

Bienvenue dans
ce cours ! 



Rejoins-moi sur
 slack



Plan du cours



FLEXBOX

- Introduction
 - À quoi sert FlexBox ?
 - Comment sont elles supportées par les navigateurs ?
 - Principes et Axes
- Les propriétés liées au container
 - flex-direction
 - justify-content
 - align-items
 - flex-wrap
 - align-content
 - flex-flow
- Les propriétés liées aux éléments
 - Align-self
 - order
 - flex-grow
 - flex
 - flex-shrink
 - flex-basis
- Allez plus loin
 - Placer son footer en bas par défaut
 - Centrer verticalement et horizontalement un élément
 - Création de cartes responsive
 - Création d'une galerie
 - Création d'une section texte + image alternatif



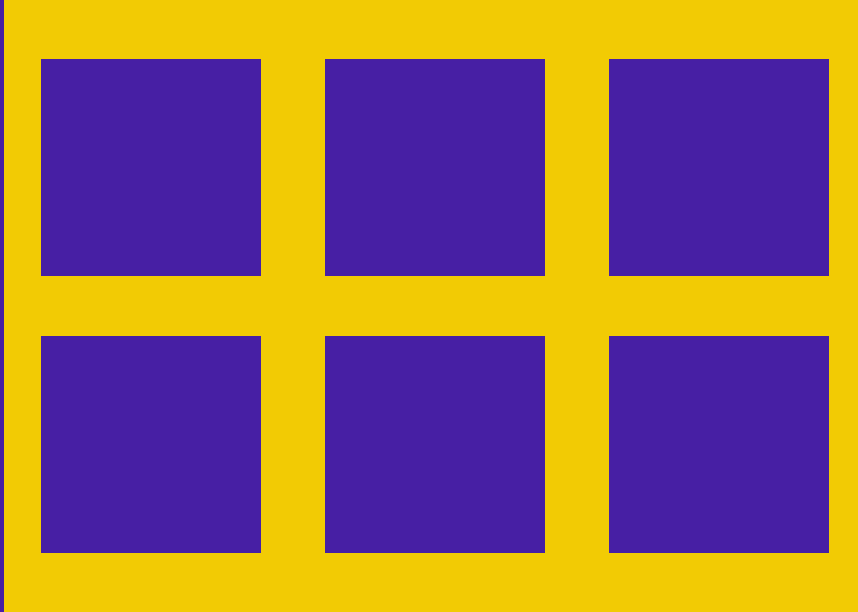
À la fin de ce
cours...



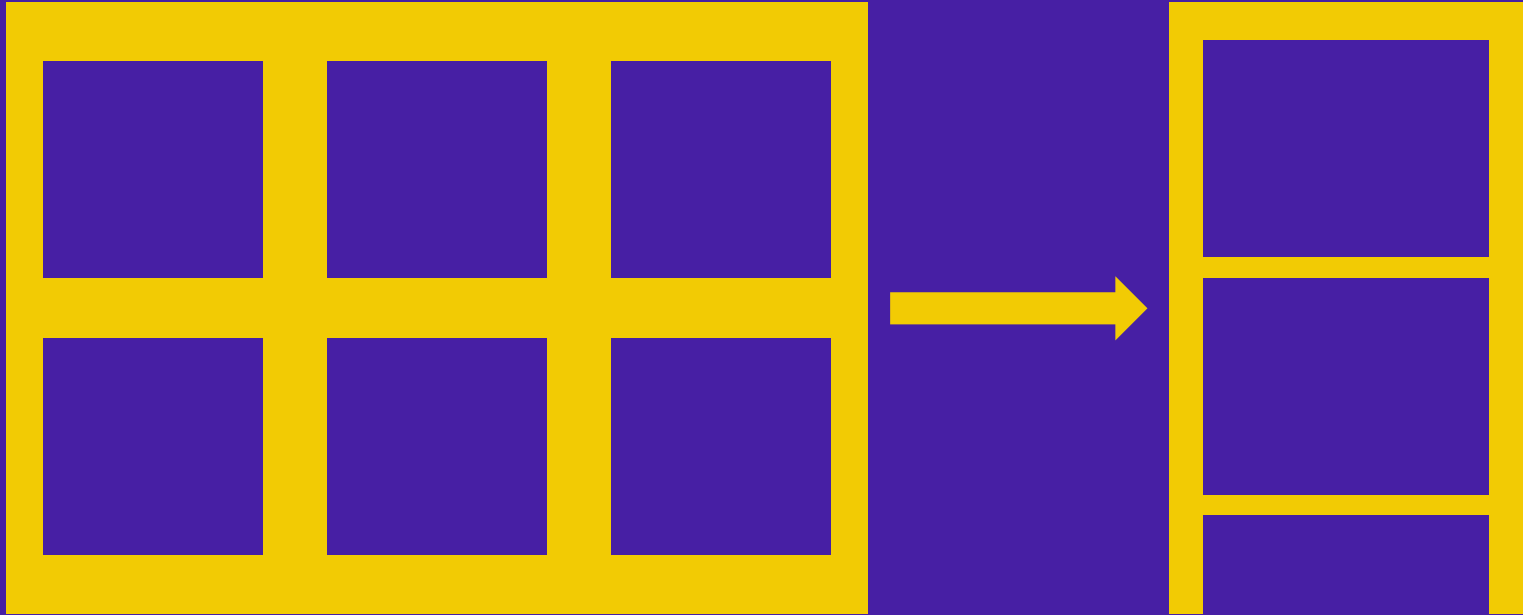
Jargon



Responsive



Responsive



Un container



Items

Element 1

Element 2

Element 3

Element 4



**À quoi sert
FlexBox ?**



Mettre à l'échelle automatiquement des éléments pour remplir l'espace disponible



Example 1:

Element 1

Element 2

Element 3

Element 4



Example 2:

Element 1

Element 2

Element 3



**Rétrécir ou Agrandir automatiquement des
éléments pour les faire rentrer dans le
conteneur**



Example 1:

Element 1

Element 2

Element 3



Example 2 :

Element 1

Element 2

Element 3

Element 4

Element 5

Element 6



Changer l'ordre des éléments



Example 1:

Element 1

Element 2

Element 3



Example 2 :

Element 3

Element 2

Element 1



Example 3 :

Element 2

Element 3

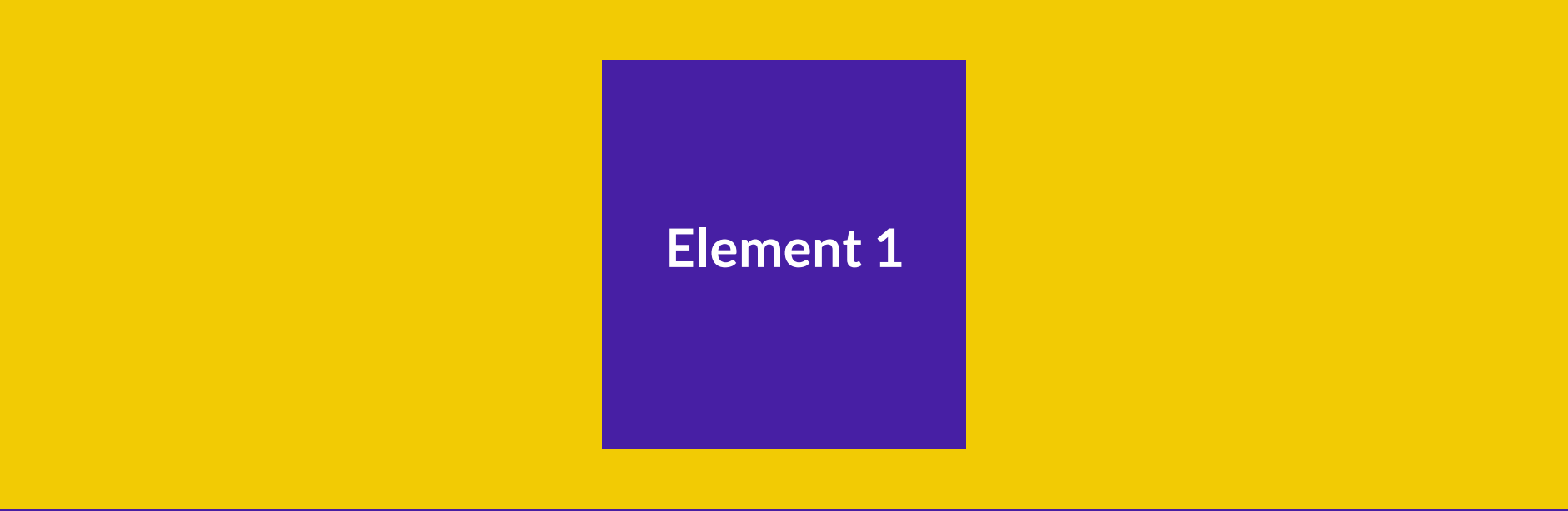
Element 1



**ENFIN pouvoir centrer horizontalement et
verticalement sans problèmes**



Exemple 1:



Element 1



Mettre en place une bonne structure de page



Header

Content

Footer

Créer des éléments de navigation



Exemple 1:

LOGO

Element Element

Bouton



Exemple 2 :

Element Element

LOGO

Bouton



Example 3 :

LOGO

Element Element Element



Et bien plus encore !



**Comment les FlexBox
sont supportées par les
navigateurs ?**



IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Opera Mobile *	Chrome for Android	Firefox for Android	UC Browser for Android	Samsung Internet	QQ Browser	Baidu Browser	KaiOS Browser
					10-11.5											
		1 2-21	1 4-20	1 3.1-6	12.1	1 3.2-6.1										
6-9		3 22-27	21-28	6.1-8	15-16	7-8.4		1 2.1-4.3	12							
2,4 10	12-81	28-76	29-81	9-13	17-67	9-13.3		4.4-4.4.4	12.1				4-10.1			
4 11	83	77	83	13.1	68	13.5	all	81	46	81	68	12.12	11.2	10.4	7.12	2.5
		78-79	84-86	14-TP		14.0										

<https://caniuse.com/#feat=flexbox>



Tout part d'un
`display: flex;`



Par défaut :

```
div {                                     user agent stylesheet
  display: block;
}
```

<https://quirksmode.org/css/css2/display.html#playground>



Fonctionnement par Axes



Par défaut : Row

Main axis : Axe principal

Element 1

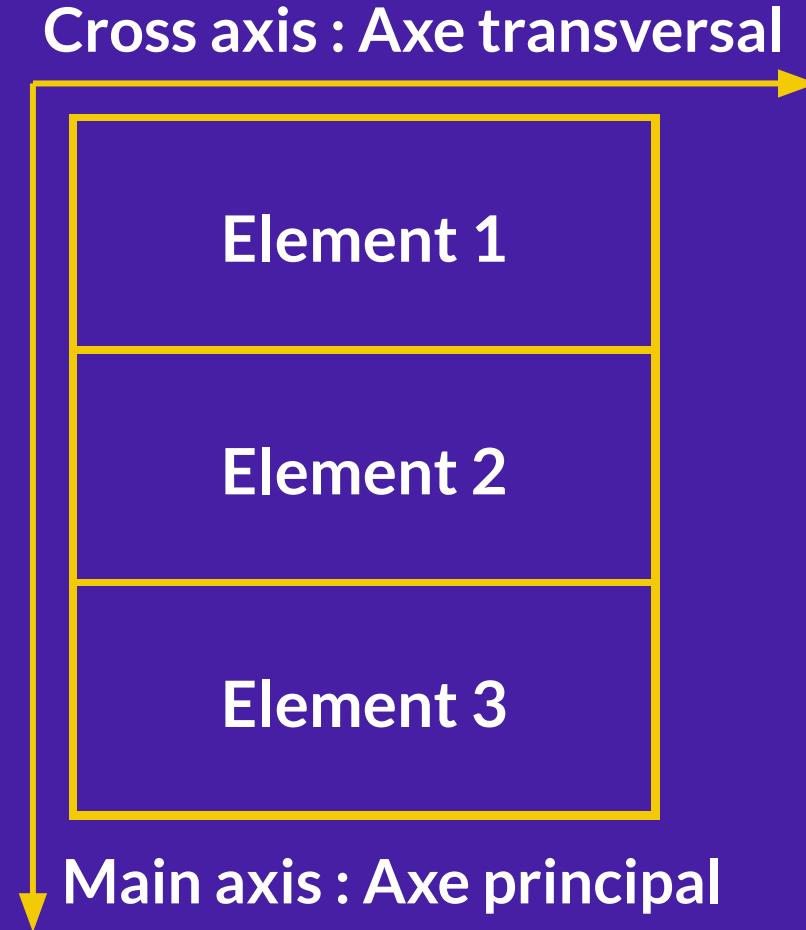
Element 2

Element 3

Cross axis : Axe transversal



Column



Element 1



Element 1



Element 1



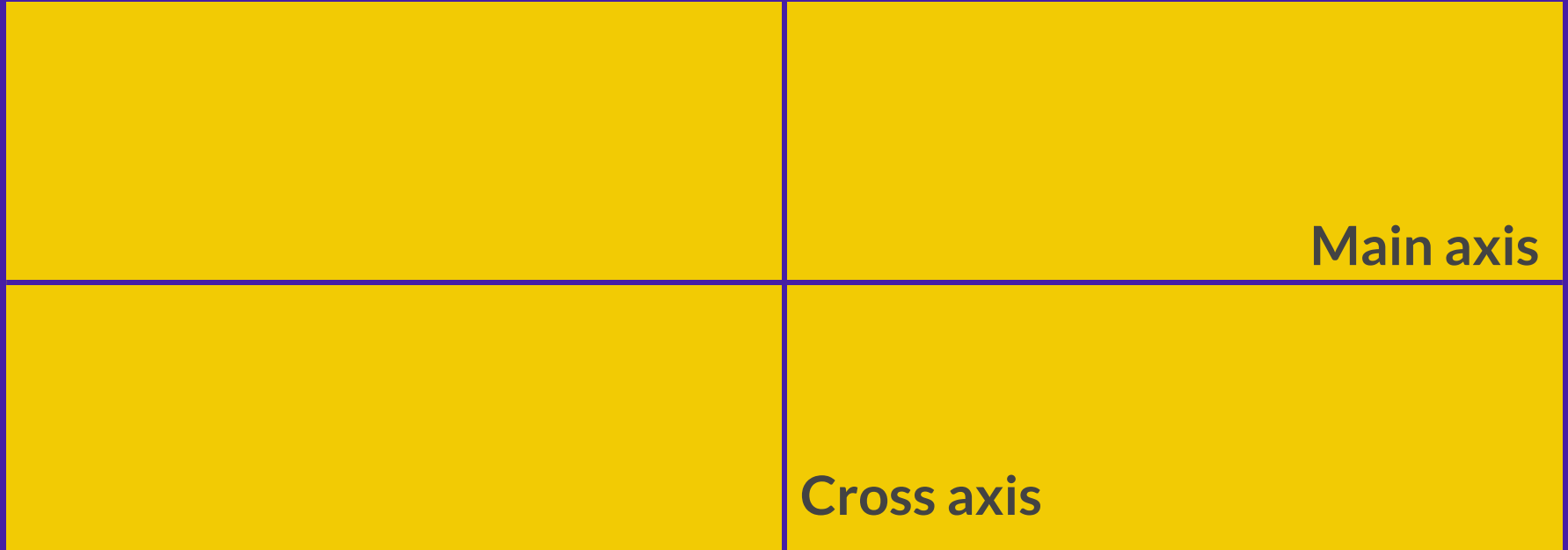
Element 1



Les propriétés liées au container



Flex-direction: row

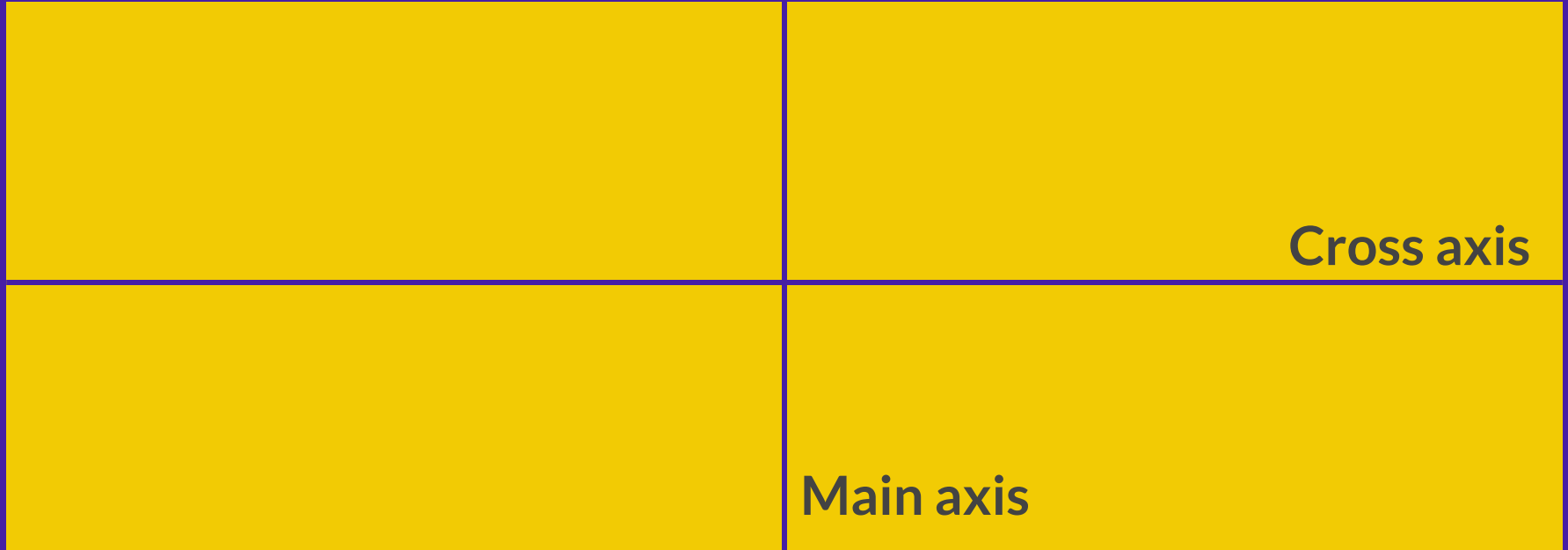


Flex-direction: row-reverse

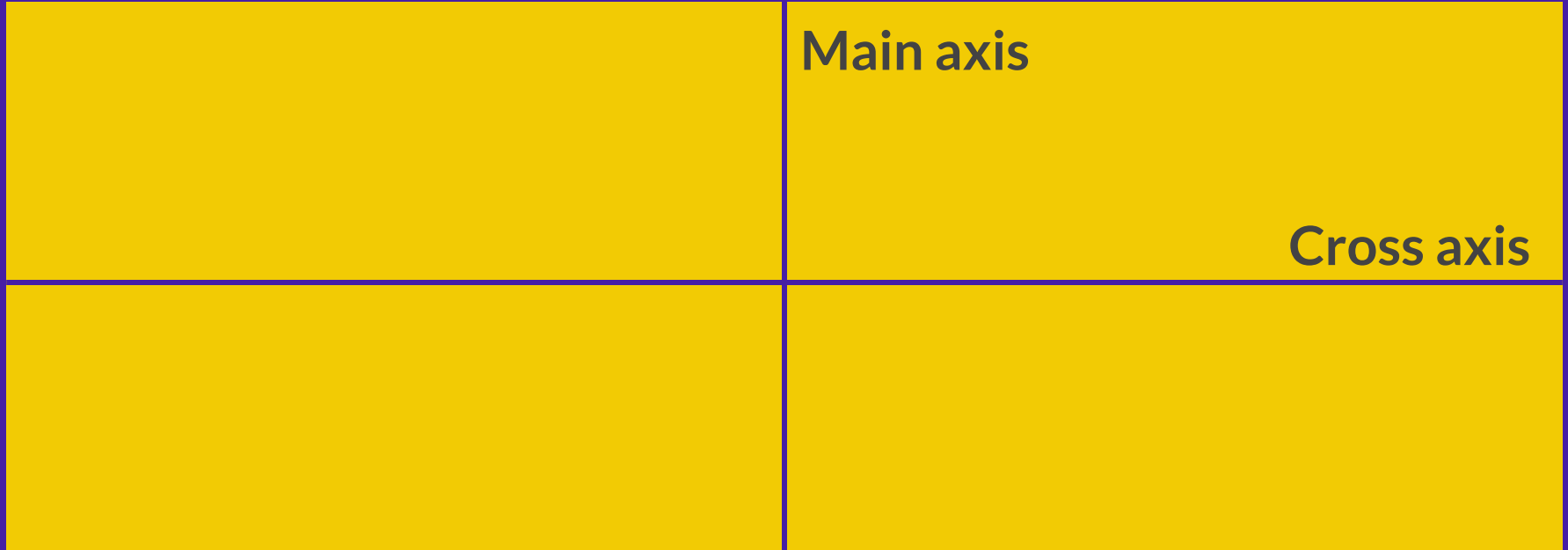
Main axis	
	Cross axis



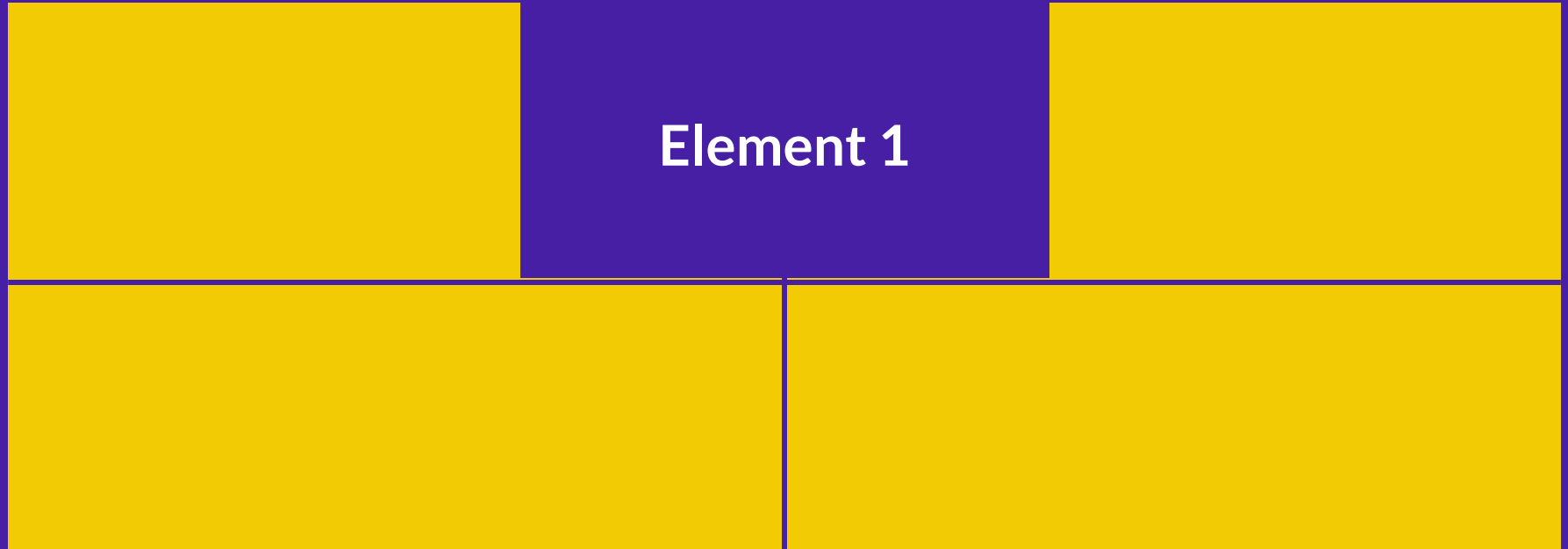
Flex-direction: column



Flex-direction: column-reverse



Justify-content: center



center

Element 1

Element 2

Element 3



flex-end

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3



flex-start

Element 1

Element 2

Element 3

flex-end

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3



flex-start

Element 1

Element 2

Element 3

flex-end

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3

space-between

Element 1

Element 2

Element 3



flex-start

Element 1

Element 2

Element 3

flex-end

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3

space-between

Element 1

Element 2

Element 3

space-around

Element 1

Element 2

Element 3



flex-start

Element 1

Element 2

Element 3

flex-end

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3

space-between

Element 1

Element 2

Element 3

space-around

Element 1

Element 2

Element 3

space-evenly

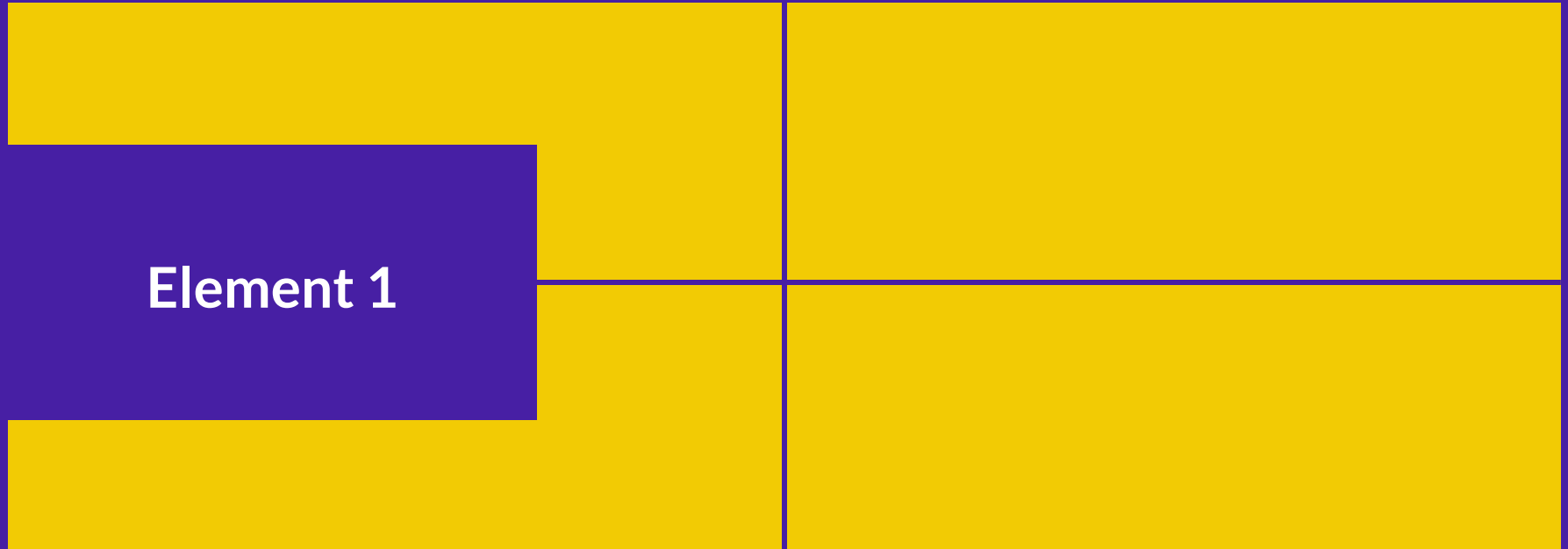
Element 1

Element 2

Element 3



Align-items: center



center

Element 1

Element 2

Element 3



flex-start

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3



stretch

Element 1

Element 2

Element 3

flex-start

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3



stretch

Element 1

Element 2

Element 3

flex-start

Element 1

Element 2

Element 3

center

Element 1

Element 2

Element 3

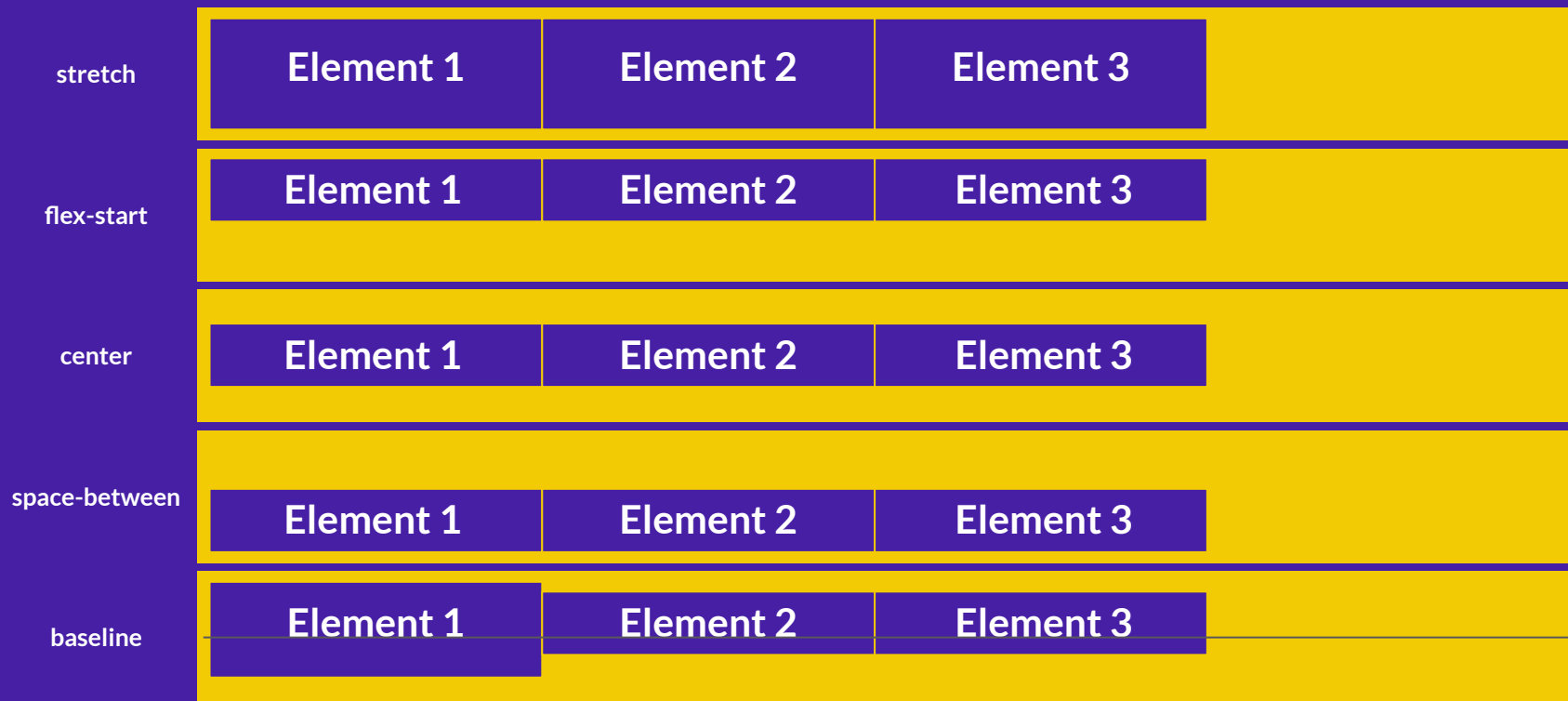
space-between

Element 1

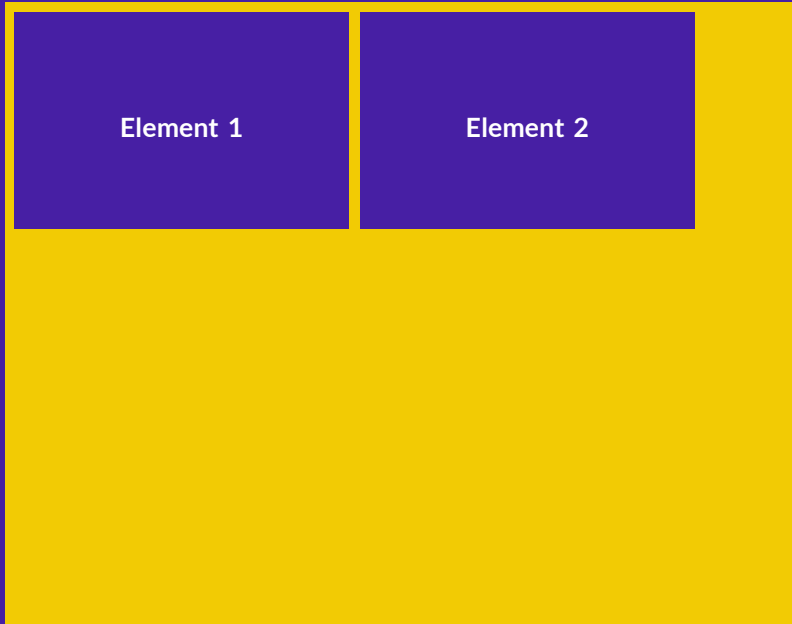
Element 2

Element 3

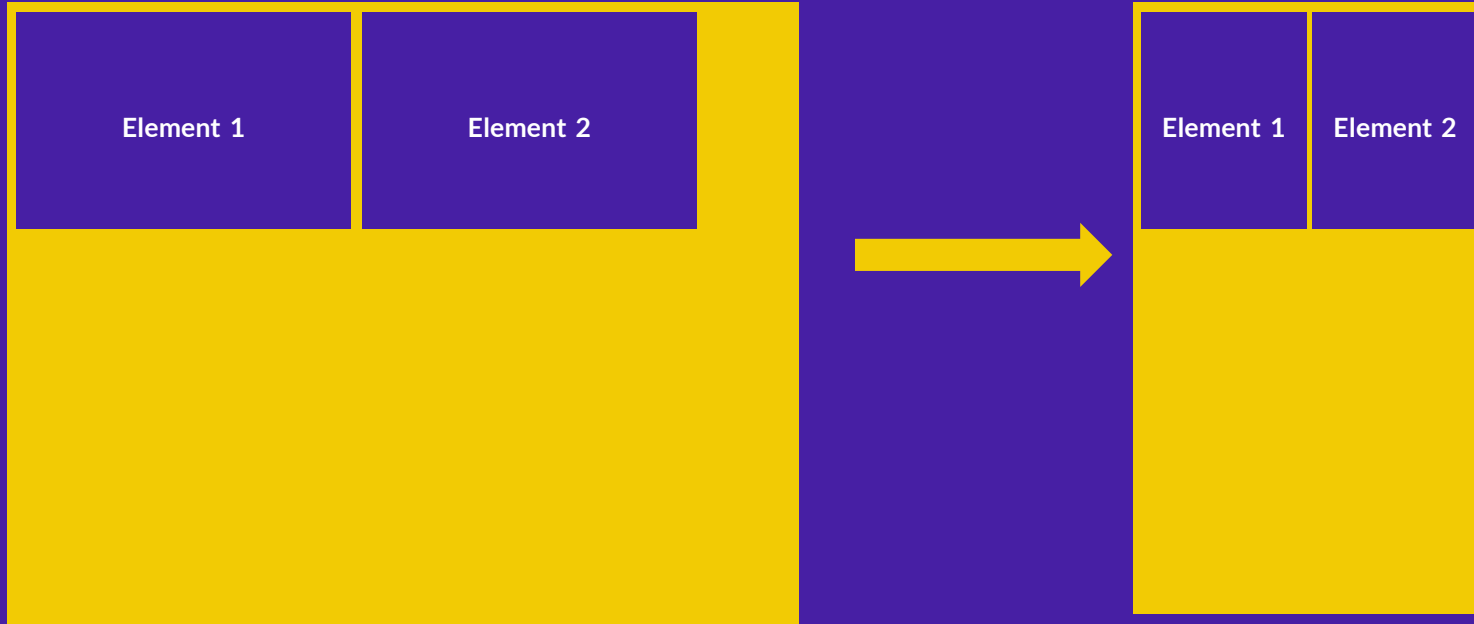




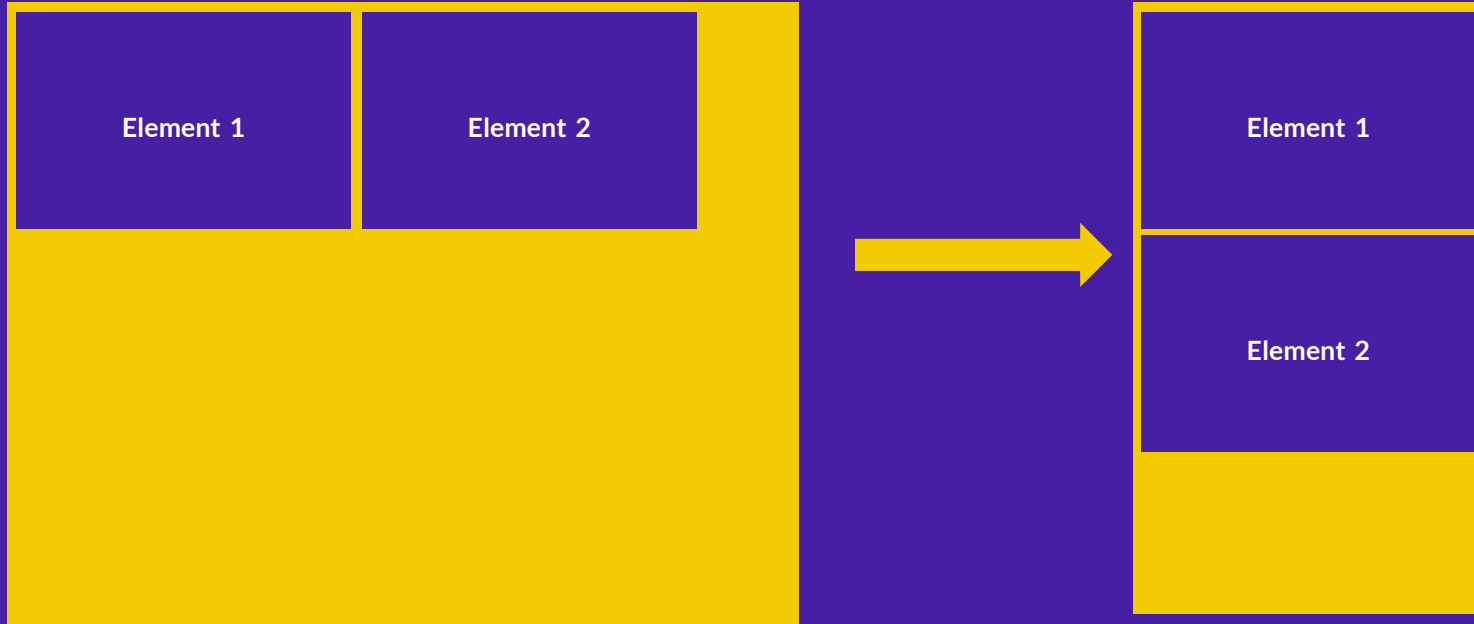
Flex-Wrap



Flex-Wrap: no-wrap



Flex-Wrap: wrap



Align-content: center

Element 1	Element 2	Element 3	Element 4	Element 5
Element 6	Element 7	Element 8	Element 9	Element 10



center

Element 1	Element 2	Element 3	Element 4
Element 5	Element 6	Element 7	Element 8



flex-start

Element 1	Element 2	Element 3	Element 4
Element 5	Element 6	Element 7	Element 8

center

Element 1	Element 2	Element 3	Element 4
Element 5	Element 6	Element 7	Element 8



stretch

Element 1	Element 2	Element 3	Element 4
Element 5	Element 6	Element 7	Element 8

flex-start

Element 1	Element 2	Element 3	Element 4
Element 5	Element 6	Element 7	Element 8

center

Element 1	Element 2	Element 3	Element 4
Element 5	Element 6	Element 7	Element 8



stretch	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
flex-start	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
center	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
flex-end	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8



stretch	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
flex-start	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
center	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
flex-end	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
space-between	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8



stretch	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
flex-start	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
center	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
flex-end	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
space-between	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8
space-between	Element 1	Element 2	Element 3	Element 4
	Element 5	Element 6	Element 7	Element 8



Flex-flow



Flex-flow

=



Flex-flow

=

Justify-content



Flex-flow

=

Justify-content

+



Flex-flow

=

Justify-content

+

flex-wrap



flex-flow: row wrap



Les propriétés liées aux éléments



Align-self

Element 1:
Stretch



Align-self

Element 1 :
flex-start



Align-self

Element 1 :
flex-start

Element 2 :
flex-end



Align-self

Element 1 :
flex-start

Element 2 :
flex-end

Element 3 :
center



Align-self

Element 1 :
flex-start

Element 2 :
flex-end

Element 3 :
center

Element 4 :
Baseline



Order: 0

Element 1

Element 2

Element 3



Element 1
order: -1;

Element 3
order: 0;

Element 2
order: 99;



Flex-basis



Flex-basis = min-width



Flex-grow

Element 1
flex-grow: 1

Element 2
flex-grow: 2

Element 3
flex-grow: 1



Flex-shrink

Element 1
`flex-shrink: unset`

<https://developer.mozilla.org/en-US/docs/Web/CSS/flex-shrink>



Flex-shrink



Flex-shrink



Flex



Flex

=



Flex
=
flex-grow



Flex
=
flex-grow
+



Flex
=
flex-grow
+
flex-shrink



Flex
=
flex-grow
+
flex-shrink
+



Flex
=
flex-grow
+
flex-shrink
+
flex-basis



Flex: 1 1 250px

Flex-grow: 1;

Flex-shrink: 1;

Flex-basis: 250px;



Flex: 1;

Flex-grow: 1;

Flex-shrink: 1;

Flex-basis: 0%;



**Placer son footer en
bas**



```
<body>  
  <div class="header"></div>  
  <div class="content"></div>  
  <div class="footer"></div>  
</body>
```



```
<body>
  <div class="header"></div>
  <div class="content"></div>
  <div class="footer"></div>
</body>
```

```
body {
  display: flex;
  min-height: 100vh;
  flex-direction: column;
}
```



```
<body>
  <div class="header"></div>
  <div class="content"></div>
  <div class="footer"></div>
</body>
```

```
body{
  display: flex;
  min-height: 100vh;
  flex-direction: column;
}

.content{
  flex: 1;
}
```



Créer un menu de navigation



**Centrer horizontalement
et verticalement un
élément**



```
<div class="content">  
  <div class="main-section">  
    <h1>Hello World !</h1>  
  </div>  
</div>
```



```
<div class="content">
  <div class="main-section">
    <h1>Hello World !</h1>
  </div>
</div>
```

```
.main-section {
  display: flex;
  justify-content: center;
  align-items: center;
}
```



Création de cartes responsive



Création d'une galerie



Création d'image + texte alternatif



FIN.

