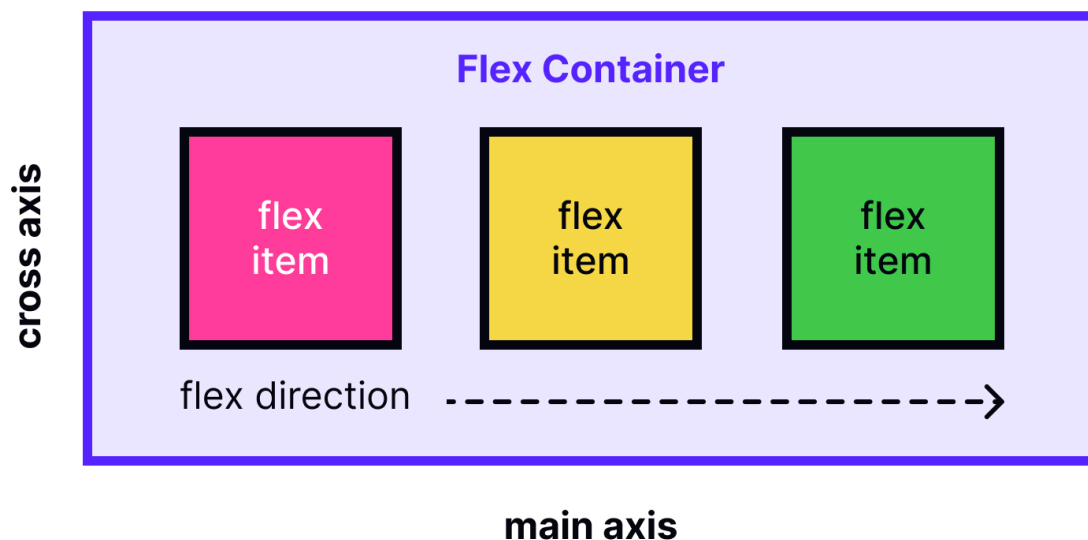


## Desenvolvimento de Páginas Web

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### CSS Flexible Box Layout (flexbox)



- Flexbox (ou Flexible Box Layout) é um modelo de layout do CSS3 criado para **facilitar a organização de elementos em uma única dimensão** (linha ou coluna) dentro de um contêiner.
- Especialmente útil para criar **layouts responsivos e distribuir espaço entre os itens de forma eficiente**, mesmo quando os tamanhos dos elementos são desconhecidos ou dinâmicos.
- Vamos desenvolver um **exemplo simples** para estudar os conceitos básicos do flexbox.
- **Material complementar:** Flexbox Froggy  
<https://flexboxfroggy.com>

Vamos criar um contêiner que envolverá três itens. Repare que cada item possui duas classes:

#### Trecho do HTML

```
<div class="elementos">
  <div class="item i1">1</div>
  <div class="item i2">2</div>
  <div class="item i3">3</div>
</div>
```

O contêiner terá borda preta e 300px de altura (height) :

#### Trecho do CSS

```
.elementos{
  border: solid 2px black;
  height: 300px;
}
```

Todos os itens terão texto centralizado e 15px de padding (espaçamento interno):

#### Trecho do CSS

```
.item{
  text-align: center;
  padding: 15px;
}
```

Cada item terá uma cor diferente:

Trecho do CSS

```
.i1{
  background-color: red;
}

.i2{
  background-color: green;
}

.i3{
  background-color: blue;
}
```

Agora vamos alterar a propriedade `display` do contêiner para `flex`.

Trecho do CSS

```
.elementos{
  display: flex;
```

Com a propriedade **`flex-direction`** podemos controlar a direção principal do layout:

- **row**
- row-reverse
- column
- column-reverse

Trecho do CSS

```
.elementos{
  display: flex;
  flex-direction: row;
```

A propriedade **justify-content** permite controlar o espaçamento horizontal dos itens:

- **flex-start**
- flex-end
- center
- space-between
- space-around
- space-evenly

Trecho do CSS

```
.elementos{
  display: flex;
  flex-direction: row;
  justify-content: flex-start;
```

Já a propriedade **align-items** permite controlar o alinhamento em relação ao eixo perpendicular ao eixo principal (*cross axis*):

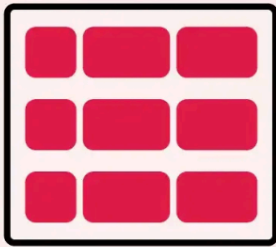
- **flex-start**
- flex-end
- center
- stretch

Trecho do CSS

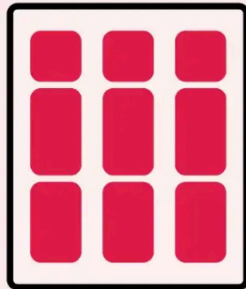
```
.elementos{
  display: flex;
  flex-direction: row;
  justify-content: flex-start;
  align-items: flex-start;
```

# CSS Flexbox

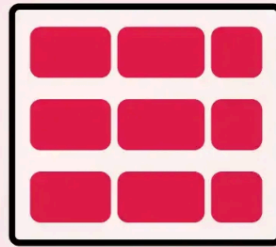
## flex-direction



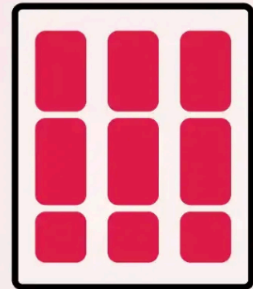
row



column

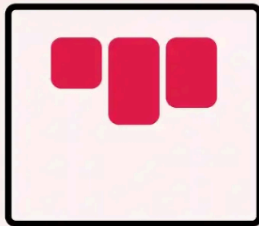


row-reverse

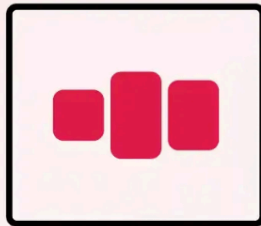


column-reverse

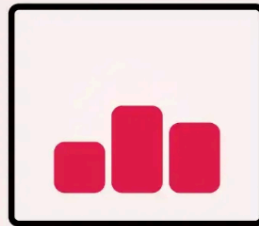
## align-items



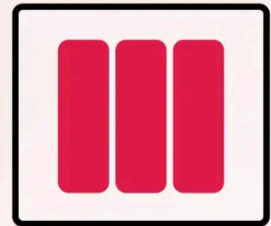
flex-start



center

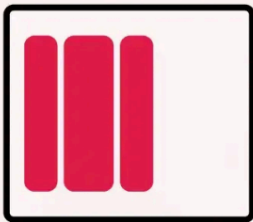


flex-end



stretch

## justify-content



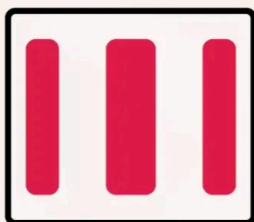
flex-start



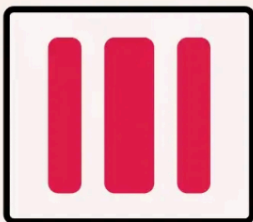
center



flex-end



space-between

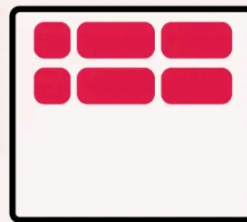


space-around

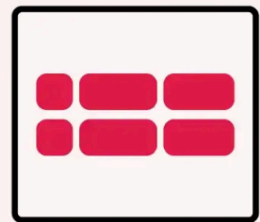


space-evenly

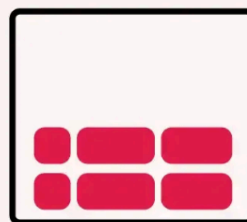
## align-content



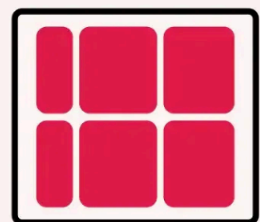
flex-start



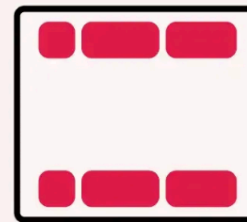
center



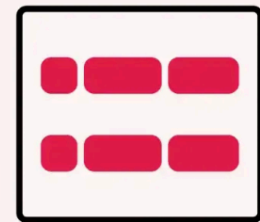
flex-end



stretch



space-between



space-around