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Topic: Course HTML

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CSS



CSS (Cascading Style Sheets) is a styling language that makes websites look beautiful and professionally designed.

1-CSS Syntax:

```
h1 {  
    color: black;  
}  
like equals (=)        ↗  
Differenciate between elements
```

2-Selector:

it is a tool used to specify which HTML elements we want to apply formattting (style).

2-1-Element Selector:

Element Selector: (h1, div, p ...)

```
P {  
    color: blue;
```

2-2-Class Selector:

Class Selector: (.title)

```
.title {  
    font-size: 20px;  
}
```

HTML

```
<p class="title">Hello</p>
```

2-3-ID Selector:

ID Selector: (id प्रैज़स्व उ)

```
# main{  
    background: yellow;  
}
```

HTML
<div id="main"> batin </div>

2-4-Descendant Selector:

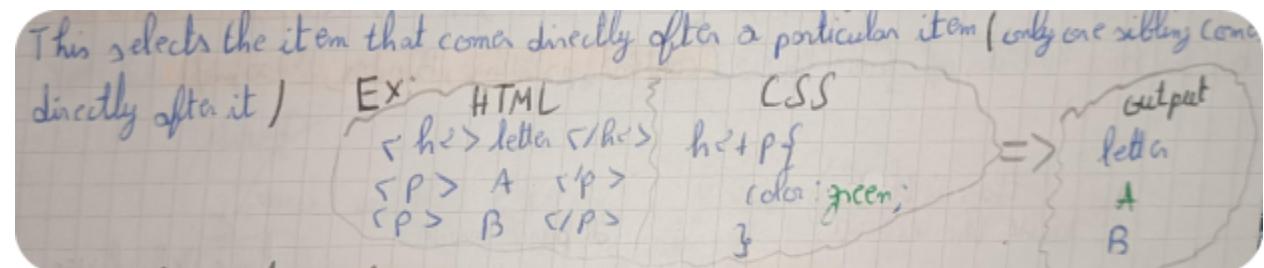
Descendant Selector: (inheritance)

```
div p{  
    color: green;  
}
```

HTML
<div> <p> </p> </div>

3-Sibling Selectors:

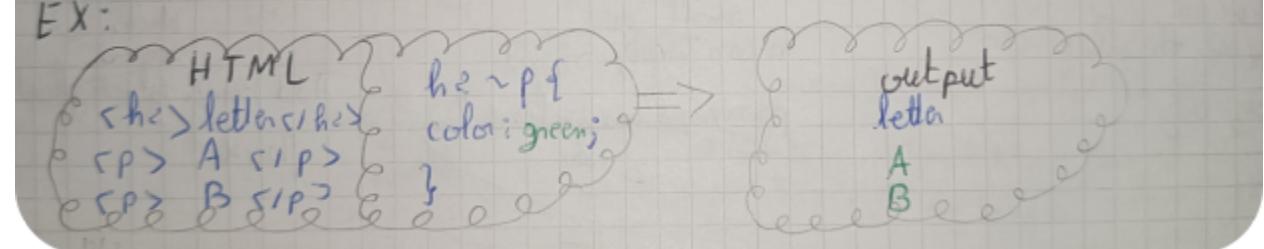
3-1-Adjacent Sibling Selectors :



3-2-General Sibling Selectors(~) :

This selects all brothers (siblings) that come after the item, not just the one immediately after it.

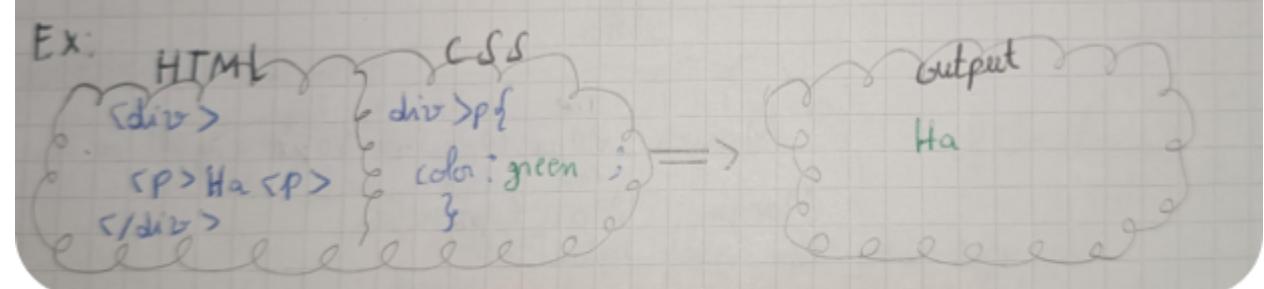
Ex:



3-3-Child Selectors(>) :

This selects only direct child element within a given element.

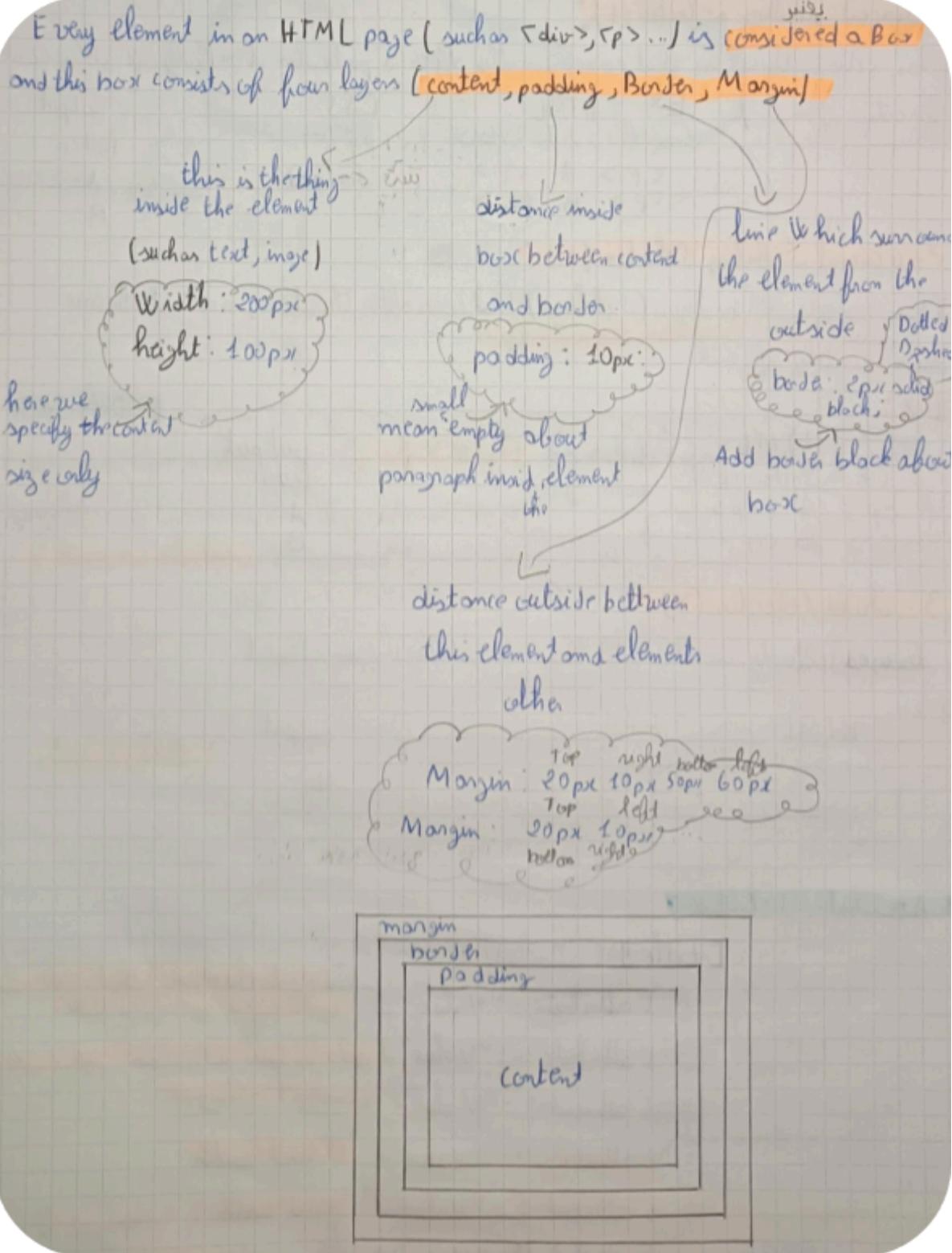
Ex:



4-Attributes Selector:

- ① [attribute]
- ② [attribute = "Value"] → selects the element that is exactly equal to a specified value
- ③ [attribute ~ = "Value"] → ولكن تكون مفهولة بـ *space* *or* *dash* ولكن تكون مفهولة بـ *space* *or* *dash*
- ④ [attribute | = "Value"] → *separated* - | *نسبة* - | *separated*
- ⑤ [attribute ^ = "Value"] → starts with
- ⑥ [attribute \$ = "Value"] → ends with
- ⑦ [attribute * = "Value"] → anything + Value

5-Box Model:



6-Border Radius:

Used to make the corners of an element curved rather than sharp.

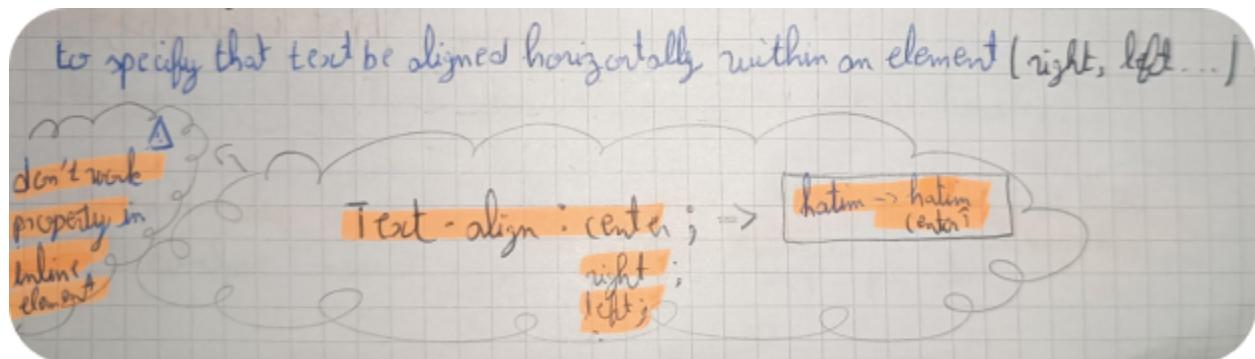
border-radius: Top right bottom left
50px 50px 50px



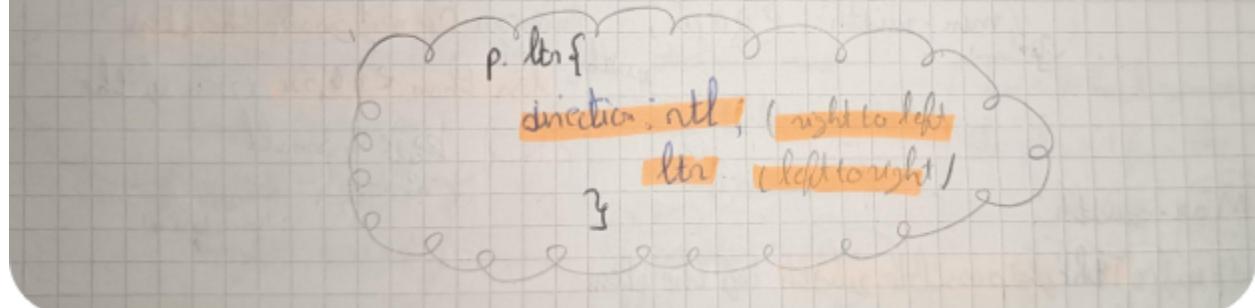
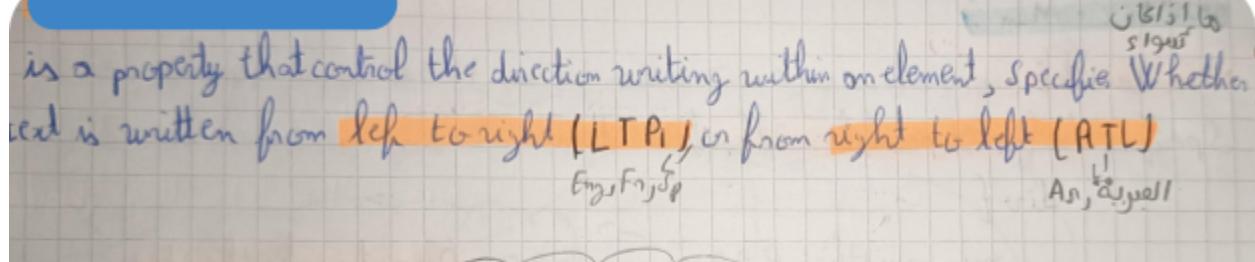
→ This form

7-Text:

7-1-Text Align:



7-2-Text Direction:



7-3-Text Transform:

They are used to change the shape of letters in text, such as converting them to uppercase or lowercase letters or capital.

کل کوئنڈ میونڈ

کل کوئنڈ میونڈ

text-transform: uppercase;
lowercase
capitalize

7-4-Text Spacing:

letter-spacing: controls the space between letters

letter-spacing: 3px;

word-spacing: controls the space between words

letter-word: 5px

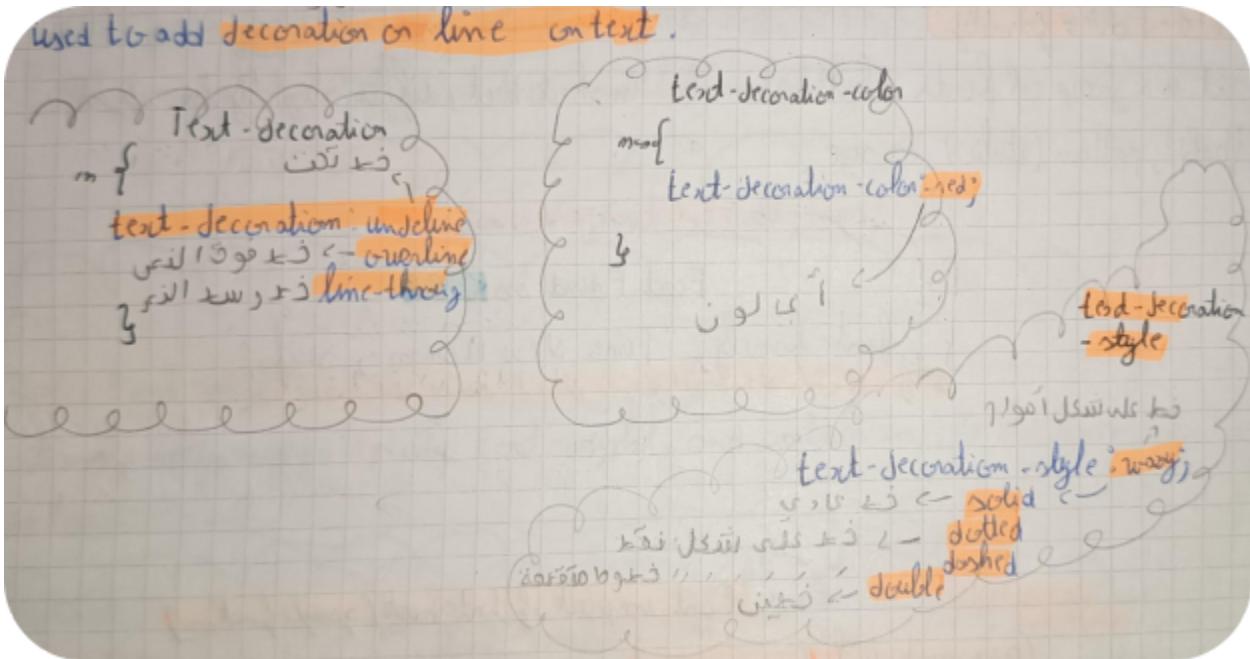
line-height: controls the distance between lines (height between lines)

text-indent: Add the distance in beginning the first line of paragraph.

line-height: 8px;

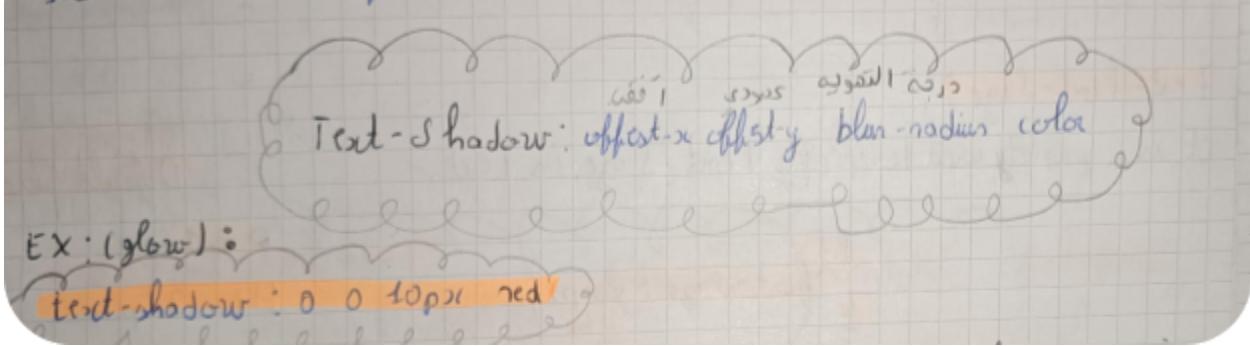
text-indent: 5px;

7-5-Text Decoration:



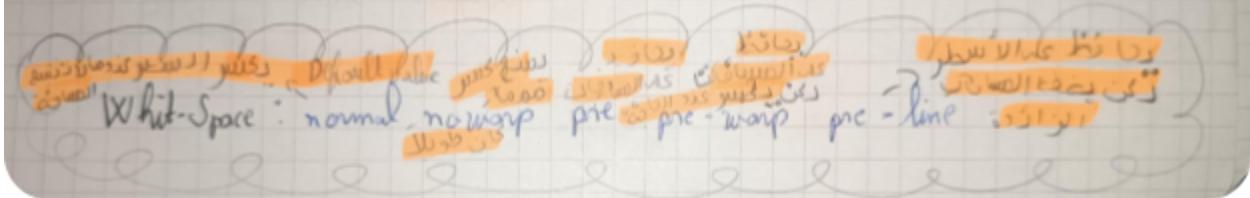
7-6-Text Shadow:

used to add shadow for text, Make text appear bright one have 3D depth.



7-7-Whit-Space:

This property controls how spaces and lines within text are handled.



8-Font:

8-1-Font Family:

it is a group of fonts that are similar in shape but, differ slightly in weight (bold), pattern (italic), or size.

P { Font Found in CSS }

} font-family: "Times New Roman", serif;

Importing fonts from Google Fonts

@import url (...)

h3 { font-family: "BB H Sans Bold"; }

8-2-Font Size:

it is a property used to specify Font-Size in Text.

P { font-size: 20px; }

2em

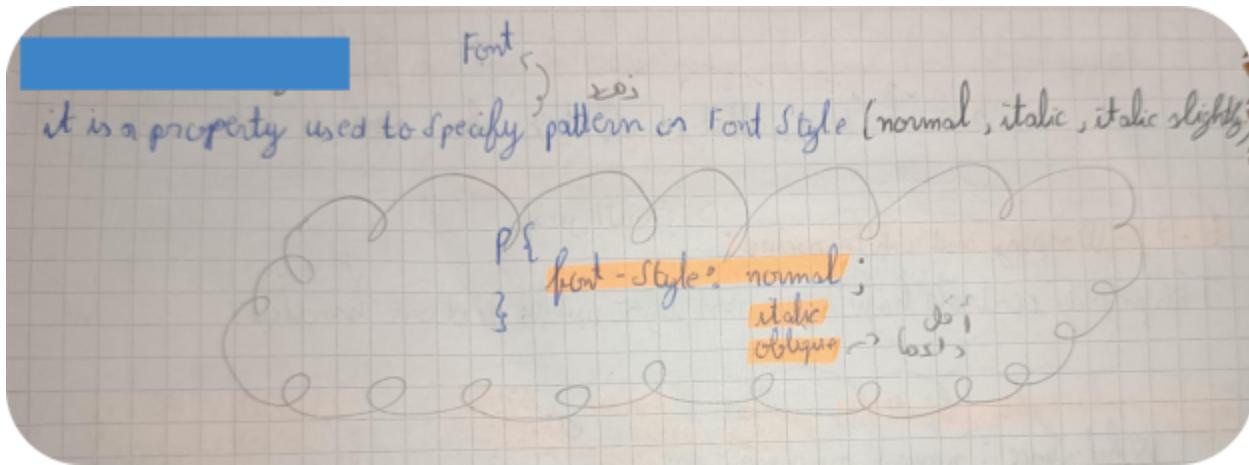
10%

Default Value

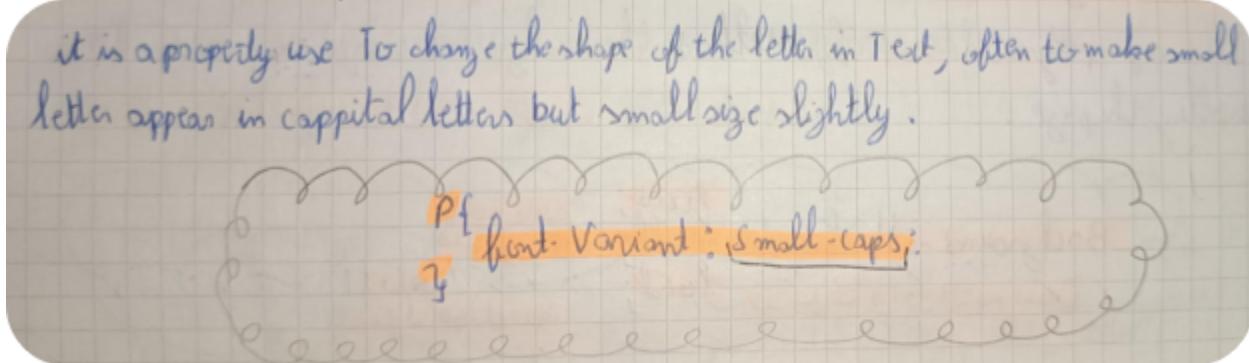
P = 16px

H1 = 3em

8-3-Font Style:



8-4-Font Variant:



8-5-Font Weight:

It is a property used to specify font-weight and controls the thickness of the letters.

Normal:

font-weight: 400;

Bold

font-weight: 700;

Bolder

font-weight:
800px

normal;
bold; on 50px
bold; on 100px
lighter; on 150px

8-6-Font Short Hand:

```
.Archid { font-style: normal; font-variant: small-caps; font-weight: bold; font-family: "Times New Roman", serif; font-size: 30px; line-height: 1.2; }
```

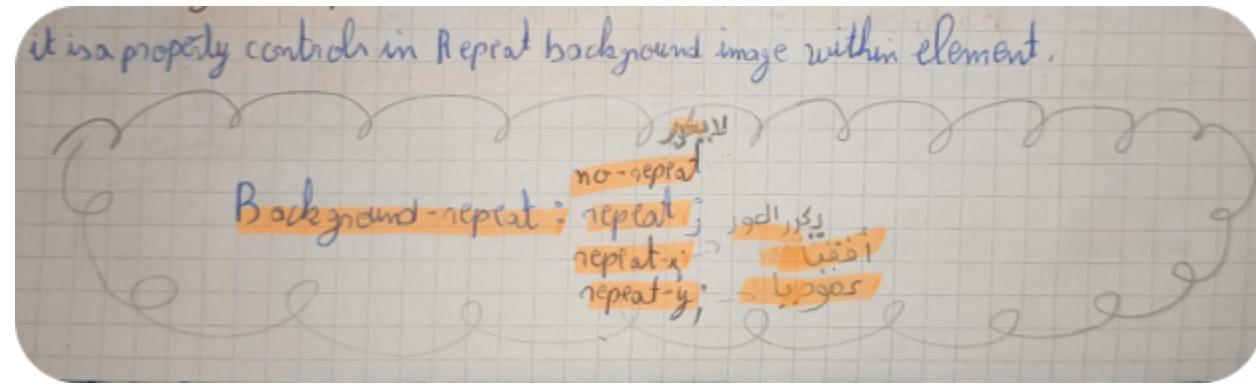
9-Background:

Used to insert a background(image, color...) into a page.

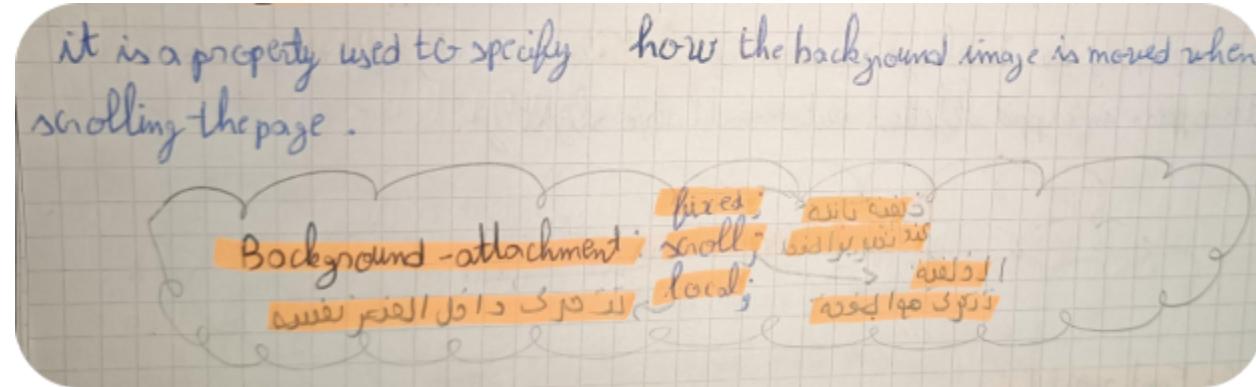
EX:

Background-image: url()

9-1-Background repeat:

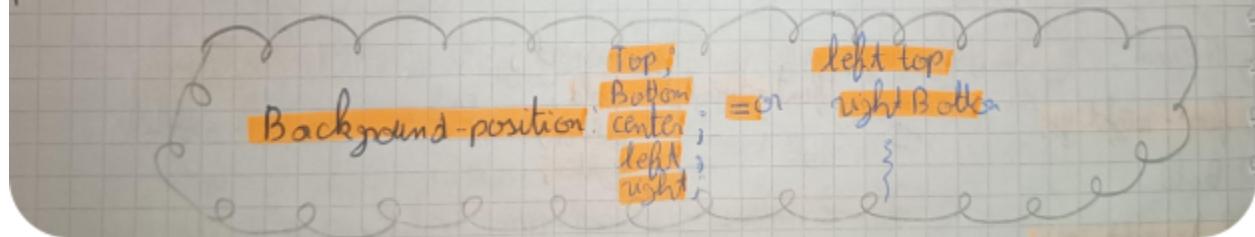


9-2-Background Attachment:



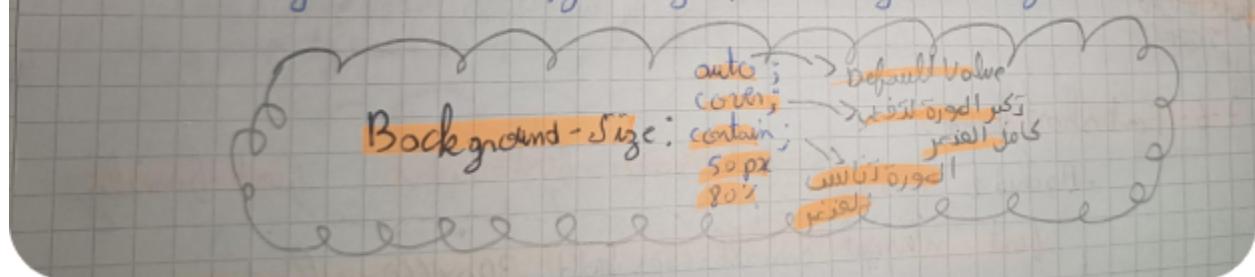
9-3-Background Position:

it is a property used to specify where the background image appears within the element (Top - Bottom - left - right).



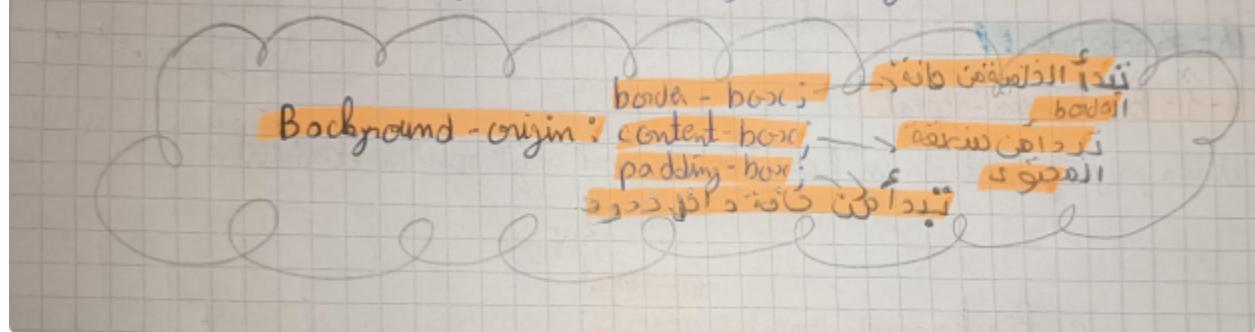
9-4-Background Size:

it is a property used to specify the size of the background image within element.



9-5-Background origin:

it is a property used to specify where the background image start within an element



9-6-Background linear gradient:

use to create a color gradient (two or more colors) that smoothly transitions from one color to another against the background of the element.

Background-image: linear-gradient(180deg, red, blue)

top right

bottom left

9-7-Background radial gradient:

use to create a color gradient, circle or ellipse.
shaped like

Background-image: radial-gradient(circle 50px at center, red, blue)

10-Position:

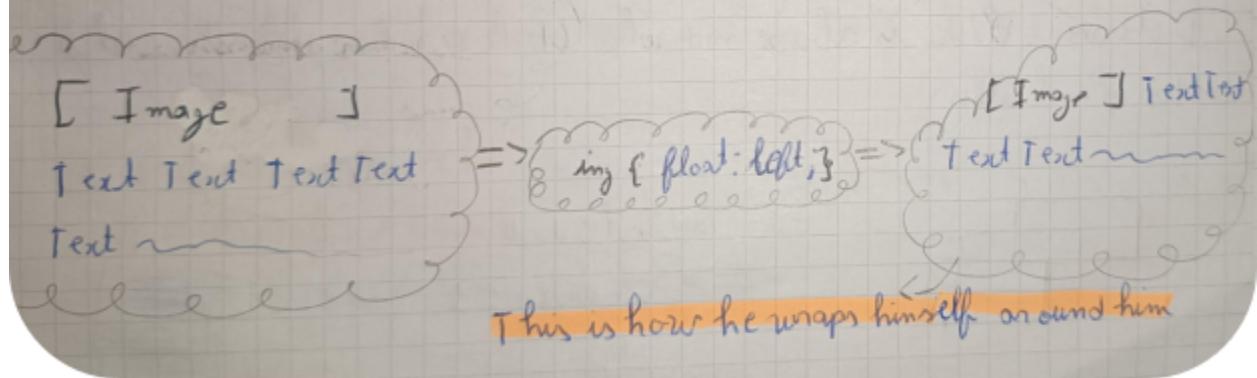
10-1-Float:

Used to move an element to the right or left within a page, so that other elements wrap around it.

`float: left; or float: right; float: none;`

how to wrap around it?

Ex:



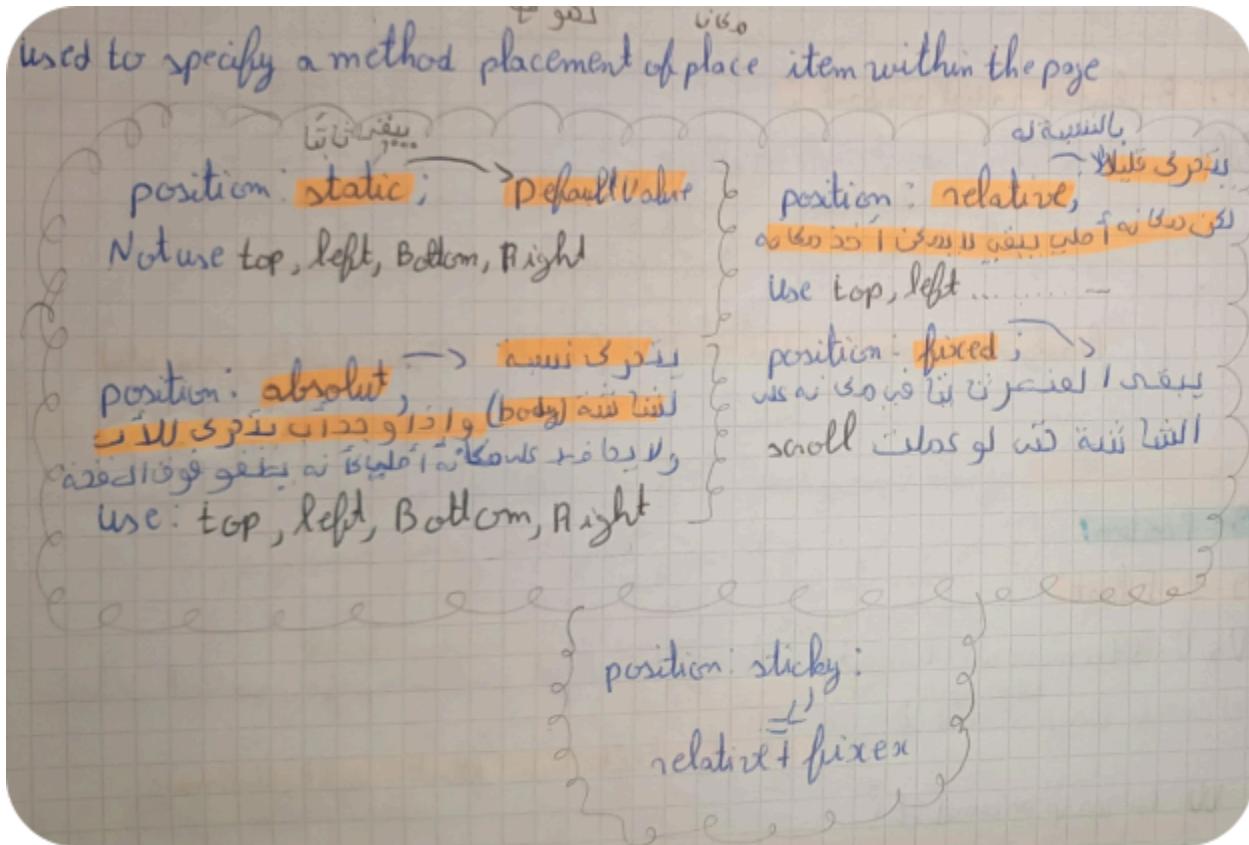
10-2-overflow:

They are used to determine what happens when the content of an item is larger than its allotted (When the content "exceeds" its boundaries)

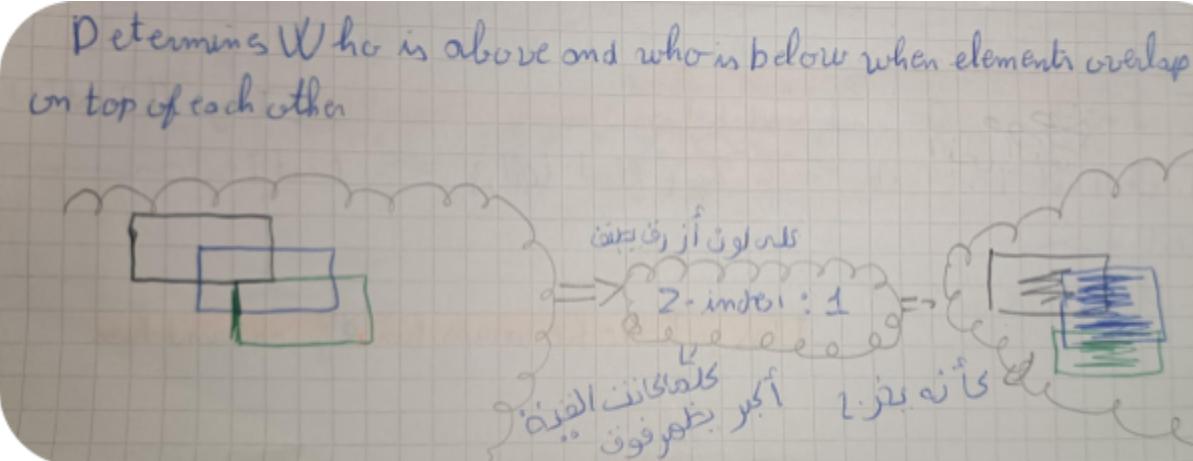
Default Value

`overflow: hidden; ; overflow: scroll; ; overflow: visible;`

10-3-Position:



10-4-Z_Index:



11-List and Table:

11-1-List Style:

They are used to control the shape of lists and determine the type of tag (dot, image or number...), where it appears, or replace it with an image.

list-style-type: circle;
list-style-type: none;
list-style-type: square;
list-style-type: decimal;

list-style-position: inside;
list-style-position: outside;

place mark (inside or outside)

list-style-image:
url("icon.png")

replace mark image

11-2-Table Style:

means formatting a table in terms of borders, colors, spaces, alignment, and background.

Example

border: 1px solid black; padding: 10px; background-color: black

text-align: center;

12-CSS Units:

These are the ways we measure:

- width.
- height.
- Text-size.
- padding and margin.

12-1-CSS Absolute Units:

Does not change with screen size.

Example:

px or cm or mm or in

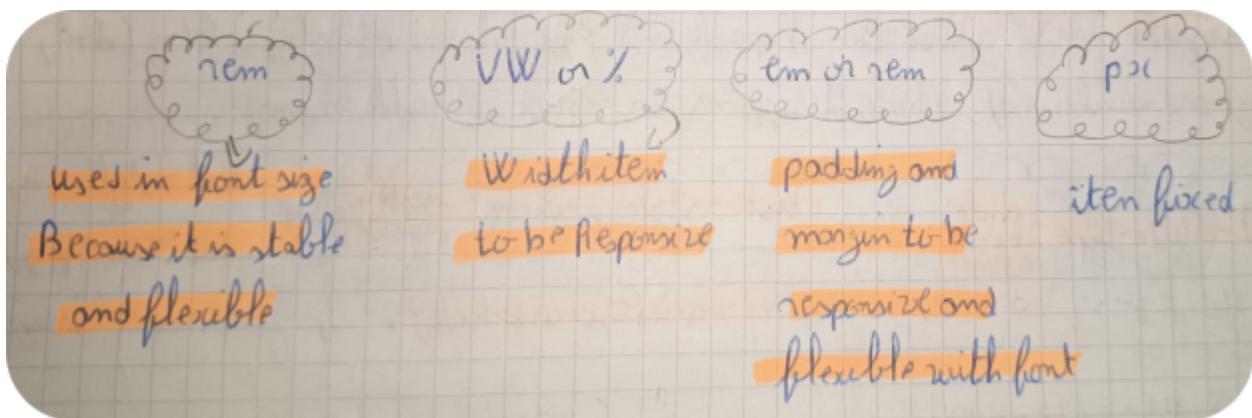
12-2-CSS Relative Units:

change depending on the screen size or item.

Ex:

% or em or rem or vw or vh

12-3-More Used:



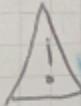
13-Pseudo classes:

it is a word that begins with two dots": " used in CSS to select elements according to a specific case and not according to its name class, or type.

More Use:

- > **: hover** عند تطبيق الفارة على الفنر
- > **: active** عند فتح المتصفح على الفنر
- > **: focus** عند فقط على المدخلات في input
- > **: required** إلزام ادخال المعلومات في input
- > **: checked** مستند مفخخ وcheckbox
- > **: disabled** لمنع التعامل
- > **: Visited** زيارة الرابط لفقد زرته
- > **: empty** الفنر فارع

There are many pseudo classes, it depends on your use and AI can be used to help.

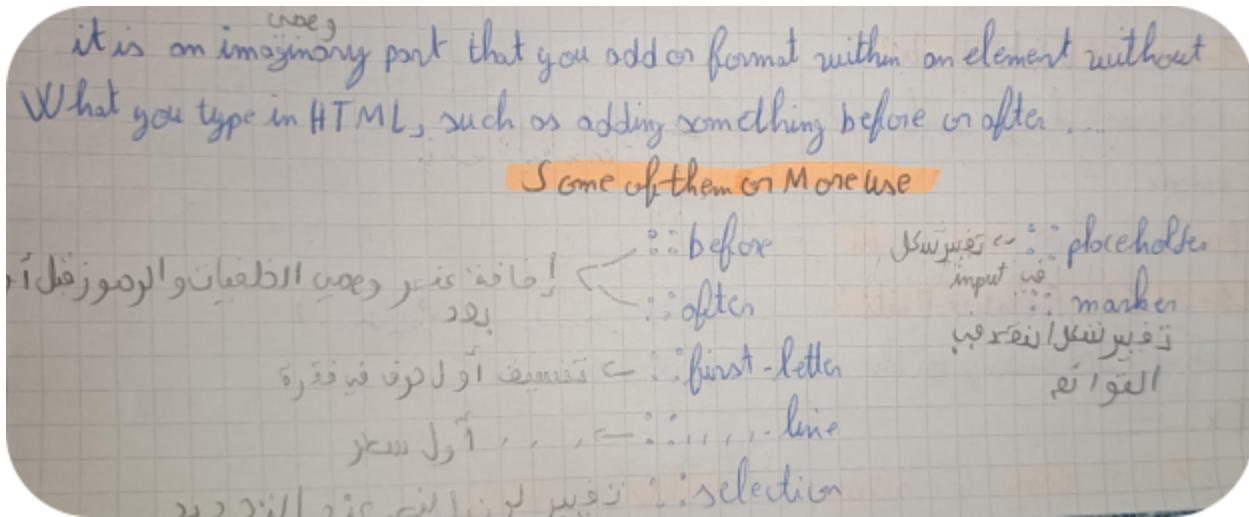


13-1-All Pseudo classes (but in French):

Sélecteur	Exemple	Description
:checked	input :checked	Sélectionne tout élément <input> coché du formulaire
:disabled	input :disabled	Sélectionne chaque élément <input> désactivé
:empty	p :empty	Sélectionne chaque élément <p> qui n'a pas d'enfant
:enabled	input :enabled	Sélectionne chaque élément <input> activé
:first-of-type	p :first-of-type	Sélectionne chaque élément <p> qui est le premier élément <p> de son parent
:in-range	input :in-range	Sélectionne les éléments <input> avec une valeur située dans une plage spécifiée
:invalid	input :invalid	Sélectionne tous les éléments <input> avec une valeur invalide
:last-child	p :last-child	Sélectionne tous les éléments <p> qui sont les derniers enfants de leurs parents
:last-of-type	p :last-of-type	Sélectionne chaque élément <p> qui est le dernier élément <p> de son parent
:not(sélecteur)	:not(p)	Sélectionne tous les éléments qui ne sont pas des paragraphes
:nth-child (n)	p :nth-child(2)	Sélectionne chaque élément <p> qui est le deuxième enfant de son parent
:nth-last-child (n)	p :nth-last-child(2)	Sélectionne chaque élément <p> qui est le deuxième enfant de son parent, à partir du dernier enfant
:nth-last-of-type(n)	p :nth-last-of-type(2)	Sélectionne chaque élément <p> qui est le deuxième élément <p> de son parent, à partir du dernier enfant
:nth-of-type (n)	p :nth-of-type(2)	Sélectionne chaque élément <p> qui est le deuxième élément <p> de son parent
:only-of-type	p :only-of-type	Sélectionne chaque élément <p> qui est le seul élément <p> de son parent
:only-child	p :only-child	Sélectionne chaque élément <p> qui est le seul enfant de son parent
:optional	input :optional	Sélectionne les éléments <input> sans attribut "required"
:out-of-range	input :out-of-range	Sélectionne les éléments <input> qui ont des valeurs en dehors d'une plage spécifiée

Sélecteur	Exemple	Description
:read-only	input :read-only	Sélectionne les éléments <input> avec un attribut "readonly" spécifié
:read-write	input :read-write	Sélectionne les éléments <input> sans attribut "readonly"
:required	input :required	Sélectionne les éléments <input> avec un attribut "required" spécifié
root	root	Sélectionnez l'élément racine du document
:target	#news :target	Sélectionne l'élément #news actuellement actif
:valid	input :valid	Sélectionne tous les éléments <input> avec une valeur valide
:link	a :link	Sélectionne tous les liens non visités
:visited	a :visited	Sélectionnez tous les liens visités
:active	a :active	Sélectionne le lien actif
:hover	a :hover	Sélectionne les liens sur lesquels la souris passe
:focus	input :focus	Sélectionne l'élément <input> qui a le focus

14-Pseudo element:



14-1-All Pseudo Element (but in French):

:first-letter	p:first-letter	Sélectionne la première lettre de chaque élément <p>
:first-line	p:first-line	Sélectionne la première ligne de chaque élément <p>
:first-child	p:first-child	Sélectionne tous les éléments <p> qui sont les premiers enfants de leurs parents
:before	p:before	Insérer du contenu avant chaque élément <p>
:after	p:after	Insérer du contenu après chaque élément <p>
:lang(it)	p:lang(it)	Sélectionne chaque élément <p> avec une valeur d'attribut lang commençant par "it"

15-Tranform:

15-1-Translate:

- used to move an element from its place without changing its original place in the flow
 - flow is the natural way elements on a page are arranged from top to bottom and from left to right.

تمريض نذر يكأم فرقاً shorthand
transform: translate(x,y) ١٥
بمعنى أخذ دهون القلب بـ ١٥% ١٥
فريدة واحدة تزداد في وزنها
لديني مثابة تحفظ

15-2-Scale:

14-2-Scale:
 Used to enlarge or reduce an element without changing its location in the flow.

15-3-Rotate:

used to rotate an element around its center at a certain angle.

Transform: Rotate (0 deg); shorthand
 rad Rotate (0 deg)
 turn
also (0, 0, 0)

15-4-Skew:

used to tilt an element (oblique distortion) on the horizontal or vertical.

Transform: `skew(x, y)`; \rightarrow degree

horizontal \rightarrow vertical

15-5-Matrix:

Shorthand

matrix (`ScaleX`, `ShearY`, `SkewX`, `ScaleY`, `TranslateX`, `TranslateY`)

16-Transition:

Allows you to make a smooth movement when something in the element changes, (such as color, location...) instead of suddenly changing.

16-1-Transition property:

The property you want to make has movement such as (Width, color...)

برمجي تدريجية: Width;

16-2-Transition duration:

إذا كان تم تدريبها فـ وادره

transition-duration: 5s;

الكلمة تم تدريبها فـ

transition- , , , : 7s; 3s;

16-3-Transition timing function:

Motion form (Slow or fast start and end) during a transition.

Transition-timing-function:

- تبدأ ببطء وتسارع في البداية ثم تنتهي - ease
- تفوت المسيرة بدردشة وتسارع - linear
- تبدأ ببطء ثم المسيرة - ease-in
- تسرعه ثم بطيئ - ease-out
- تبدأ ببطء وتسارع تباطئ في النهاية - ease-in-out
- تعمد لونها - cubic-bezier

16-4-Transition delay:

it is a property that specifies the waiting time before transition movement begins.

Transition-delay: 0,5s;

16-5- Shorthand Transition:

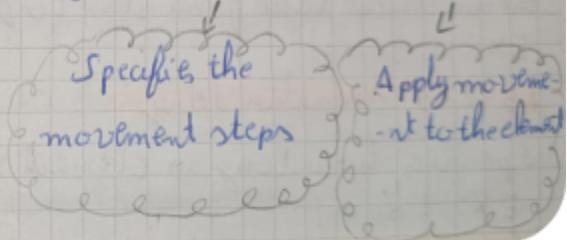
```
transition-property: width;  
... duration: 1s;  
... timing-function: ease;  
... delay: 0.3s;
```

↓ Shorthand

```
transition: width 1s ease 0.3s;
```

17-Animation:

it is a method in CSS that lets you control the movement of element step by step, without using js you need two things : 1- @keyframes , 2- Animation



17-1-Keyframes:

Specifies the movement steps .

Ex:

The diagram shows a CSS code snippet for a keyframe animation. The code is:
```css  
@keyframes hatim {  
 0% { translate: 10px; }  
 100% { translate: 0px; }  
}  
```  
Annotations with arrows explain the parts:

- An arrow points from the '@keyframes' keyword to the label 'animation name (hatim)'.
- An arrow points from the '0%' keyframe to the label 'Apply movement to the element.'
- An arrow points from the '100%' keyframe to the label 'to the element.'

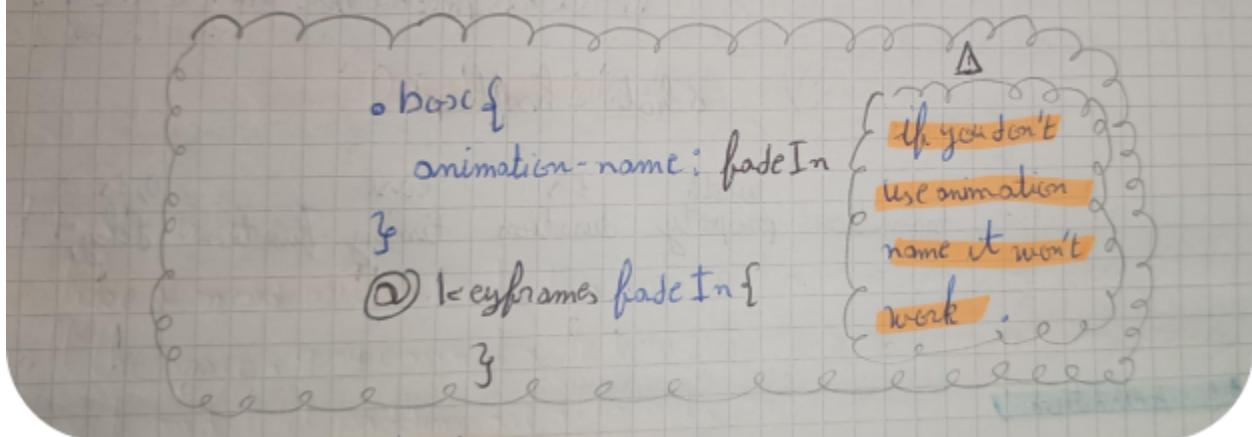
17-2-Animation:

Apply moment to the element.

17-2-1-Animation Name:

Used to specify the name of the movement you want to apply to the element.

Ex:



17-2-2-Animation duration:

Specifies the duration of an animation movement, meaning how long does the movement take from start to finish.

Ex: (Zoom)

17-2-3-Animation delay:

Specifies how long an element waits before the animation starts.
Ex: (soon)

17-2-4-Animation iteration count:

Specifies how many times the animation will be repeated.
Ex: (soon)

17-2-5-Animation direction:

Specifies the direction of animation movement in each iteration.
Ex: (soon)

17-2-6-Animation timing function:

determines how the speed of movement changes over time.

Ex:

Animation-timing-function:

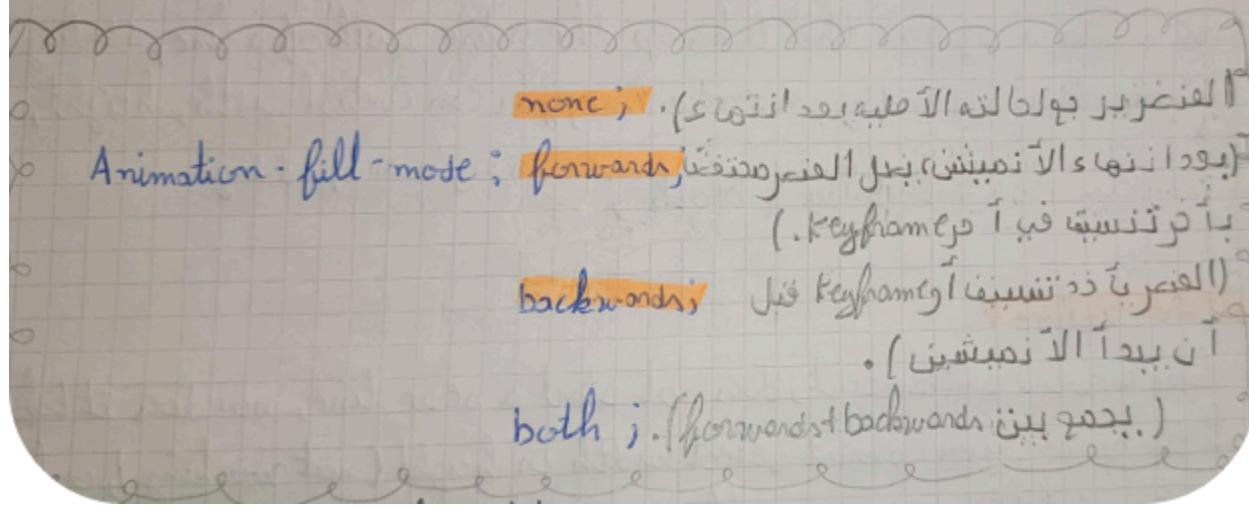
ease-in;
ease-out;
ease-in-out;
ease;
linear;
cubic-bezier;

You explained
in a paragraph
16-3-transition
timing function

17-2-7-Animation fill mode:

Specifies what the element will look like before the animation starts and after it ends.

Ex:



17-2-8-Animation play state:

Controls turning animation on or off without deleting or restarting it from the beginning.

Animation - play - state : `running`; `paused`; `hidden`

→ Animation on (default)

→ Animation off

17-2-9-All Animation In Example:

```
.box{  
background-color: bleu;  
width: 100px;  
height: 100px;  
animation-name: moveBox;  
..., -duration: 3s;  
..., -delay: 1s;  
..., -timing-function: ease-in  
}  
animation-iteration-count: infinite;  
animation-direction: alternate;  
animation-play-state: running;  
animation-fill-mode: both;
```

18-Display:

used to determine how an element is displayed on a page and how it behave within a page.

18-1-Block:

it's like a big box that takes up the entire width of a line, starting on a new line and ending on a new line, you can control width, height, margin and padding.
Ex:

Display : block ;

margin and padding .

18-2-Inline:

like a word within text, does not start a new line, nor does it take all the space , you cannot select width or height (not working), only right and left padding are allowed, but top and bottom (not working).
Ex:

Display : inline ;

18-3-Inline-Block:

This type combines the features of block and inline.

- Appears next to other elements such as inline.
- You can determine width and height.
- You can control margin and padding all direction

18-4-Display:none; :

The item completely disappears from the page as if it does not exist.

Display: none;

18-5-visibility:

The item remains in place but is not visible.

Visibility: hidden;

18-6-Opacity:

that controls the degree of transparency of an element.

$(100\% : 1 \rightarrow 0,1 (30\%))$
opacity : 0,5;

19-Flexbox:

is method for organizing elements within a page in a neat and flexible manner, so that they move and are easily distributed according to the available space.

19-1-Flexbox Parent:

is the parent element that we put `display: flex` onto to be responsible for organizing the elements inside it.

19-1-1-The most important features of flex parent:

19-1-1-1-Flex Direction:

Determines the orientation of item inside the box (parent).

`row` → أفقی و توزیع اعلانات الاتجاه

`row-reverse` → فیروزه، عکس اعلانات الاتجاه

`flex-direction: column` → عمودی و توزیع اعلانات الاتجاه

`column-reverse` → عکس، عمودی و توزیع اعلانات الاتجاه

19-1-1-2-Flex Wrap:

it is a property in Flex box that tells items to all stay on the same line or move to a new line when there is not enough space

flex-wrap: nowrap; تبعد العناصر كلها في سطرو واحد
flex-wrap: wrap; تسفح للعناصر بجزء إلى السطرين بعد
flex-wrap: wrap-reverse; السطر الذي يظهر فوق بعده
تثبت

19-1-1-3-Justify Content:

A property that controls the positioning of element horizontally (Default Value).

If the direction column → controls above and below (because the main axis becomes vertical).

If the direction row → controls the distribution on the right and left (because the main axis becomes horizontal).

justify-content: flex-start; العنصر يبدأ في البداية المفتوحة
justify-content: center; العنصر في الوسط
justify-content: end; نهاية العنصر

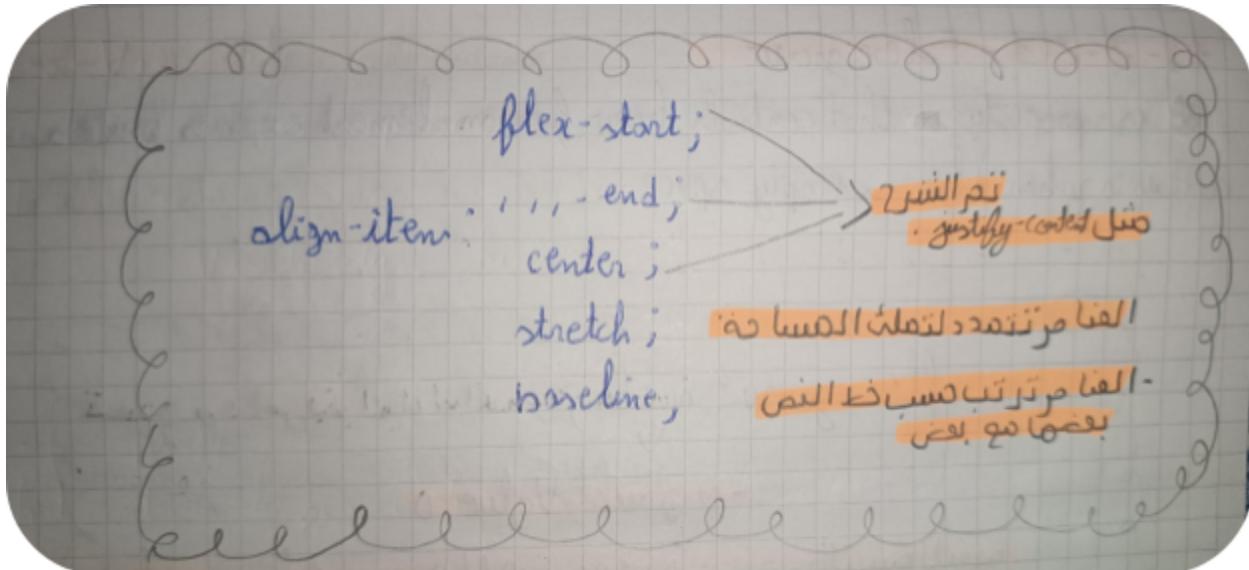
space-between; العنصر الأول في البداية والآخر في النهاية والباقي يوزع بينهما
space-around; كل عنصر له مساحة حوله باز
space-equal; كل المسافات متساوية
there's more بس العناصر

19-1-4-Align items:

controls the alignment of elements vertically (Default Value).

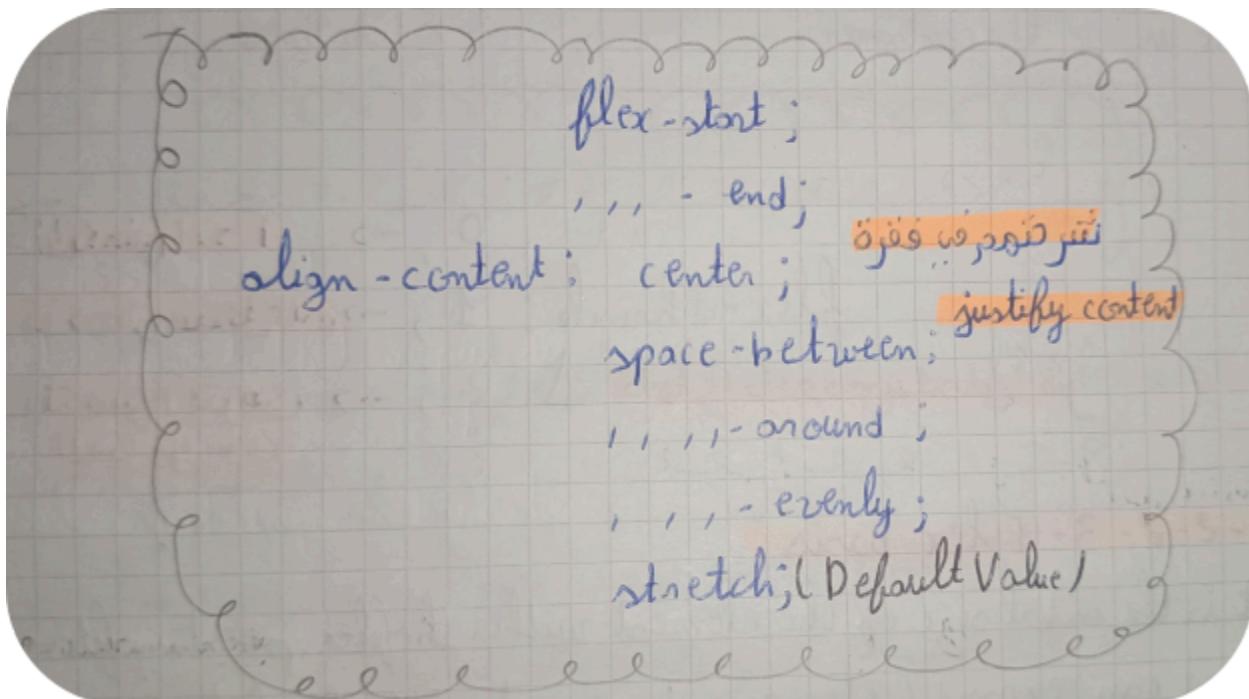
If `flex-direction: row` → alignment will be vertical (above/below)

If `flex-direction: column` → alignment will be horizontal (right/left)



19-1-1-5-Align Content:

it only works when you have more than one line (meaning when you use flex-wrap). controls the space between lines (not element). If you don't have multiple lines → align-content doesn't manage anything.



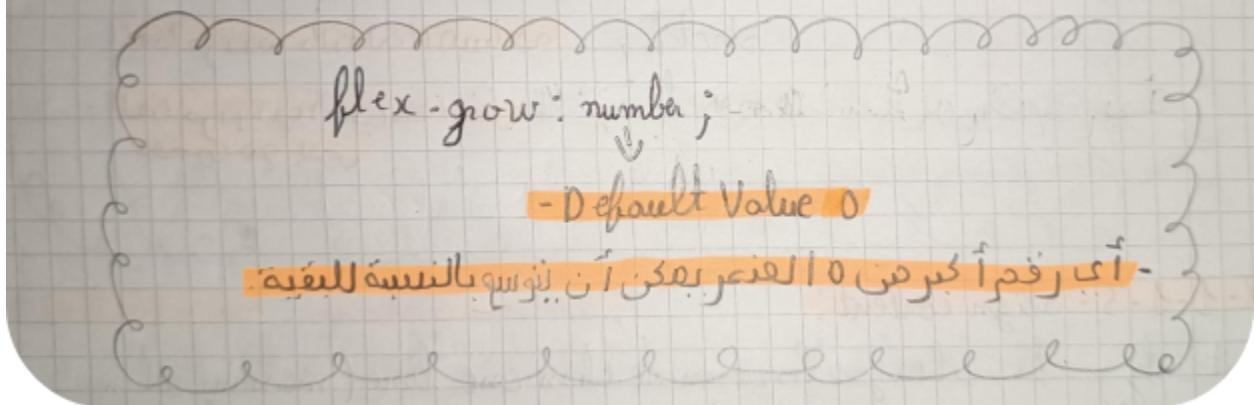
19-2-Flexbox Self:

is the element within Flexbox Parent (the `flex` element) that can control it self, such as its location or size within the container, without affecting the second elements.

19-2-2-The most important features of flex parent:

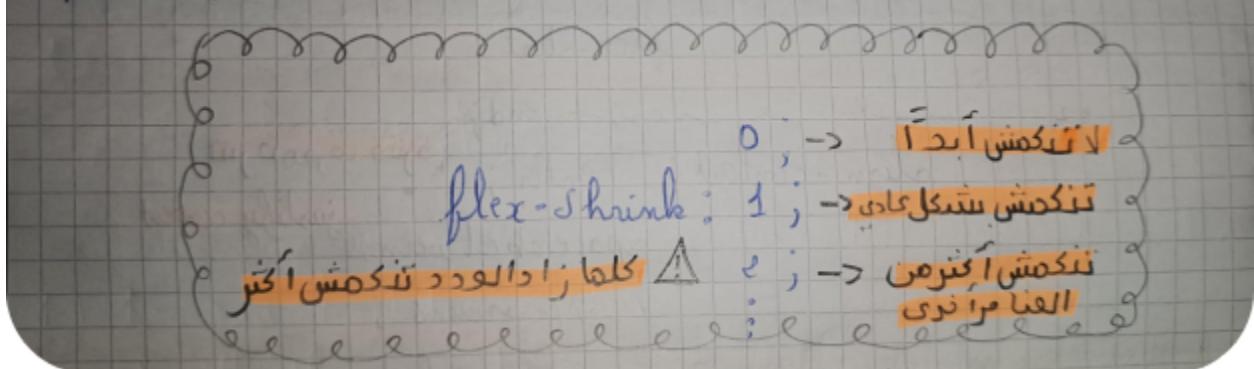
19-2-2-1-Flex Grow:

is a property that controls how far an element expands inside a container when there is empty space.



19-2-2-2-Flex Shrink:

is a property that causes an element to shrink when there is not enough space inside the container.



19-2-2-3-Flex Basis:

it is the initial size of the element within the flex parent , after which the element can expand (flex-grow) or contract (flex-shrink) depending on the axis
-ble space .

flex-

flex - basis: 200px ; النطرين يبدأ بـ 200px

19-2-2-4-Flex (Shorthand):

is shorthand three Value flex-grow , flex-shrink , flex-basis ,

flex: 1 1 200px ;

flex-grow flex shrink flex basis

19-2-2-5-Order:

it is a property that allows you to change the order of elements within the flex Flex Parent without changing their order in HTML .

كلما كان الرقم أقرب نظير الأخر بين العناصر والعكس

order: 3;

19-2-2-6-Align Self:

controls the alignment of a single element according to the Flex direction specified in Flex Parent .

If flex direction was: row → cross axis = Vertical

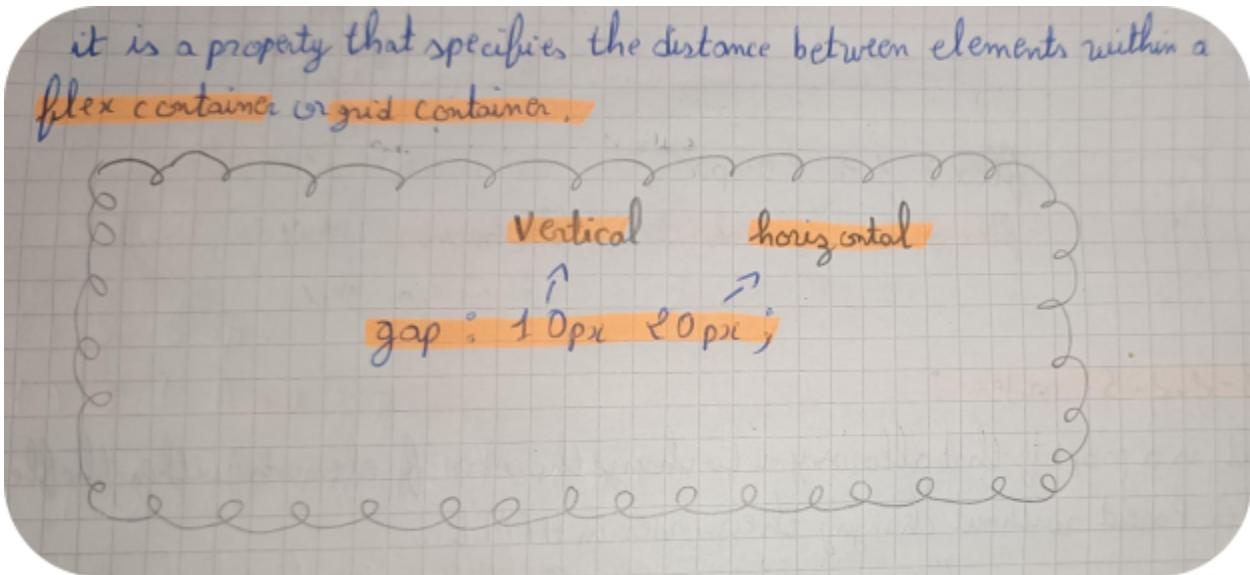
..... ; column → cross axis = horizontal

flex-start;
flex-end;

شروع
من قبل

align-self : center;
baseline;
stretch;

19-2-2-7-Gap:



19-3-understand flexbox good:

Is To understand flexbox well go to url:

<https://nouvil.net/flex-box-game/>

The screenshot shows a dark-themed web application for learning flexbox. At the top, there's a navigation bar with links for "Blog", "css game", "خريطة تعلم البرمجة", "problem solving", "All Courses", and "Home". The main title "Nouvil" is on the right. Below the navigation, there are two main sections: "Flex Items" and "Flex Parents".

Flex Items: This section has a heading "align-self" and a sub-section "value: stretch". It includes a note: "لختير ينعكس القيم التي يتم وضعيها للإيجاد في align-self". Below this are four buttons: "center", "flex-end", "flex-start", and "stretch". A visual representation shows five colored boxes (pink, yellow, orange, blue, red) arranged horizontally. The third box from the left is orange and has the label "align-self" above it. The boxes are numbered 1 through 5 from right to left.

Flex Parents: This section has a heading "Display Flex" and a sub-section "value: flex". It includes a note: "لختير ينعكس القيم التي يتم وضعيها للإيجاد في flex". Below this are two buttons: "block" and "flex". A visual representation shows a dashed box containing the same five colored boxes (pink, yellow, orange, blue, red), numbered 1 through 5 from right to left. The bottom right corner of this section has a small upward-pointing arrow icon.

20-Grid:

that allows you to divide a page into a grid (rows + columns), and control the locations of elements with great ease.

display: grid ;

20-1-Grid Template Columns:

used within the grid container to specify the number of columns.

grid-template-columns: 100px 100px;
50% 50%

20-2-Grid Template Rows:

used within the grid container to specify the rows of a grid or the height of these rows.

grid-template-rows: 100px 200px;

20-3-Unit in Grid:

more used the unit in grid: px, % and auto.

px: A fix unit, specifying width or height.

% (more used in grid): A unit specific to grid, meaning part of the available spaces.

%: Specifies the size as a percentage of the container area.

auto: Automatically takes size depending on the content within the columns or rows.

grid-template-rows: 1fr 1fr

grid-template-columns: 30% 30% 60%

20-4-Repeat Grid:

is a function in CSS Grid that allows you to repeat a number of rows or columns with the same Value instead of typing each one by hand.

I mean, instead of writing:

grid-template-columns: 1fr 1fr 1fr;
..., ..., ... - rows: 1fr 1fr ;

We Use:

{ grid-template-columns: repeat(3, 1fr);
..., ..., ... - rows: repeat(2, 1fr); }

20-5-Gap:

20-5-1-Row Gap :

Specifies the vertical distance between rows.

نحوه ای تفکه لینج فقر

row-gap: 20px;

20-5-2-Column Gap :

Specifies the horizontal distance between columns.

column-gap: 20px;

20-5-3-ShortHand :

instead Row-gap or column-gap we use gap.

gap: 20px 15px;

row-gap

column gap

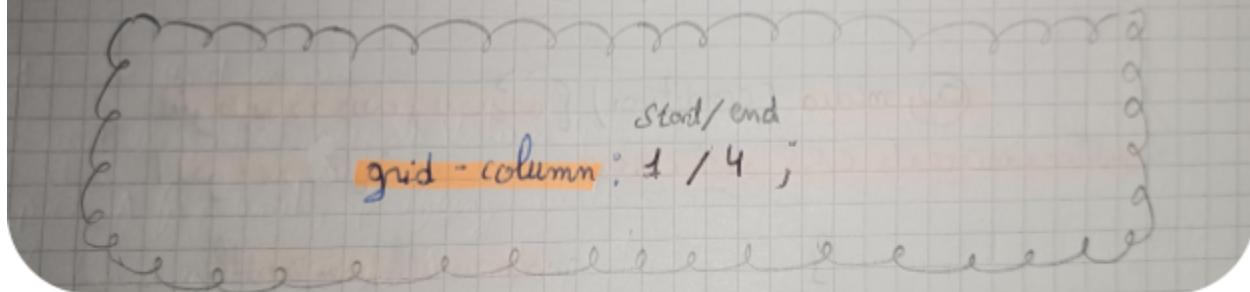
20-6-Justify content, align item and align content :

Is like what's in the flex box and explained it in **19-Flex Box**.

20-7-Grid Self :

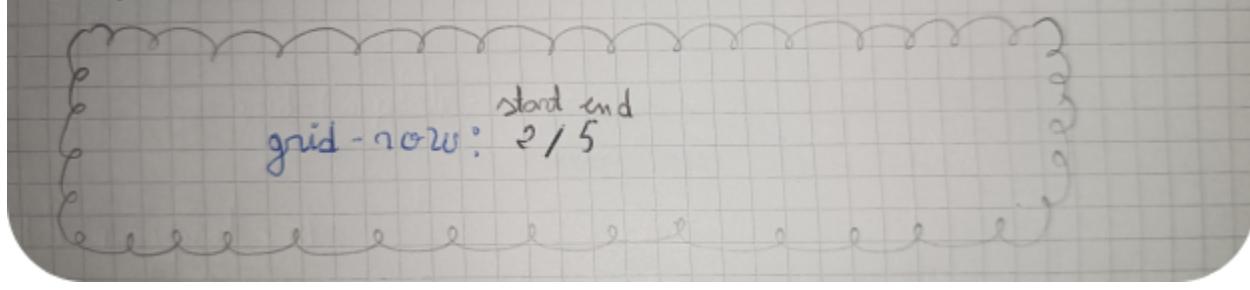
20-7-1-Grid Column :

is a property that specifies the location of an element within columns in a grid, it specifies which column the element starts in and which column it ends in.



20-7-2-Grid Rows :

is a property that determines the location of an element within rows in a grid, that is, it determines which row the element begins in and which row it ends in.



21-Responsive :

يُزكيف This means that the website design adapts to the size of the screen or device that the user sees: computer, laptop, tablet, or mobile.

21-1-Unit Relative :

He is the one who contributes to making the site responsive
as explained in **12-2-CSS Relative Units**

21-2-Grid and Flexbox:

it is what contributes to the site's responsiveness to the site's organized arrangement. can explain it in **19-Flexbox** , **20-Grid**

21-3-Media Query:

that allows you to change your site's design depending on screen size or device type (mobile and tablet...)) @ media ...

شرط بدد من تبيّن مقداره \Rightarrow $\text{condition} \rightarrow \text{media}$
القواعد مثل: زكبة كود ٥٠٠ كادي سب condition