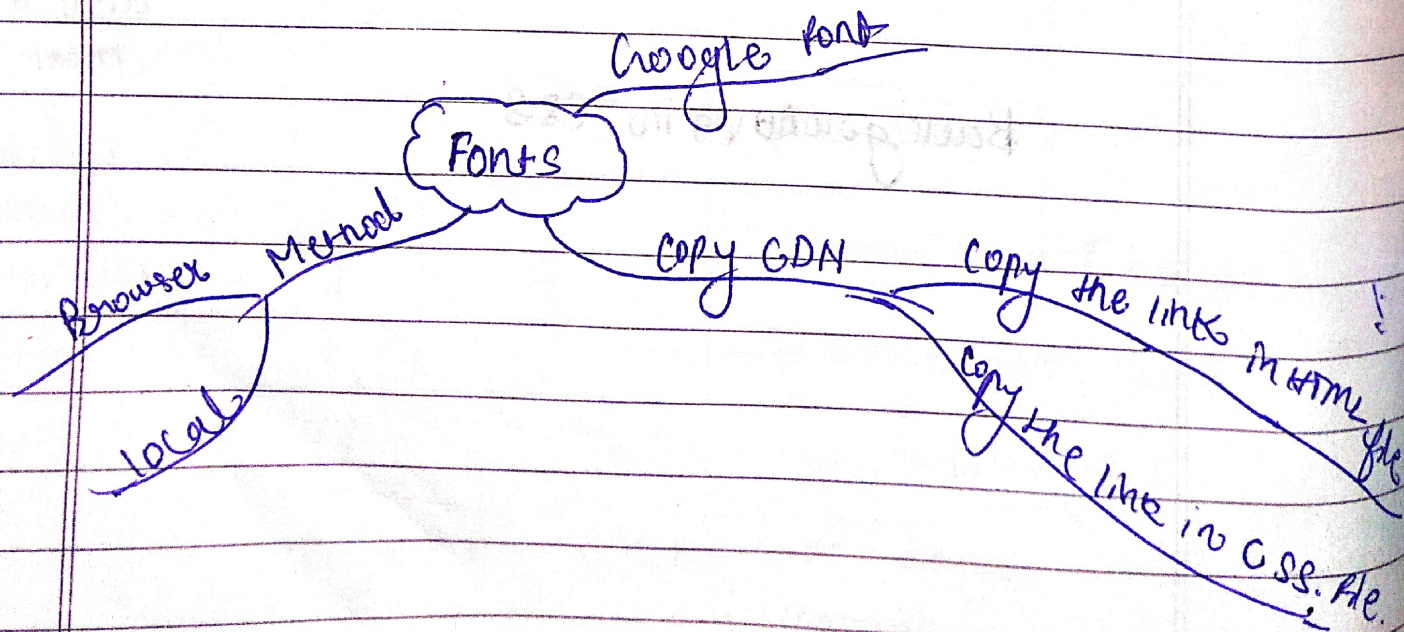
Priority in CSS

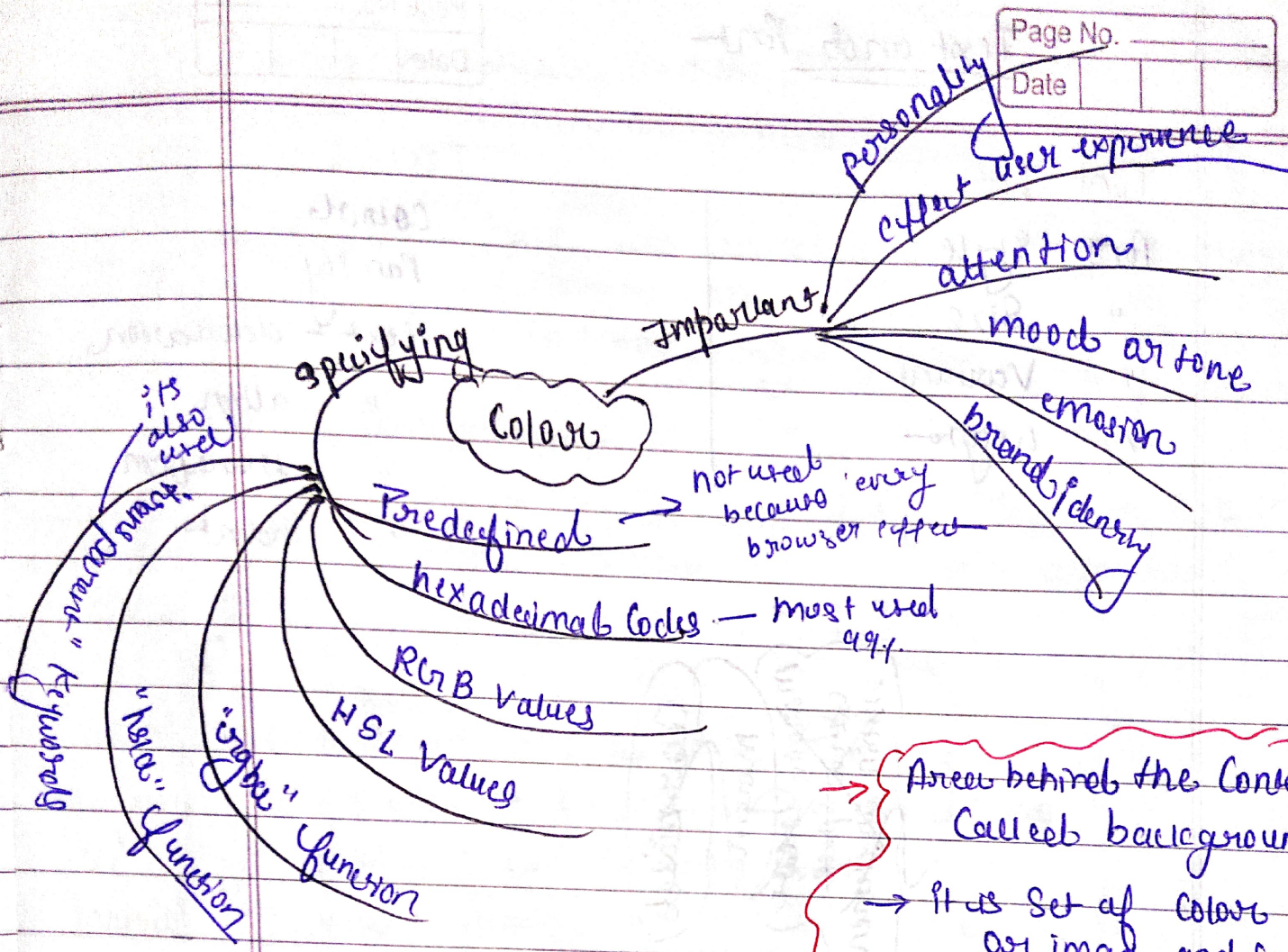
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①

- First priority → inline (our parents)
- Second " → internal (our relative)
- Third " → External (our society)

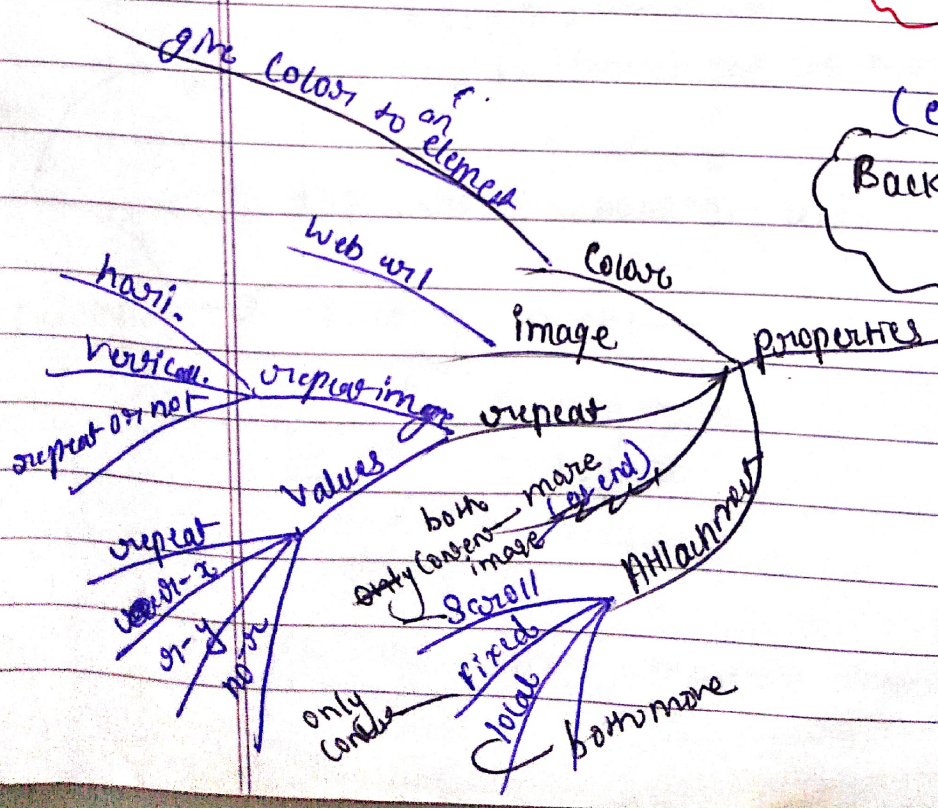
if you give same links





Area behind the Content
Called background
→ It is set of colors
or image and can
be repeated or
positioned as desired

(element)
Background/Style



Margin → Create extra space around an element

Padding → Create extra space within an element

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Margin

- you have less control over all four margin (margin area)

→ [top, right, bottom, left]

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

Negative values are also allowed

(default)

auto → When the browser calculate margins

length → Specifies → px, pt, cm etc / Fixed value

% → width of the containing element

inherit → parent element

An element's padding area is the space b/w its content and its borders.

top, right, bottom, left

Padding

padding-top

" - right

" - bottom

" - left

Padding and element width → understand the clash

Height and Width

(watch video)

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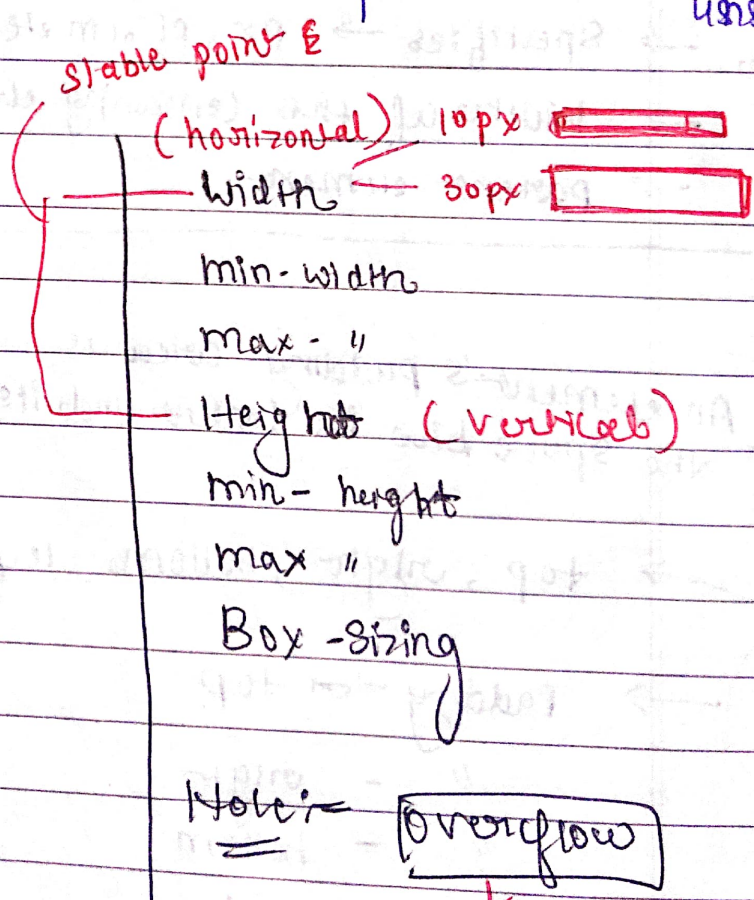
• Width min
max width by default sets the content area

→ but manually you fix by width by

┌ px, em, %, auto (default)
 └ length
 └ image, text

→ keywords values : max - content - min - " Global → inherit initial revert unset.

• Height ||



↓
 if the content over there, hidden that

⇒ a: hover

The specified element(s) but only when in the Specific State

Ex: when a cursor hovers over a link

Attributes
Pseudo-Class
Element (tag / type)

Selectors

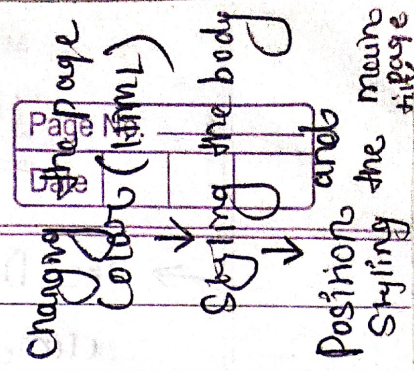
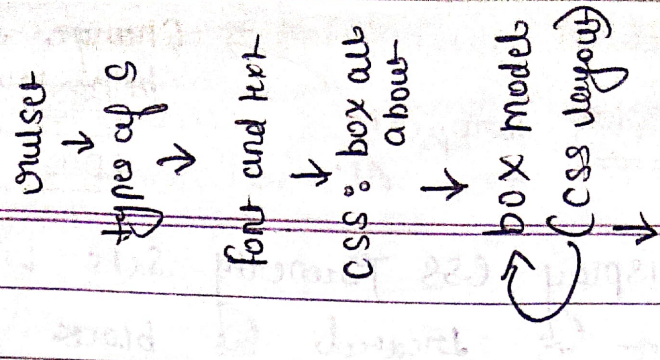
use specified attribute
img [src]

Multiple instance of the same class can appear on a page.
• my-class

each id value should be unique.
my-id

All HTML elements of the specified type.
<p>

CSS basics



Centering the img ←

Display Property

Change the default behaviours of HTML

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→ The Display CSS Property sets whether an element is treated as block or inline element and the layout used for its children, such as → Flow layout
→ grid
→ flex

→ Display Property sets an element's inner and outer display types.

Outer type sets → Flow layout

inner layout sets → children

~~<P>~~ → ~~block~~ element

inside style

```
P {  
  Display: inline;  
}
```

change into block

inside style

```
span {
```

```
  Display: block;  
}
```

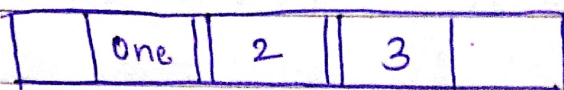
change into inline

import

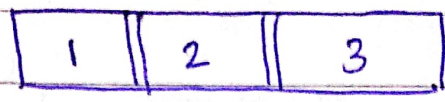
- Display : None → not visible in browser
- Display : hidden → watches the video
- Display : inline-block
- Display : inline

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Display : block ;



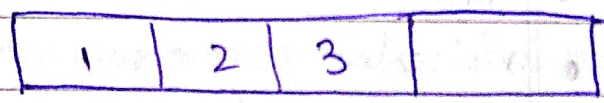
Display : inline-block ;



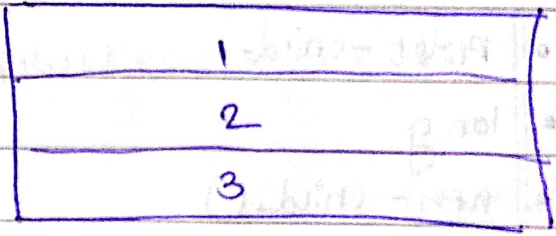
" : none ;

blank

" : flex ;



" : grid ;



most used ppt

(जो प्रामाणिक नहीं)

Pseudo classes — नकली [:]

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→ ~~Some~~ Some work is done by other CSS selectors, then the discovery come is called — Pseudo classes

Most frequent used Selector in PG —

- **hover** → button and link ^(anchor tag) → happens when **visit**
- **focus** → change in small area → **generally used on input**
- **link** → unvisited links
- **visited** → how you clicked ~~there~~
- **active** → happen when **click** Ex: Google
- **first-child** — watch video
- **lang**
- **nth-child()**

maths
1, 2, 3
(1)
(2)
(2n+1)
 $2 \times 1 + 1 = 3$

Syntax: —

```
Selector : pseudo class {
    Property : value ;
}
```

```
Ex := P : hover {
    bgc : black ;
    color : white ;
}
```

→ apply when you go to this context

Can be used to style a specific part of an element

→ Pseudo-classes are used to select elements based on their state, such as when the element is hovered over, when it has focus or when it is the first or last child of its parent element.

Pseud Pseudo-elements [::]

is a keyword added to a selector that lets you style a specific parts of the selected elements.

Ex: — change the first line of ^{every} <p>

P:: first-line {

color : blue ;

text : uppercase ;

}

→ can be used to style an element based on its state.

Syntax: =

Selector :: Pseudo-element {

Property : value ;

}

only use one selector at a time



CSS allows developers to create special types of selectors called pseudo-elements, which can be used to style specific parts of an HTML element.

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Some are :-

:: first-line → change first line

:: first-letter

:: after → change → add msg = "Priyanka"

:: before → opposite of after

:: markers

:: selection

Difference in both
CSS Specificity.

Gradient

used not more

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→ The `<gradient>` CSS data type is a special type of `<image>` that consists of a progressive transition between two or more colors.

↳ Smooth transitions between two or more specific colors.

- ① Linear (goes down / up / left / right / diagonally)
- ② Radial (defined by their center)
- ③ Conic (rotated around a center point)

Linear

Set starting point and a direction (or an angle) along with the gradient effect.

Radial

- It is defined by its center
- to create a ~~radial~~ radial gradient you must also define at least two color stops

Conic

- to repeating radial gradient

Transition

→ hover के बाद कोई animations देना!

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The transition is CSS Property as a shorthand Property like :-

transition - Property - all

transition - duration - 0s

transition - function - ease - (speed) - slow / fast

transition - delay - 0s

→ hover होते के कितनी देर बाद

→ CSS transitions allow you to change Property values smoothly, over a given duration.

Note :- If the duration part is not specified, the transition will have no effect, because the default value is 0.

Ex { Selector {
 transition: width 2s;
}

Time

ease → slow start → fast → end slowly

ease-in → slow start

ease-out → slow end

ease-in-out → slow start and slow end

Linear → constant start and end speed

Cubic-bezier

transition - timing - function

Tooltip

hover होने के बाद
नाम आती

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→ is used to specify extra information about something when the user moves the mouse pointer on element.

<title> — used

→ Commonly used in → image

→ links

→ a tooltip that appears when the user moves the mouse over an element.

↳ placed — left

— right

— top

— bottom

Media Queries

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→ Media Queries are a features of CSS that allows you to apply different styles to a webpage on the characteristics of the device it is being displayed on.

This can be useful for creating responsive designs that look good on a variety of different devices

Such as :- Smartphone
tablets

Desktop Computers

Advantages to using media queries

in your web development projects:-

- Responsive Design
- Customized user experience → increase traffic
- improved performance → low internet require
- enhanced accessibility
- Simplified maintenance

Note :- always start you Responsive design
→ mobile first Design → Now most people are in mobile screens

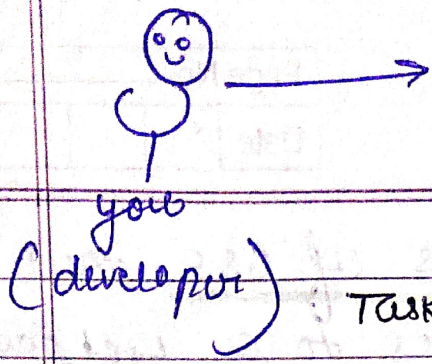
ios Apple → various Screen size

Tablet → different size

Android → different size of different Company

Smart tv → different sizes

#



Startup

→ top 5 product

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→ desktop - list all product in headers

→ in phone → ~~header~~

fit in phone screens all

5 product efficiently

#

heavy animations
not works good
in phone well,

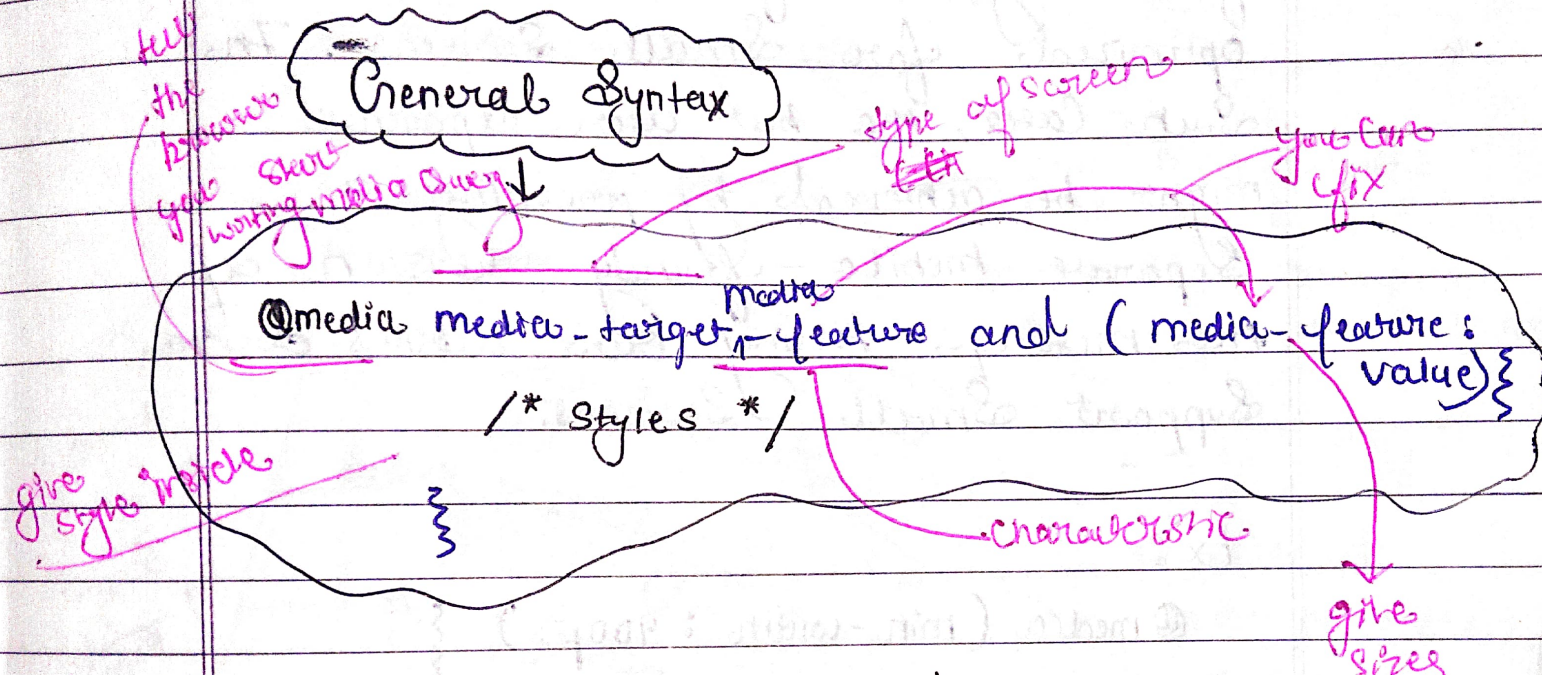
because peoples travel in different areas → their internet connection not well, so its hard to ~~comp~~ make it fast the animation in low internet

#

Must try → increase and decrease
slowly your web browser
and see the margin, - (viewport)
See how the layout change
in different screen sizes.

→ And also explore
"Toggle # device tool bar"
→ help in Debugging

→ adjust your webpage in different sizes of screen.



Note : viewport understood must

↳ Whatever you see in web page is called viewport

↳ Whatever the content render on the browser is called viewport

- phone → ^{Small} very ~~too~~ view port
- tablet → ^{Small} too view port
- Desktop → big view port
- TV → very big view port

} Set in meta

Media Query in Action

⇒ In some cases, websites may not support small screens because the website's functionality and features are not optimized for small screens. In such cases, the best user experience might be achieved by providing a separate mobile-friendly version of the message telling the website does not support small screens.

Ex: =

```
@media (min-width: 900px) {
```

```
// if viewport is atleast 900px
```

```
then this style will apply //
```

```
}
```

Note → give size in media Query in ~~an~~ increasing order

↙ its reduce the chance of overlapping

To keep things simple

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you could say ~~four~~ five groups

① Extra Small devices
(phones, 600px and down) ⇒ max-width : 600px

② Small devices
(portrait tablet and large phone)
600px and up ⇒ min-width : 600px

③ Medium devices
(landscape tablets, 768px and up)
⇒ min-width : 768px

④ Large devices
(laptops/desktops, 992px and up)
⇒ min-width : 992px

⑤ Extra large
(large desktops, 1200px and up)
⇒ min-width : 1200px

Large → 1440px

normal → 1024px

Tablet → 768px

mobile → 425px

Writing media Queries for different Screens :-

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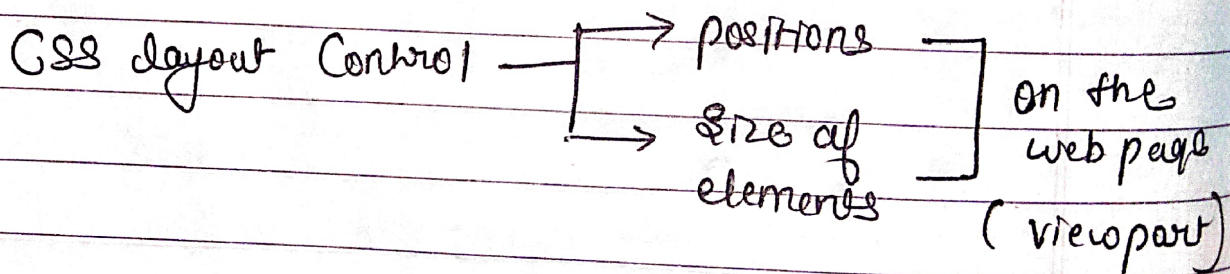
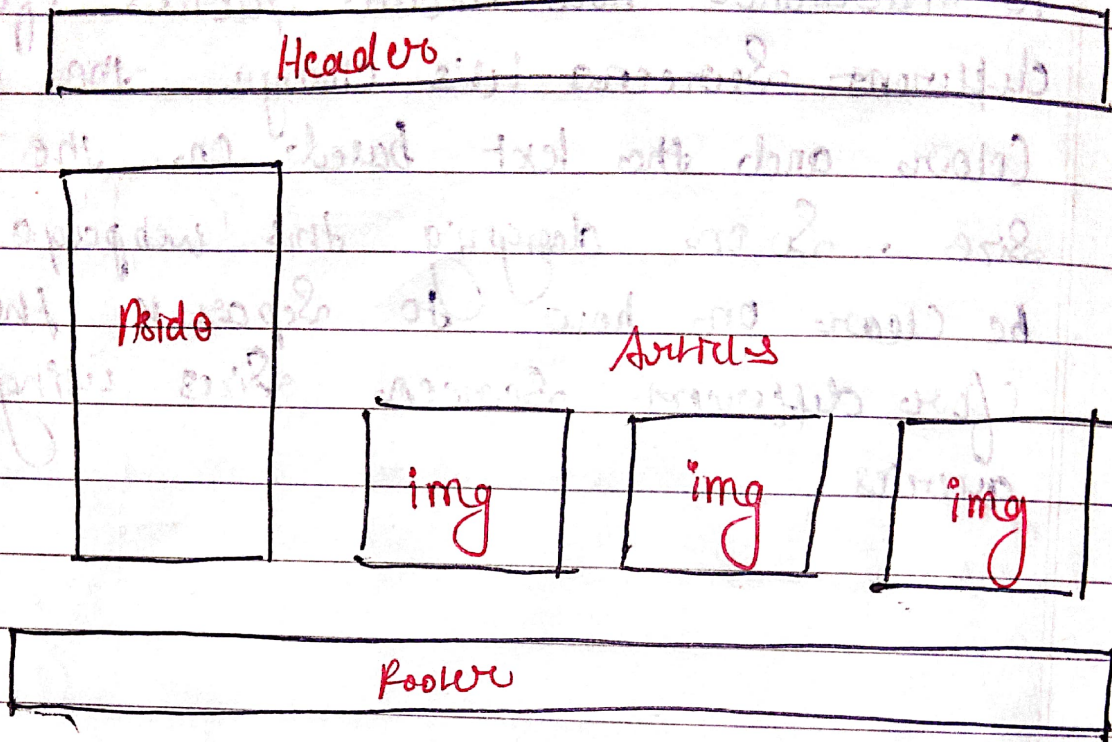
→ To understand how media queries for different screens let's change the background colour and the text based on the screen size. So on designing this webpage we will be clear on how to separate the CSS for different screen sizes using media queries.

CSS layout

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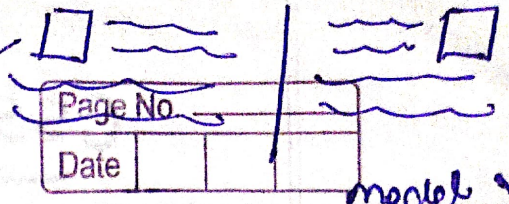
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Web
Page



- Benefits of using :
- Better presentation / Structure
 - Better accessibility
 - Flexible and responsive
 - Reuseability
 - Browser Compatibility

Types of CSS layout :



(default layout)

give origin to place element at any place

- ① Normal flow → what we are using to render our CSS
- ② float → none, right, left
- ③ position → top, right, left, bottom
most used
- ④ flex
- ⑤ Grid → display

→ float property specifies how can position an element within the container.

→ float is majority used when we want to align elements horizontally next to each other.

CSS position

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↳ position give you align your elements at any place :- top, bottom, right, left - one?

CODING BUGS NOTES GALLERY

↓ Types of position

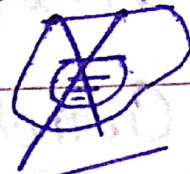
Stick to Div or Parent

must give the default

depends on using condition

- ① → Static
- ② → Sticky
- ③ → Fixed
- ④ → Relative
- ⑤ → Absolute

default positions



mixture of fixed and relative



tell where you want fix

change position according to its relative / current position

what only do according to parents

(Property) Overflow

⇒ The Overflow Property is CSS determines what happens to Contents that is too large to fit in an element's box.

↳ Different Values of Overflow

- Overflow : visible → render outside the box
- Overflow : hidden → outside content will be invisible
- Overflow : scroll → add scrolling — see all content
- Overflow : auto → similar as scroll, but add

add
scrollbars
even if you
need it or
not (no choice)

not (no choice)

scrollbars only when
necessary — have choice

depends
on browsers

Overflow-x and Overflow-y

— these properties specify whether to change the overflow of content just — horizontally
— vertically
— both

x → left/right

y → top/bottom

Z-index

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(Property) — work as stacks

→ Z-index property in CSS used to specify the stack order of an element.

→ An element with a higher Z-index value will be placed in front of an element with a lower Z-index value.

→ Z-index : (Integer value) — 1, 2, 3 etc

↳ the element with a higher number is placed on top of the elements with lower numbers.

→ default Z-index — always — 1

→ always give value in Negative value

work as transparency

→ its only works, if two things are in same position (place)

→ low priority → lower position

- higher " → higher "

Flex Box

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↳ part of CSS layout (method)

CODING BUGS NOTES GALLERY

→ CSS Flexbox ~~allow~~ layout allows you to easily format HTML.

Flexbox makes it simple to align items vertically and horizontally, using rows and columns.

items will "Flex" to different sizes to fill the space, it makes responsive design easier.

making all columns in a multiple-column layout adopt the same height even if they contain a different amount of a content

Why Flexbox

easily add space

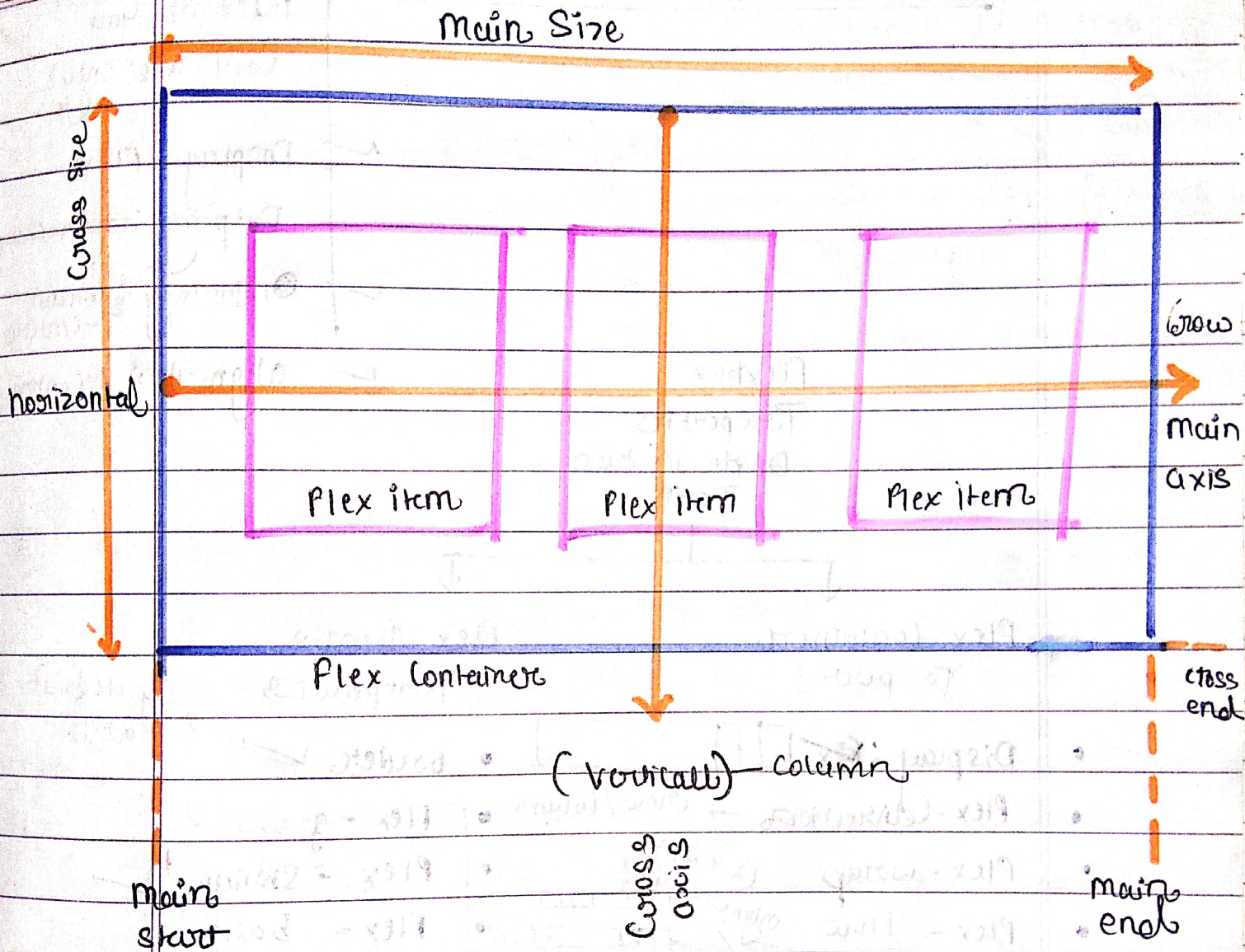
vertically centering a block of content inside its parent

One dimension layout

making all the children of a container take up an equal amount of the available width/height regardless of how much width/height is available.

Note :- Flex box Container \rightarrow Flexbox model

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Some fundamental terminologies of flexbox :-

- ① Flex Container
- ② Flex items
- ③ Main axis
- ④ Cross axis

Different Flexbox Properties

lifetime you will use only

- ↳ Display: flex
- ↳ ~~Display: align-center~~
- ↳ ~~Justify: center~~
- ↳ align-items: center

Flexbox Properties
Divide into two Parts

Flex Containers Properties

Flex items Properties

- Display: flex
- Flex-direction → row / column
- Flex-wrap
- Flex-flow
- justify-content → align to left
- align-items → align to left
- align-content → top to bottom (y-axis)
- gap
 - (i) row-gap
 - (ii) column-gap

- order → by default at 0
- flex-grow 0
- flex-shrink !
- flex-basis
- flex
- align-self

give not space

Commons - flex you add property all at same line.

• Display Property

Display : Flex

Display : inline-flex

it is used to define a flex container. After defining a flex container using display flex over inline-flex.

• Justify Content

→ (works in x-axis) — left to right

→ align the flex items in main axis

Values : — Flex-start

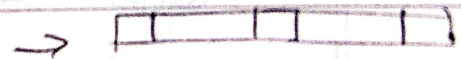
Flex-end

Center

Space-between

Space-around

Space-evenly



→ equal margin

• Align items

→ work in y-axis → top to bottom

→ cross axis

values : — Stretch

— Flex-start

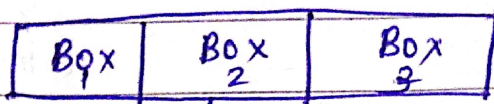
— Flex-end

— Center

— baseline

Flex item Properties

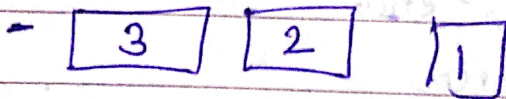
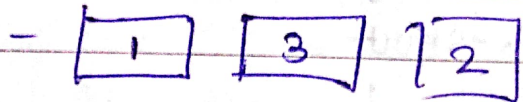
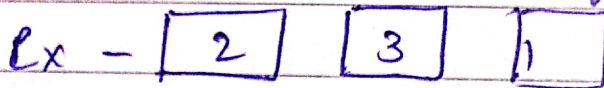
→ There are the properties that are used over the flex items (child elements).



→ works on the particular box, item, we use flex item properties.

• Order — Array

→ give the order / positions of individual flex item.

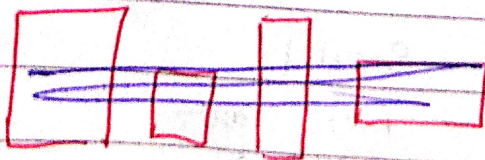


→ align as you want

→ by default → 0

• flex grow → left to right

→ for increasing and decreasing the individual flex item.



— default → 0

→ negative value also allow



→ big numbers & big size

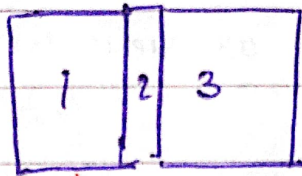
• flex-shrink

(~~top to bottom~~)

→ work same as flex grow

• flex-shrink

→ left to right



Box 2 ⇒ 2

→ flex item should be shrink if the flex container is smaller than the total size of flex items.

→ only positive value ↙

→ default value 1 ↘

means elements will shrink equally to fit the container.

→ higher numbers & more shrink

• flex basic

• flex

in flex property, you give all property
in one time

- flex-grow
- flex-shrink
- flex-basis

• align-self

→ align a flex item its flex container.
(set as you want)

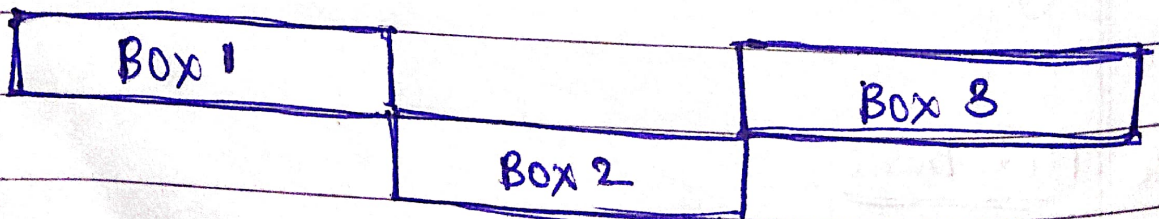
• stretch

• flex-start

• flex-end

• center

• baseline



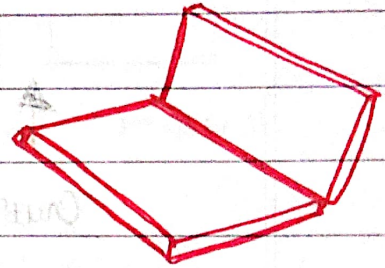
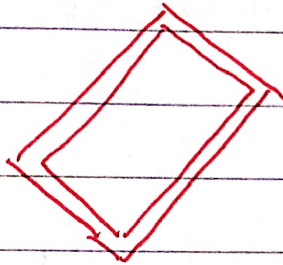
GRID

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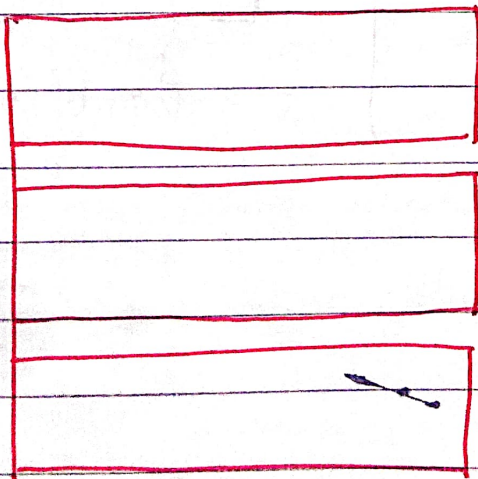
Date | | | |

CSS Grid layout

⇒ is a two-dimensional layout system for the web. It lets you lay content out in rows and columns and has many features that make building complex layout straight forward.



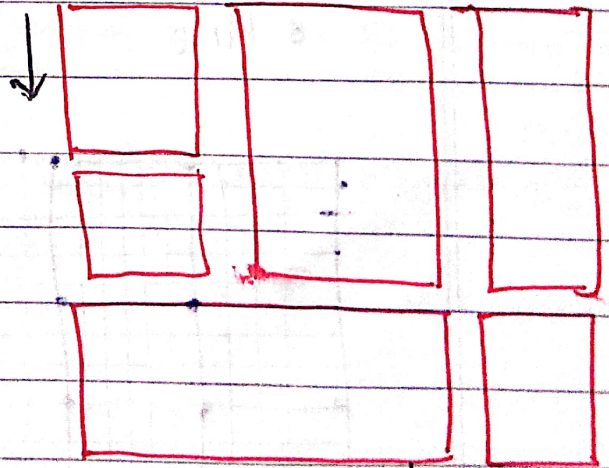
They help us to create designs where elements don't jump around or change width as we move from one page to page, providing greater consistency on our websites.



Flexbox

One Dimension

(Draw back big)



CSS Grid

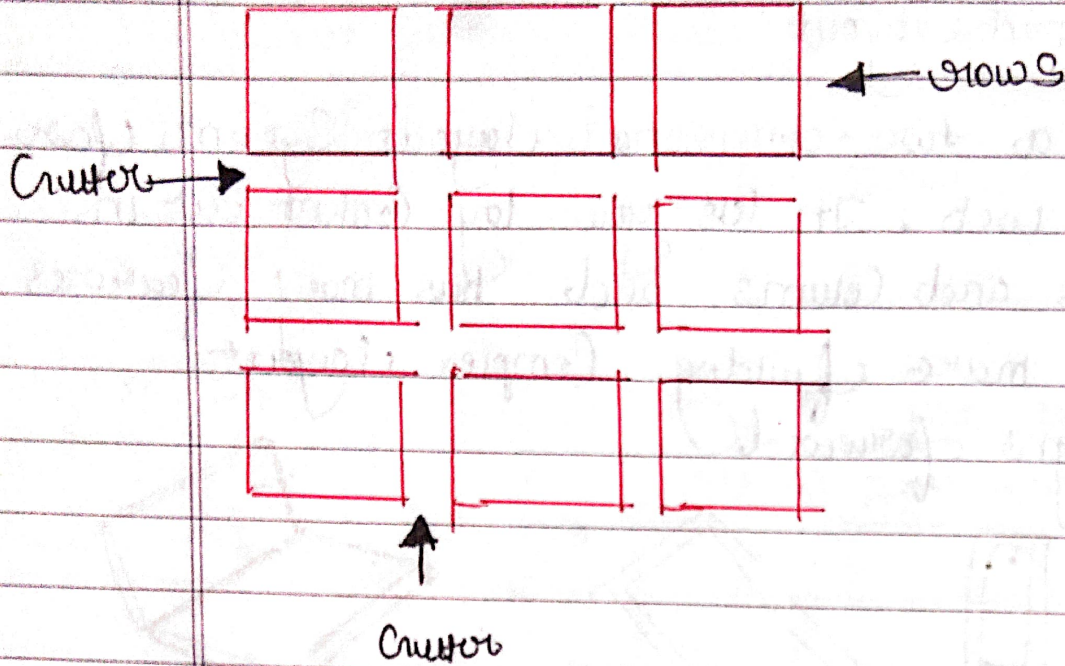
Two Dimension

Why it's come

Grid Layout

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Columns
↓



Terminologies :-

- Element
- Row
- Column
- Gap
- Line

Grid Item

