



UNIVERSIDADE  
FEDERAL DO CEARÁ

## Tecnologias Web

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CSS3 - parte 4 Flex Box

UFC – Engenharia da Computação – 2023-1

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# Agenda

➡ Flex Box



# Dificuldades com layouts

- Centralizar um bloco de conteúdo verticalmente dentro de seu pai.
- Fazer com que os filhos de um container ocupe uma quantidade igual de largura/altura disponível, independente da quantidade de largura/altura disponível.
- Fazer todas as colunas de um layout com múltiplas colunas adotem a mesma altura, mesmo que contenham uma quantidade diferente de conteúdo.

# Exemplo de layouts

## Sample flexbox example

### First article

Tacos actually microdosing, pour-over semiotics banjo chicharrones retro fanny pack portland everyday carry vinyl typewriter. Tacos PBR&B pork belly, everyday carry ennui pickled sriracha normcore hashtag polaroid single-origin coffee cold-pressed. PBR&B tattooed trust fund twee, leggings salvia iPhone photo booth health goth gastropub hammock.

### Second article

Tacos actually microdosing, pour-over semiotics banjo chicharrones retro fanny pack portland everyday carry vinyl typewriter. Tacos PBR&B pork belly, everyday carry ennui pickled sriracha normcore hashtag polaroid single-origin coffee cold-pressed. PBR&B tattooed trust fund twee, leggings salvia iPhone photo booth health goth gastropub hammock.

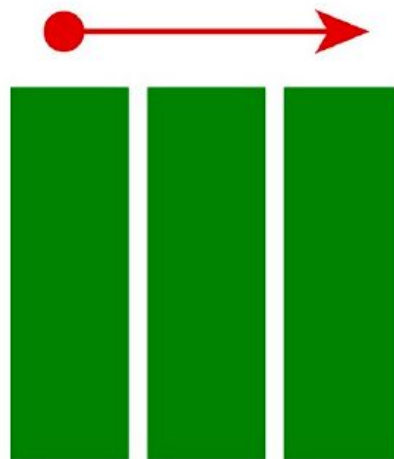
### Third article

Tacos actually microdosing, pour-over semiotics banjo chicharrones retro fanny pack portland everyday carry vinyl typewriter. Tacos PBR&B pork belly, everyday carry ennui pickled sriracha normcore hashtag polaroid single-origin coffee cold-pressed. PBR&B tattooed trust fund twee, leggings salvia iPhone photo booth health goth gastropub hammock.

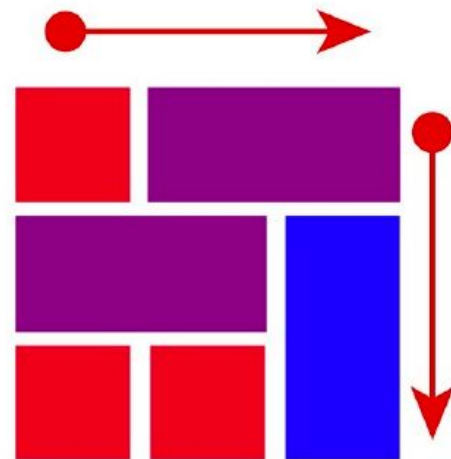
Cray food truck brunch, XOXO +1 keffiyeh pickled chambray waistcoat ennui. Organic small batch paleo 8-bit. Intelligentsia umami wayfarers pickled, asymmetrical kombucha letterpress kitsch leggings cold-pressed squid chartreuse put a bird on it. Listicle pickled man bun cornhole heirloom art party.

# Entendendo o Flex e o Grid

- São estruturas CSS que trabalham com a distribuição de elementos baseados em posição, tamanho e alinhamento;
- Hoje são a recomendação para construção de layouts responsivos;
- As duas técnicas podem trabalhar em conjunto;



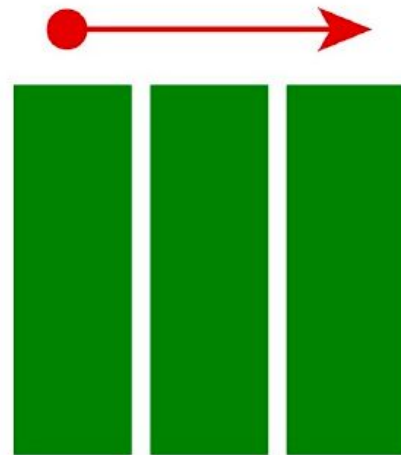
Flexbox  
One Dimensions



CSS Grids  
Two Dimensions

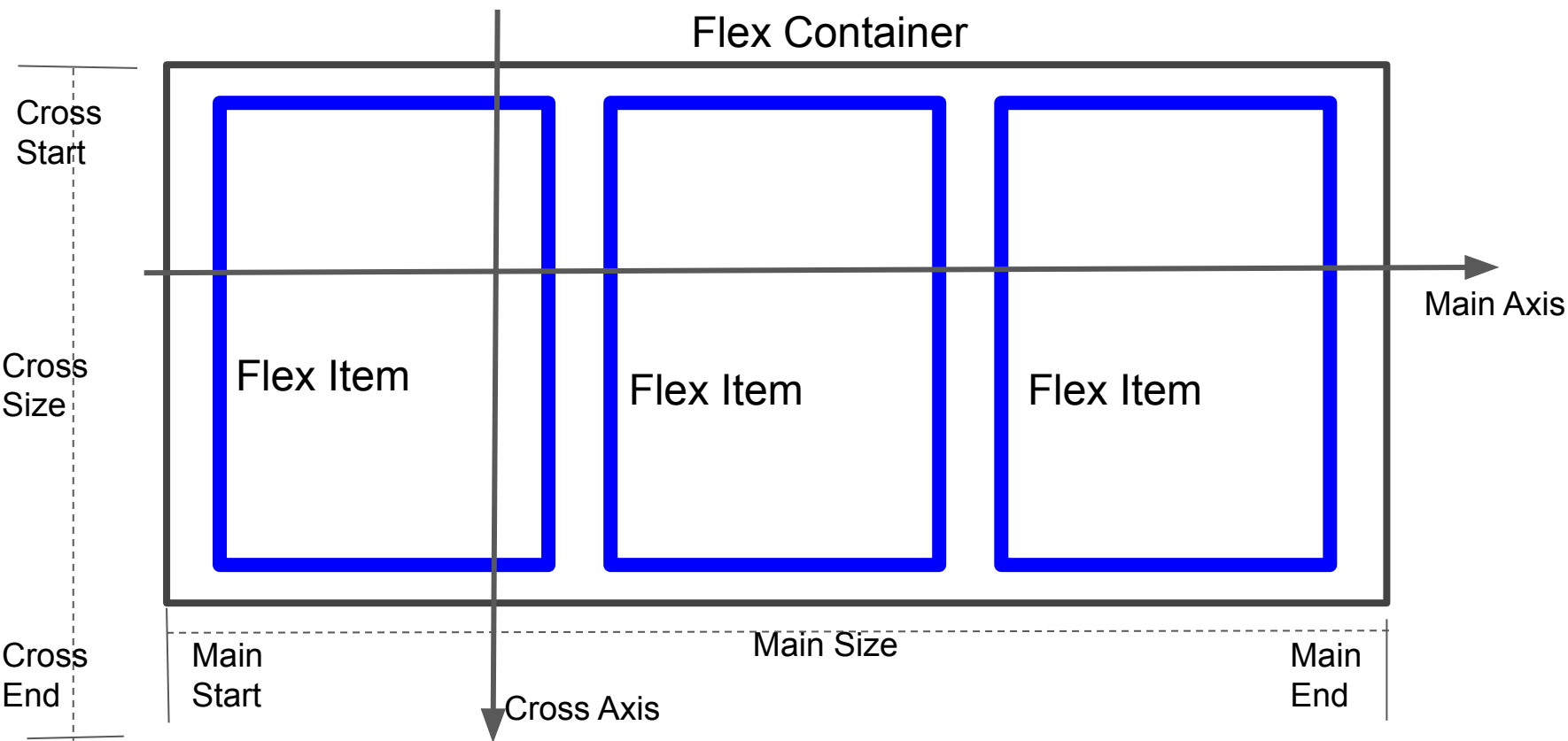
# Layout Flex

- Mais indicado para alinhar componentes em um única dimensão, seja ela linha ou coluna;
- Não precisamos nos preocupar com a quantidade de itens pois os espaçamentos são calculados automaticamente;
- Não permite interação entre linha e coluna (por exemplo operações de mesclagem de divs);



Flexbox  
One Dimensions

# Flex box



# Como usar o flexbox?

```
section {  
  display: flex;  
}
```



# Exemplos

```
.header {  
  background: #727272;  
  display: flex;  
  flex-wrap: wrap;  
  justify-content: space-between;  
  align-items: center;  
  padding: 20px;  
}
```

## Exemplo simples:

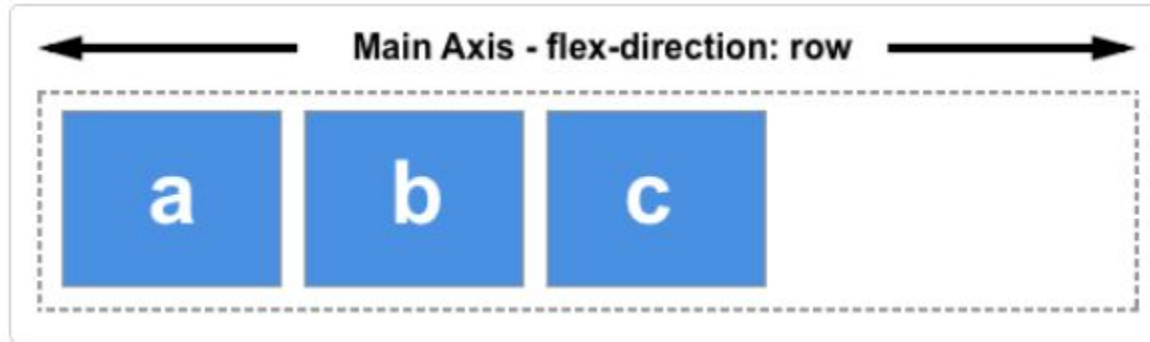
- Ativando o layout Flex;
- Definindo o que acontece quando não houver mais espaços para alocar os itens (no caso, quebramos a linha);
- Espaçamento entre os itens;
- Alinhamento;

# flex-direction

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

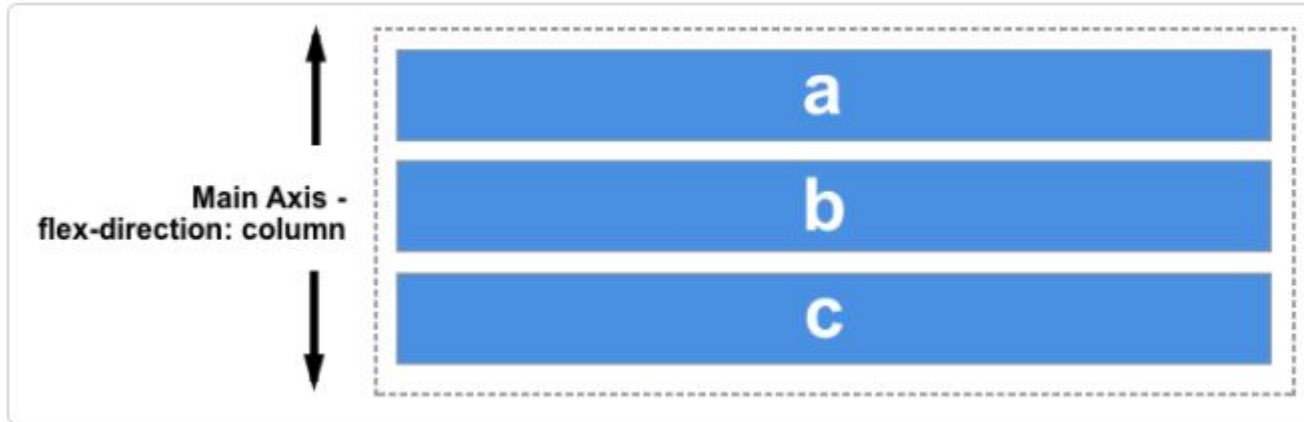
# flex-direction

- row (linha) ou row-reverse (linha reversa)

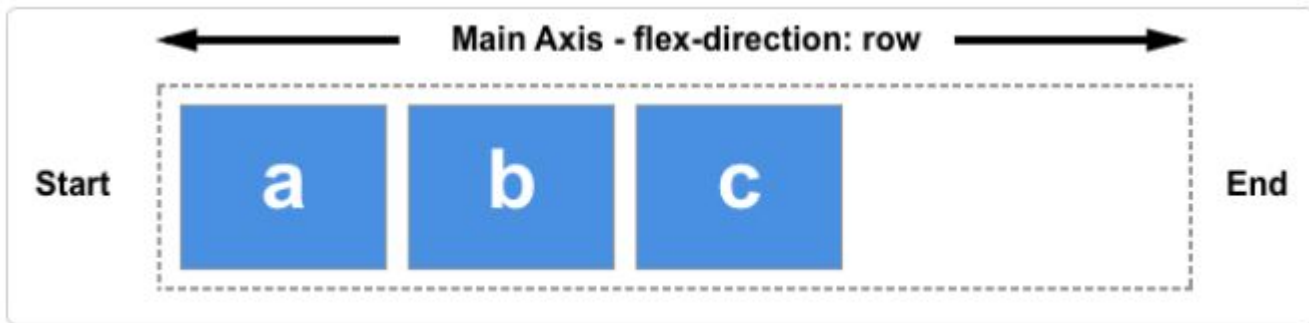


# flex-direction

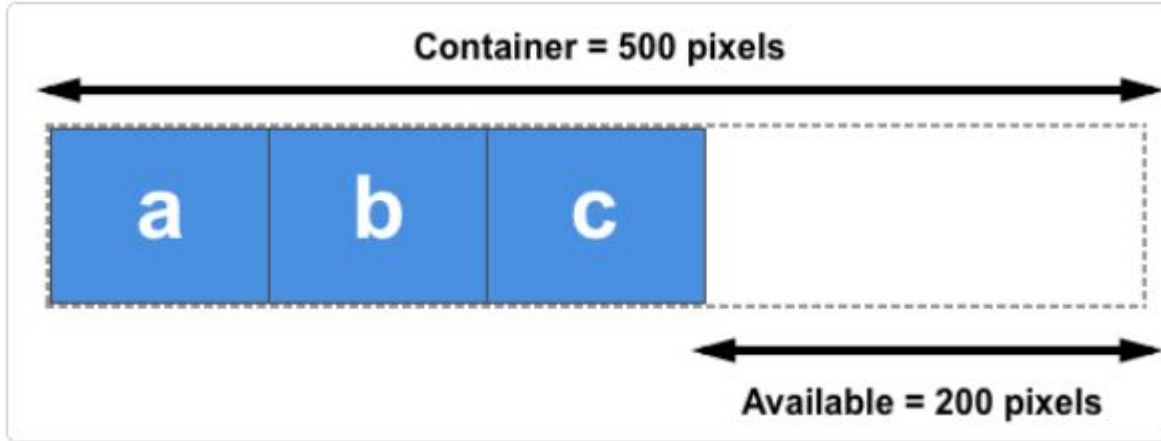
- column (coluna) ou column-reverse (coluna reversa)



# flex-direction



# Comportamento padrão



# Os componentes estão saindo fora do componente pai?

## Sample flexbox example

### First article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
typewriter.  
Tacos  
PBR&B pork  
belly,  
everyday  
carry ennui  
pickled  
sriracha  
normcore  
hashtag  
polaroid  
single-origin  
coffee cold-  
pressed.  
PBR&B  
tattooed  
trust fund  
twee,  
leggings  
salvia  
iPhone

### Second article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
typewriter.  
Tacos  
PBR&B pork  
belly,  
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carry ennui  
pickled  
sriracha  
normcore  
hashtag  
polaroid  
single-origin  
coffee cold-  
pressed.  
PBR&B  
tattooed  
trust fund  
twee,  
leggings  
salvia  
iPhone

### Third article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
typewriter.  
Tacos  
PBR&B pork  
belly,  
everyday  
carry ennui  
pickled  
sriracha  
normcore  
hashtag  
polaroid  
single-origin  
coffee cold-  
pressed.  
PBR&B  
tattooed trust  
fund twee,  
leggings  
salvia  
iPhone  
photo booth

### Fourth article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
typewriter.  
Tacos  
PBR&B pork  
belly,  
everyday  
carry ennui  
pickled  
sriracha  
normcore  
hashtag  
polaroid  
single-origin  
coffee cold-  
pressed.  
PBR&B  
tattooed  
trust fund  
twee,  
leggings  
salvia  
iPhone

### Fifth article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
typewriter.  
Tacos  
PBR&B pork  
belly,  
everyday  
carry ennui  
pickled  
sriracha  
normcore  
hashtag  
polaroid  
single-origin  
coffee cold-  
pressed.  
PBR&B  
tattooed  
trust fund  
twee,  
leggings  
salvia  
iPhone

### Sixth article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
typewriter.  
Tacos  
PBR&B pork  
belly,  
everyday  
carry ennui  
pickled  
sriracha  
normcore  
hashtag  
polaroid  
single-origin  
coffee cold-  
pressed.  
PBR&B  
tattooed trust  
fund twee,  
leggings  
salvia  
iPhone  
photo booth

### Seventh article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
typewriter.  
Tacos  
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belly,  
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normcore  
hashtag  
polaroid  
single-origin  
coffee cold-  
pressed.  
PBR&B  
tattooed  
trust fund  
twee,  
leggings  
salvia  
iPhone

### Eighth article

Tacos  
actually  
microdosing,  
pour-over  
semiotics  
banjo  
chicharrones  
retro fanny  
pack  
portland  
everyday  
carry vinyl  
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Tacos  
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polaroid  
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PBR&B  
tattooed  
trust fund  
twee,  
leggings  
salvia  
iPhone

# Os componentes estão saindo fora do componente pai?

## Sample flexbox example

### Fourth article

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### Third article

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Cray food truck brunch, XOXO +1 keffiyeh pickled chambray waistcoat ennui. Organic small batch paleo 8-bit. Intelligentsia umami wayfarers pickled, asymmetrical kombucha letterpress kitsch leggings cold-pressed squid chartreuse put a bird on it. Listicle pickled man bun cornhole heirloom art party.

### Second article

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### First article

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Wrap resolve

```
flex-wrap: wrap;
```

### Eighth article

### Seventh article

### Six article

### Fifth article



# Tamanhos diferentes para os elementos

## Sample flexbox example

### First article

Tacos actually microdosing, pour-over semiotics banjo chicharrones retro fanny pack portland everyday carry vinyl typewriter. Tacos PBR&B pork belly, everyday carry ennui pickled sriracha normcore hashtag polaroid single-origin coffee cold-pressed. PBR&B tattooed trust fund twee, leggings salvia iPhone photo booth health goth gastropub hammock.

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```
article {  
  flex: 1 200px;  
}  
  
article:nth-of-type(3) {  
  flex: 2 200px;  
}
```

# Ordenação de elementos

O *flexbox* também tem uma funcionalidade para alteração da ordem dos elementos *flex* no layout, sem afetar a ordem no código fonte HTML.

```
button:first-child {  
  order: 1;  
}
```

# Alinhamento horizontal e vertical

## align-items

- stretch: estica todos os elementos flex para preencher o elemento pai na direção do eixo transversal.
- center: centraliza os elementos ao longo do eixo transversal
- flex-start e flex-end, os quais alinham todos os elementos no início ou fim do eixo transversal, respectivamente.

## flex-basis

- flex-basis define o tamanho inicial dos elementos, em unidades de pixel

# Expansão, encolhimento e tamanho dos elementos flex

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

## flex-grow

- flex-grow definida como um inteiro positivo

## flex-shrink

- flex-shrink controla a redução dos elementos (oposto ao flex-grow)

# Referências



[https://developer.mozilla.org/pt-BR/docs/Web/CSS/CSS\\_Flexible\\_Box\\_Layout/Basic\\_Concepts\\_of\\_Flexbox](https://developer.mozilla.org/pt-BR/docs/Web/CSS/CSS_Flexible_Box_Layout/Basic_Concepts_of_Flexbox)