

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 forall web.
- Now let's try to break the acronym :

Cascading : Falling of Styles

Style : Adding design / styling our HTML tags

sheets : Working our 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 screen, on paper, in speech or on other media

History

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

↓
1996 : CSS was published on 17th November
with influences Bert Bos co-author

Later he became Co-author of CSS

1996 : CSS became official with CSS was
published in December

1997 : Created CSS levels 2 and 4 on Nov,

1998 : Published on 12th May.

Editors :-

- Atom
- Brackets
- Espresso (Mac OS X)
- Notepad++ (Great for HTML and CSS)
- Komodo Edit (Simple)
- Sublime Text

CSS in PW Skills

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↓ mainly used for style

→ 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 pages, such as

- Font
- Color
- Size
- Layout of texts and others.

Why CSS important for Web Developers?

- Styling and Responsive Design

Responsive to change in Size of Dimensions

CSS gives
to support

- Separation of Concern and appearance,
→ not creating in only single file \hookrightarrow becoming some parts
- Reusability and animation

I have ID
and class

\hookrightarrow animations

Support have

with user
in multiple
time

\rightarrow Selecting
multiple
elements

p:
p,

hi {

color: red;

}

must use
commas

apply
rule
to all
of them.

Reasons to learning CSS



- Fast Page Speed

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(load time)

- Better UX and Quick Dev time

(maintain)

- Easy formatting changes and Compatibility across devices. → works compatible you can open works different devices

Bonus tips :- Create more hints as possible, use uppercase your command on CSS

Anatomy of a CSS

Format

Selectors

Structure
Control

P { → each selector wrapped in curly braces }

Color: red;

Property
(key)

Property Value

contains many choices

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

Declaration

24 Jan

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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 its not understandable then search on google translate, slowly slowly you will understand that. \Rightarrow Fact

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

Inline

inline styling is a technique in HTML that allows 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; font-size: 24px; border: 1px solid black; padding: 5px; margin: 10px; border-radius: 10px; background-color: #f0f0f0; text-align: center; width: fit-content; margin-left: auto; margin-right: auto;">Hello</p>
```

→ When you write code inside the HTML code — called inline

→ 3rd element of 3rd

2

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 internal → 3rd file or 3rd
inside the → head
CSS (HTML)

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.

only use wrens
you need give ~~unval~~
style so the particular element.

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inline :-

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 goes to 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 classes / classes cannot be styled with
- not versatile — Can't be applied elsewhere
- if use it one place, then can't use that change in another place.

(b)

Internals in detail

- The internal CSS is used to add a certain style from 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

Advantages:-

- 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 file

Disadvantages :-

- ① at once if they are useful for only the page they are specific on. → you have write same style in all pages
→ you can't not update automatically others page.
- ② Internal style sheets increase page load time. bulky — hard to understand code

⑥

External CSS

not forget
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>` tag on every page and the `<link>` tag should be put inside the `<head>` section.

Example :-

`<head>` → Link: CSS - tag

`<link>`

`</head>`

Selectors in CSS

Select ~~HTML~~ Tags in

(1)

Part 1.

Why we use Selectors?

→ HTML Selectors are so long, in real life,
so it's not possible or wise to give a tag to
every element to beautify.

Class is most use Selector in CSS

Selectors :- help you to manipulate HTML code,

We will be using Internal CSS to demonstrate CSS Selectors

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

Simple Selectors

(1)

Types of
Selectors
(most used)

(2) Combinations

(3) Attribute "

(4) Pseudo - class "

(5) Pseudo - elements "

not used

mostly

rarely

deeply

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

① Simple Selectors :— pretty straight forward.

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most used

-
- ① Universal " " →
 - ② Element " " → h1, p, etc
 - ③ Class " " → (class = "") = . prior { } not good in long
 - ④ ID " " → # (unique) implement more as more
 - ⑤ Selector list → = # id's multiple class
- Ex :- .class1, .class7, .class10 { } not used in multiple places.

Part 2

② Combinators

between the Simple Selectors
contain more than one Simple Selector.

almost same

-
- ① Descendant → parent child selection main > p = main p { }
 - ② Child → h1 > p { } child Selectors are not parent Selectors
 - ③ Adjacent Siblings → section + p { } Section at first (अंतिम) then next Section (नेक्स्ट)
 - ④ General → section ~ p { } (2nd next)
 - ⑤ Section →

③ Attribute Selectors (+)

→ [+] { } 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 (poppins etc) so, then
How to use it.
- So, How to apply // to another browser / website,
then take CDN and apply in your
HTML code. → Content delivery Network,
~~(addreses)~~

Font :- whatever we write text

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

always remembers 2 things :-

- (1) fonts in meta head in HTML
- (2) fonts in use part in mpf.css
file in which the link of all js is

google
fonts.

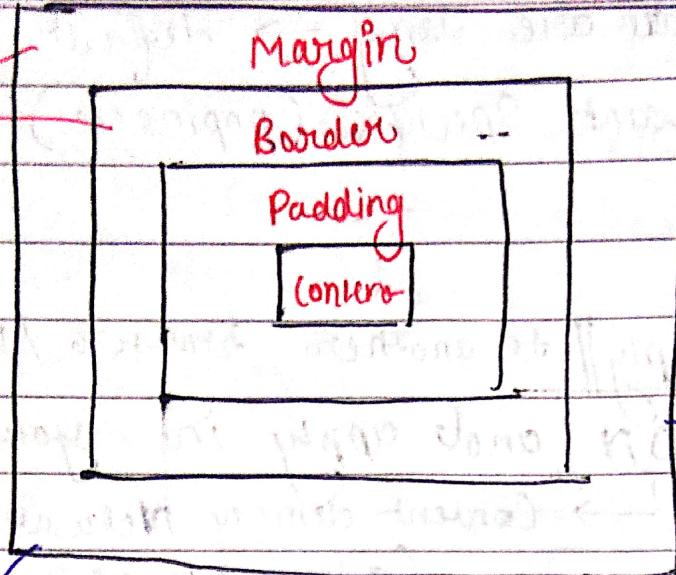
First link :- tell the browser
use
Second link / tell the .css file

2
4

Box Model

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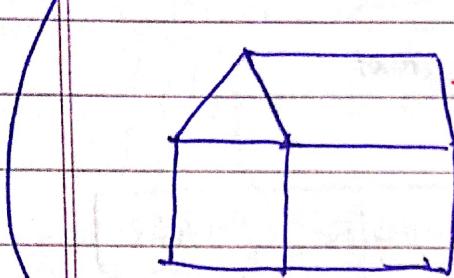
take very less space



→ term "box Model"

is used when discussing a web application's design and layout.

→ box that wraps around every HTML element



→ Bricks → Wall → margin, Border etc
(mixture of this make home (content))

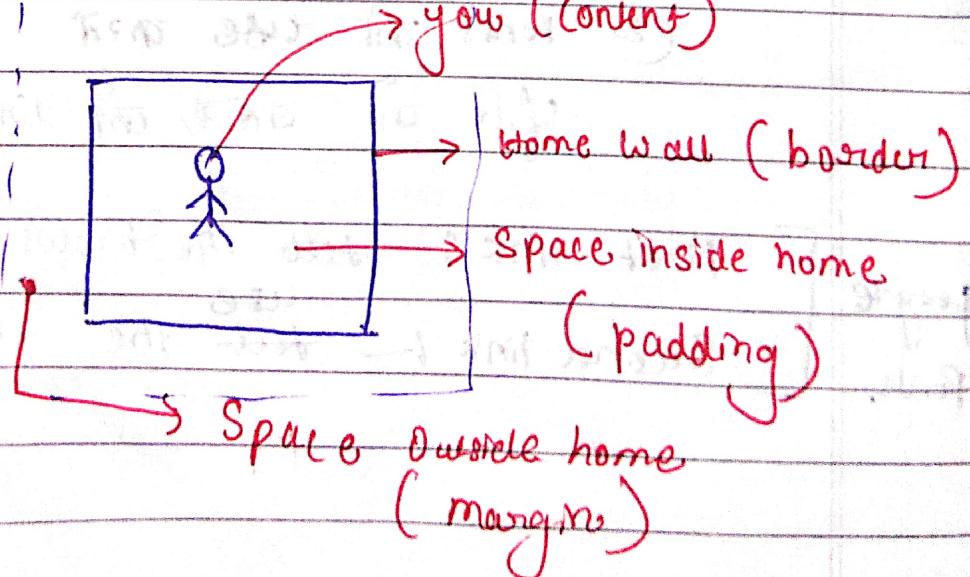
inspire → user agent Style sheet

clockwise

understand how it work

Also should know how to calculate! —

350px



③

Colors and Styles in CSS

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↳ How to make beautiful colors in your browser
to beautify your web page.

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

google browser a
variation Red = mozilla

(chance to show
differences)

There are different ways of taking colors
in your website.

Problem in that, every
browser, treat different

using Predefined Color names colors different
of same name.

① " hexadecimab Colour Codes (99.9% percent
used)

② " RGB Values

③ " HSL Values

④ " the "rgba" function

⑤ " the "hsla" function

⑥ " the "transparent" keyword →
also used

most highly

Backgrounds in CSS

also

explore
this

28 Feb

11

Priority in CSS

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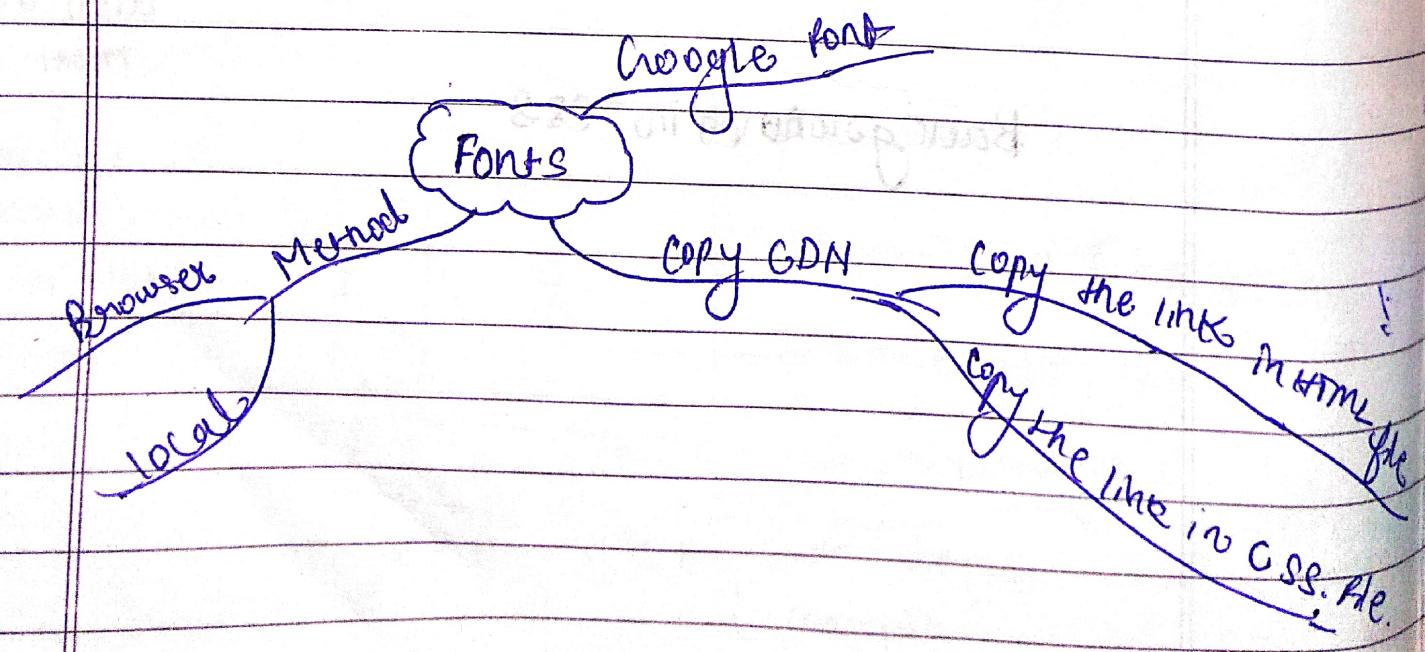
First priority → inline (our parents)

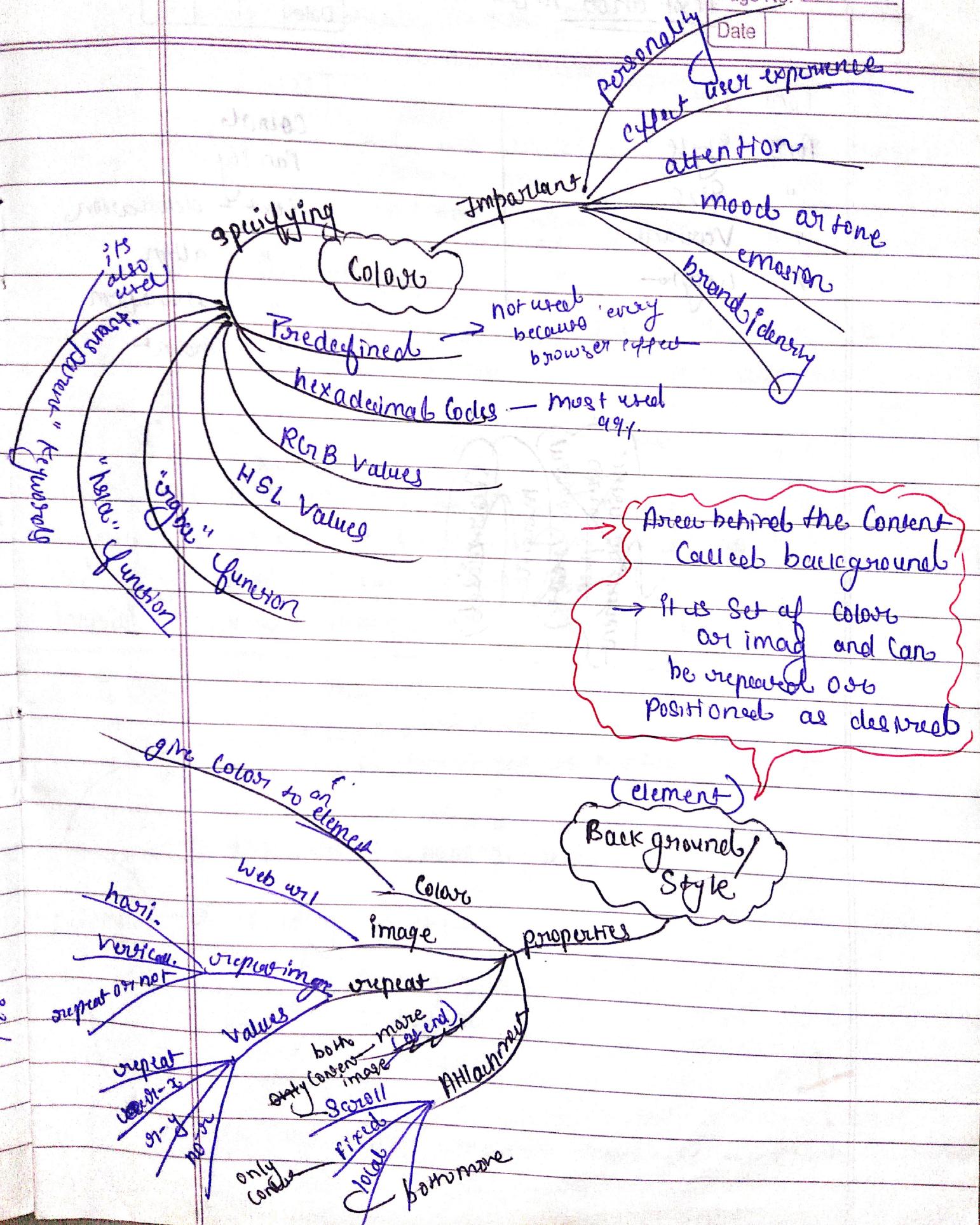
Second " → internal (our relative)

Third " → External (our society)

if you
give
same think

28 Feb present to your teacher and classmate





Margin → Create extra space around an element

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Padding → Create extra space within an element

Margins

- You have more control over all four margins (margin area)
→ [top, right, bottom, left]

margin-top

margin-right

margin-bottom

margin-left

Negative values are also allowed

(default)

auto → When the browser calculates margins

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

% → Width of the containing element

inherit → parent elements

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

→ top, right, bottom, left

Padding

→ Padding -> top

" - top

" - bottom

" - left

Padding and element width → Understand the clash

→ (watch video)

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[Height and Width]

- Widths ← min
= max
→ widths by default sets the content area

→ but manually you fix by width by

px, em, %, auto (default)
length → image, text

→ keyword values :- max-content | Global → inherit
min - " | initial
max - " | revert
width - " | unset.

Height

stable point E

(horizontal) 10px

width → 30px

min-width

max - "

Height (vertical)

min-height

max - "

Box-sizing

Hole :-

overflow

if the content over then, hidden that

Positioning the main page

Centering the img

• my-classes

→ styling the body
→ changing the page
→ color (HTML)

Page
HTML

→ box model
→ CSS layout

→ four and two
→ CSS : box all

→ types of S

→ classes

CSS rules

All HTML
elements of
the specified
type.

< p >

each id
value should
be unique

my-id

Selectors

ID

multiple
instances of
the same
class can appear
on a page.

use
specified
attribute

img [src]

The specified element(s)
but only when on the
specific style,

Part when a cursor is
hovering over a link

pseudo-class

attribute

class

=> a : hover

Display Property

Change the clear default
behaviour of HTML

Date		
------	--	--

- The Display CSS Property Sets whether an element is treated as block or inline elements 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 set → children

✓ PW

<P> → ~~block~~ block element

inside style

P {

Display: inline;

}

change into
block

< Span >

inside style

Span {

Display: block;

{

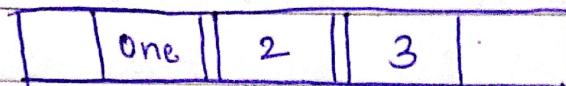
change into
inline

impacts

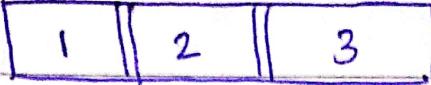
- Display : None → not visible in browser
- Display : hidden → watch the video
- Display : inline-block
- Display : inline

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Display : block ;



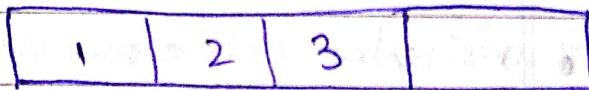
Display : inline-block ;



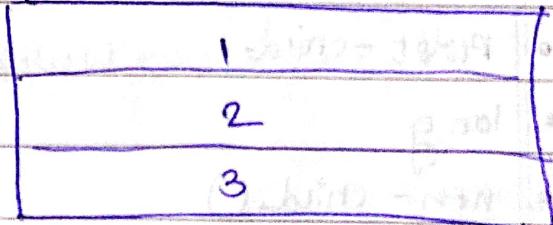
" : none ;

blank

" : flex ;



" : grid ;



Must
read
Ppt

(जो पूर्णांतर न हो)

Pseudo Classes — [::]

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

Most frequent used Selector in PC —

- hover → button and link *(cursor tag)* → happens when visit
- focus → change in small area → generally used on input
- link → underline links
- visited → how you clicked *there*
- active → happen when click Ex: Google

nth-child()
1, 2, 3
(1)
(2)
(even)
(odd)
 $(2n+1)$
 $2n+1$
= 3

Syntax : —

Selector : pseudo class {

Property : Value ;

Can be used
to style a
specific
part of
an element

Ex : P : hover {

apply
when
you

bgc : black ;

color : white ;

{

go to
the
content

→ 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.

Pseudo Pseudo-elements [::]

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

Ex : — change the first line of `<p>`

`P :: first-line {`

→ can be used

color : blue ;

to style an

text : uppercase ;

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

::marker

::selection

Difference in both

CSS Specificity.

Gradient

use < gradient >

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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 the center)
- ③ Conic (rotated around a center point)

Linear



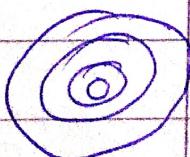
Set starting point and a direction (or an angle) along with the gradient effect.

Radial



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

Conic



- to repeat radial gradients

Transition

→ hover के बाद - कोई animation नहीं।

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The Transition is CSS Property is a shorthand Property for : all the

transition - Property - all

transition - duration - 0s

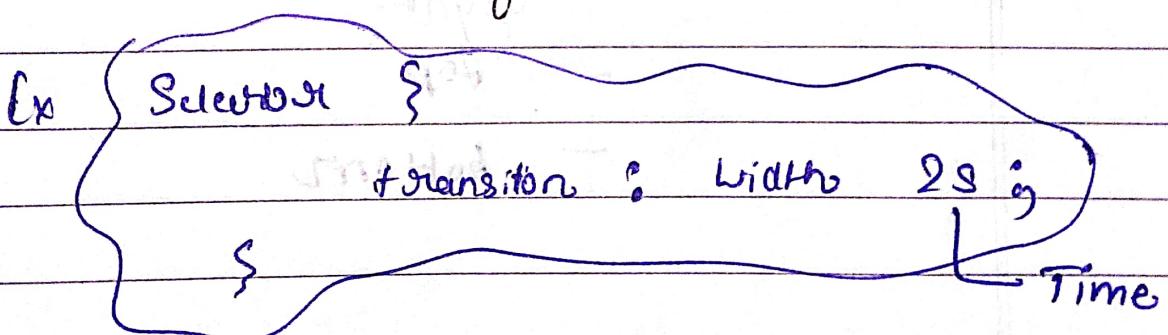
transition - function - eas - slow / fast

transition - delay - 0s

→ hover कोई नहीं होना वेर बाबू

→ 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.



ease → slow start → fast → ends 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

Tooltip

hover → in the tag

नम्ह टिप्प

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

<title> — uses

→ Generally 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 feature of CSS that allows you to apply different styles to a webpage on the characteristics of the device it's 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 usage
- enhanced accessibility
- Simplified maintenance

Note :- always start your Responsive design.

→ Mobile first Design → Now most people are in mobile screen

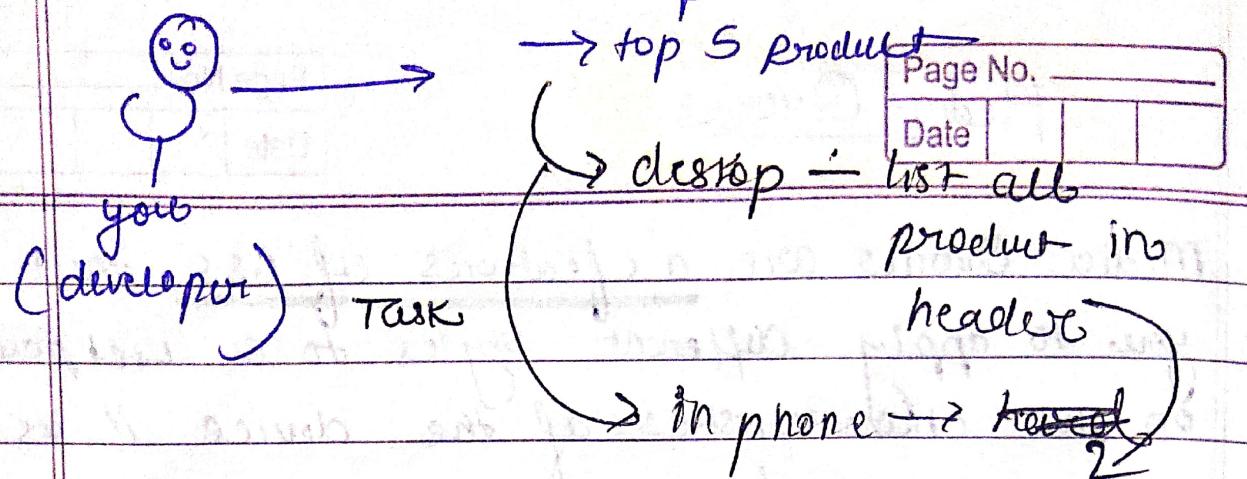
iOS Apple — various Screen size

Tablet — different size

Android — different size of different Company

Smart tv — different sizes

#



#

heavy animation

not works good

in phone well,

5 products
efficiently

because people travel to different areas → then internet connection not well, so its hard to make it fast the animation in slow network

#

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"

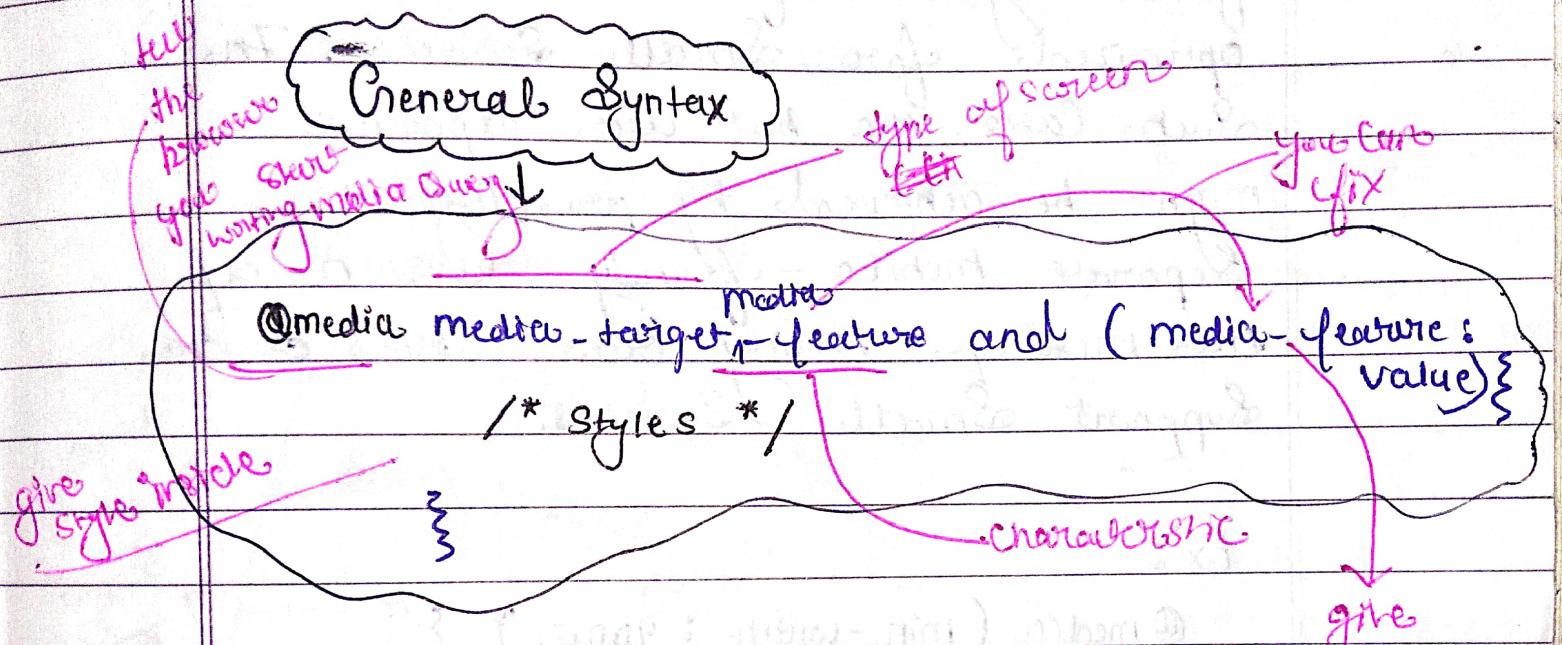
help in Debugging

Part - 2

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→ adjust your webpage in different sizes of screen.



Note : viewport understand must

- Whatever you see in web page is called viewport
- Whatever the content renders on the browser is called viewport

phone → very ^{small} _{big} viewport
tablet → ^{small} _{big} viewport
Desktop top → big viewport
TV → very big viewport

} 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 user that 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 increasing order,

it reduces the chance of overlapping

Media Query In Different Device Screens.

- Why popular?
- Typical Breakpoints
- Different Screens.

increase no. device

run most devices as possible →

use of mobile browsing

Benefits to business

improving experience

Better accessibility

Better performance

mobile vs most possible device,

Form supp

then browsing increase in mobile device

- Typical Breakpoints: —

There are tons of screens and devices with different heights and widths, so it is hard to create one exact breakpoint for each device.

To keep things simple
you could say there are five categories

① Extra small devices \Rightarrow max-width : 600px
(phones, 600px and down)

② Small devices
(portrait tablets and large phones)
600px and up \Rightarrow min-width : 600px

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

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

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

Large \rightarrow 1440px

Normal \rightarrow 1024px

Tablet \rightarrow 768px

Mobile \rightarrow 425px

Writing media Queries for different Screens :-

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→ To understand how media queries (for different screens) it's change the background colour and the text bated. 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

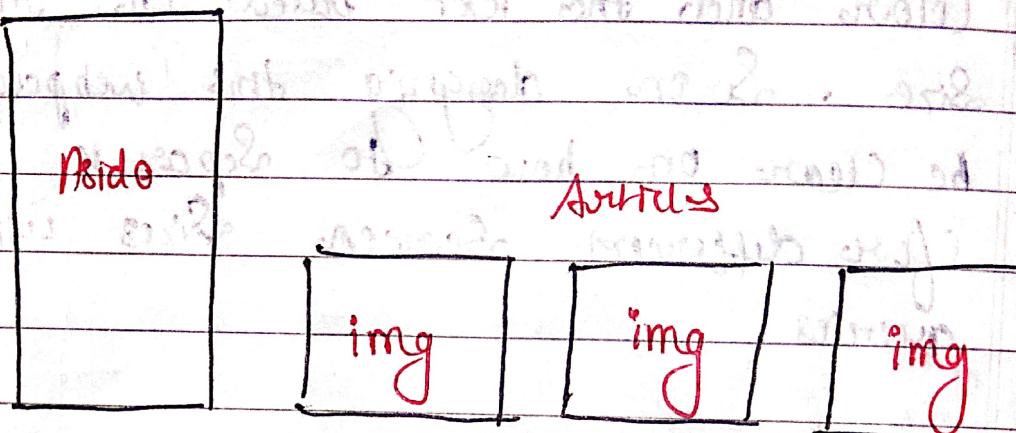
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Domesticated

Header

Web
Page



CSS layout Control → positions
→ size of elements] on the web page
(viewport)

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

model

Types of CSS layout:

① Normal flow → what we are using to understand CSS

② Float → none, right, left

③ position → top, right, left, bottom
most used

④ Flex

⑤ Grid

give origin to
place element
at any place

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

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

CSS position

→ position gives vertical alignment to elements at any place :- top, bottom, right, left one?

stick
to
parent

must
give
the direction

depends
on
origin
condition

Types of position

① → Static

② → STICKY

③ → Fixed

④ → Relative

⑤ → Absolute

→ default positions

mixture of fixed and relative

tells & where you want fix

→ change position according to its relatives / current position

what only do according to parents

(Property) Overflow

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→ The Overflow Property in CSS determines what happens to Content 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 adds scrollbars only when necessary — have choice

→ add scrollbars even if you needed 0% not (no choice)

depends on browser

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 Stack

- 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 elements 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
 - ↳ works as transparency
- it 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)

→ CSS Flexbox 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 column in a multiple-column layout adopt the same height even if they contain as different amount of content

Why Flexbox
easily adds space

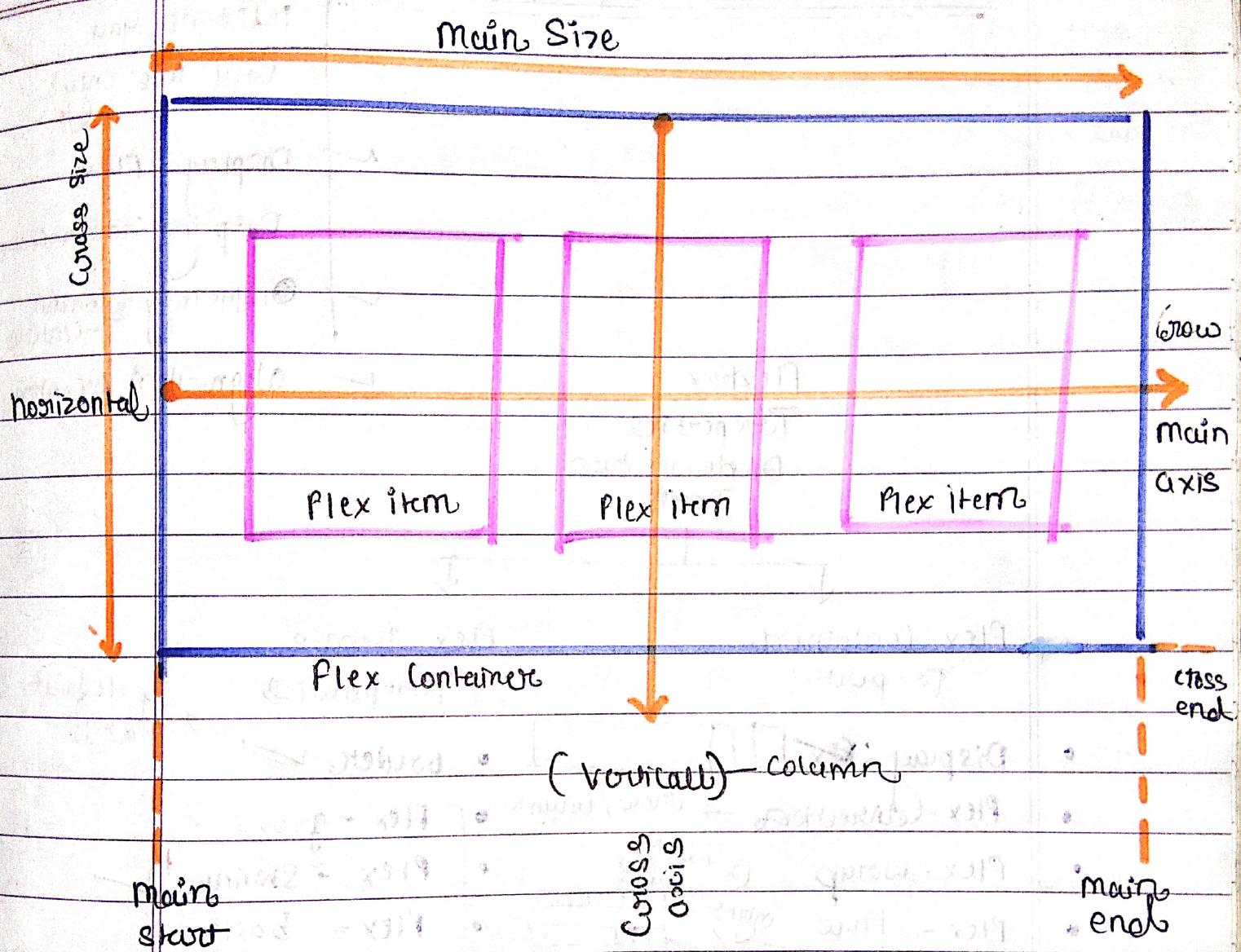
Vertically centering a block of content inside its parent

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 :- Flexbox Container → 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

In future you will use only ↴

Display : flex

~~Display : inline-block~~

Justify-content : center

Align-items : center

Flexbox
Properties
Divide into two
Parts

Flex Container
Properties

Flex items

Properties

by default at 0

- Display : flex
- Flex-direction → row / column
- Flex-wrap (x-axis) ↴
left to right
- Flex-flow (y-axis) ↴
right to left
- justify-content ↴
center to space-between
- align-items ↴
flex-end to flex-start
- align-content ↴
top to bottom (y-axis)
- gap
(i) row-gap
(ii) column-gap

- order ↴
- Flex-grow 0
- Flex-shrink 1
- 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 us used to define a flex container. After defining a flex container using display flex or inline-flex.

•

• Justify Content

→ (works in x-axis) — left to right

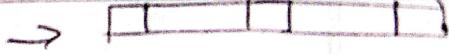
→ align the flex items in main axis

Values :- flex-start

flex-end

center

space-between



space-around — equal margin

space-evenly

• Align Item

→ works in y-axis → top to bottom

→ cross axis

values :- stretch

- flex-start

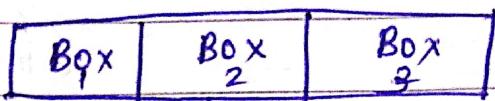
- flex-end

- center

- baseline

Flex Items Properties

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

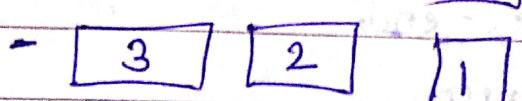
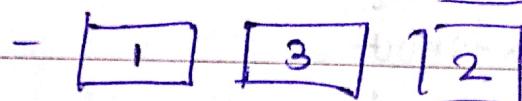
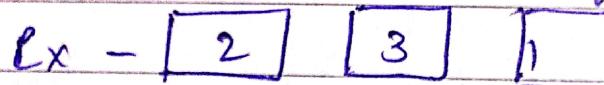


→ work on the particular box, i.e., we use flex item properties.

- Order

Array

→ give the order / positions of individual flex item.



→ align as you want

→ by default → 0

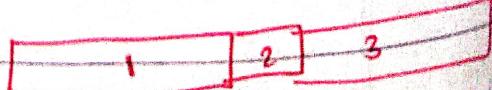
- flex grow → left to right

→ for increasing and decreasing the individual flex item.



→ default → 0

→ negative value also allow



→ big numbers & big size

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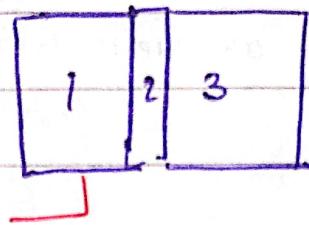
- Flex-Shrink

(top to bottom)

→ work same as flex-grow

- Flex-Shrink

→ left to right



→ 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

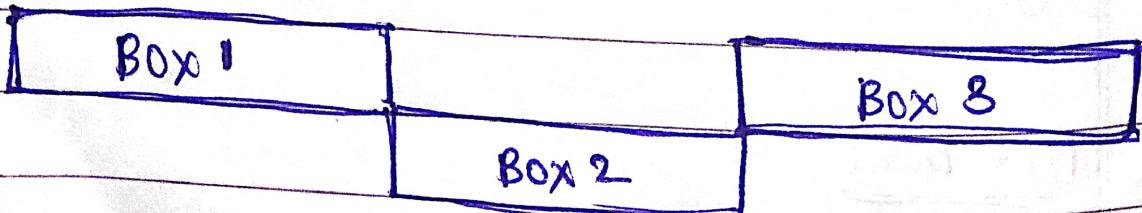
in Flex property, you give all property
in One time

- Flex-grow
- Flex-shrink
- Flex-base

• align-self

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

- Stretch
- Flex-start
- Flex-end
- Center
- baseline



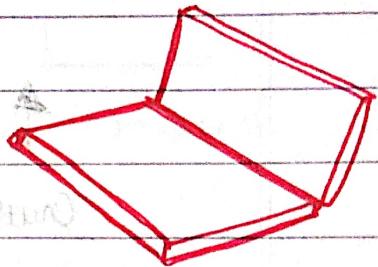
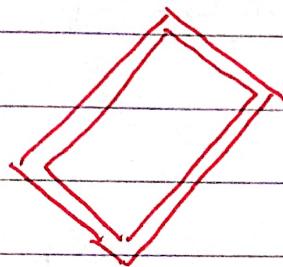
GRID

Page No.

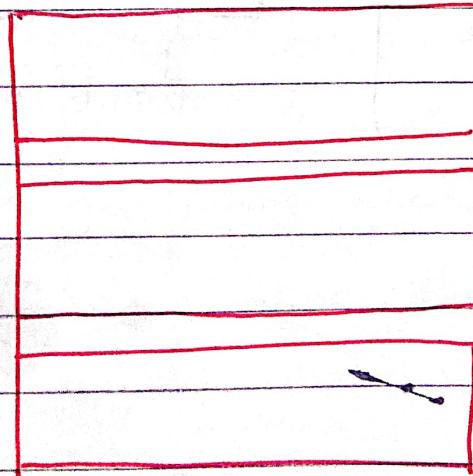
Date

GSS 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 straightforward.



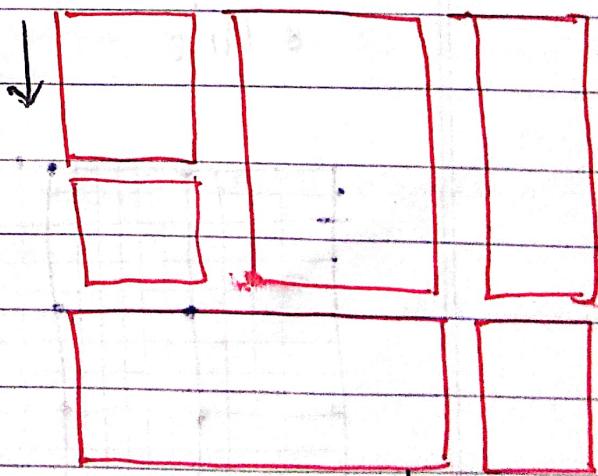
They help us to create designs where elements don't jump around or change width as we move from one page to page, providing greater consistency on our websites.



Flexbox

One Dimension

(drawback
big)



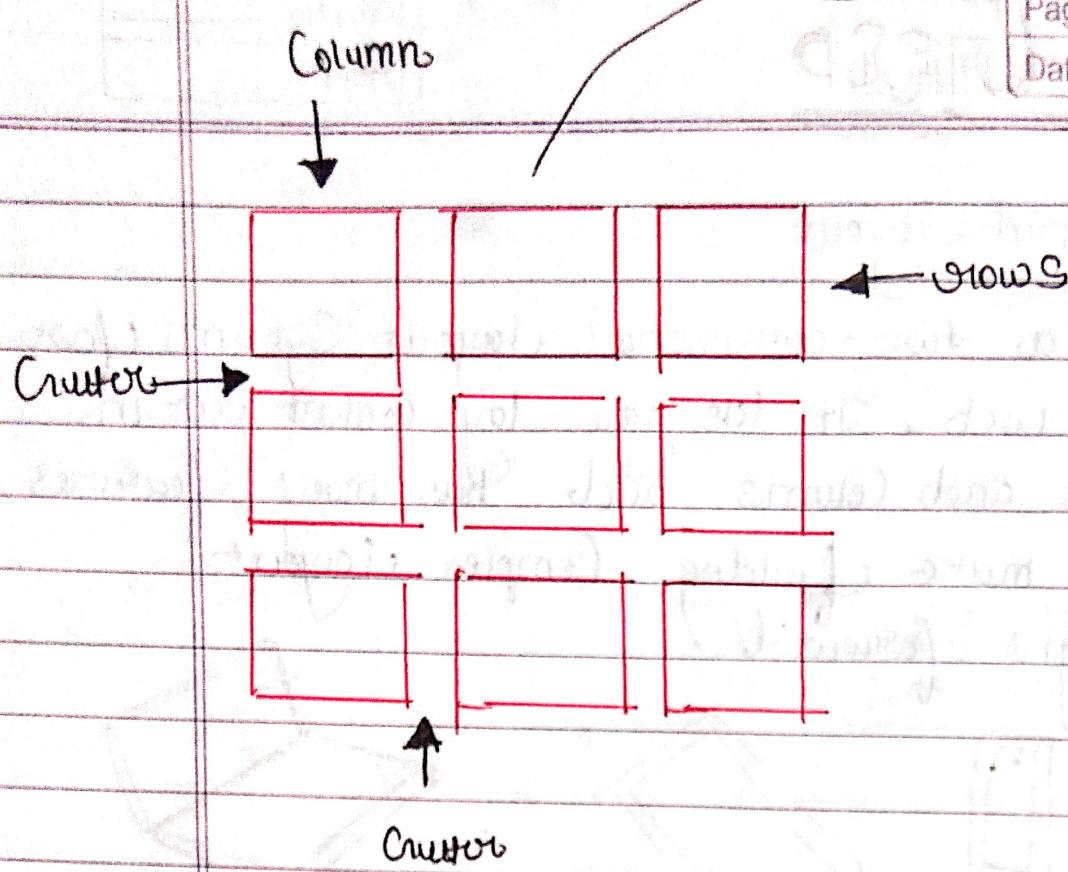
CSS Grid

two Dimension

Why its come

Grid Layout

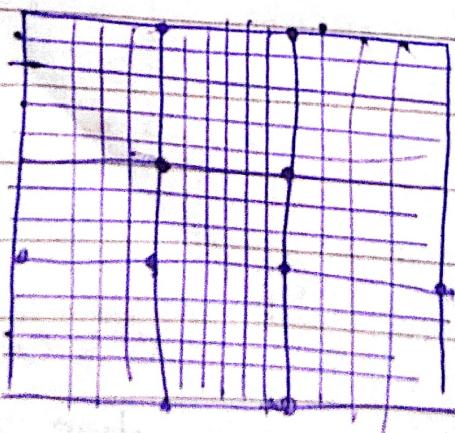
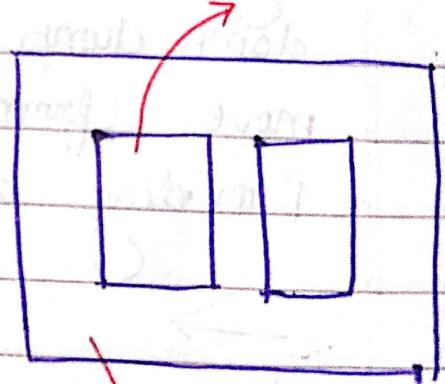
Page No.			
Date			



Terminologies :-

- Item
- Row
- Column
- Gap
- Line

Grid item



Properties of Grid

(Parent)

(child)

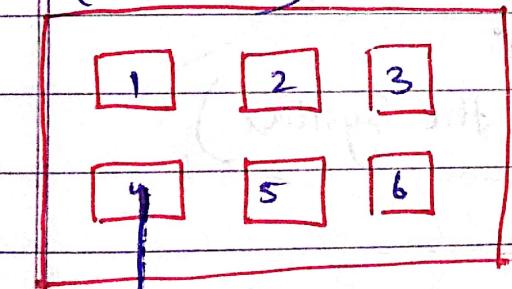
Grid
Container

Grid
items

use one
gravior
unit

- Grid - template-rows
- Grid - template-columns
- Align - Content
(y-axis)
- Justify - Content
(x-axis)
- Grid - row
- Grid - Column
- Grid - area
- Naming grid

Ex



Pg - Gravior Unit

Grid
Container