Aula 5

Layouts

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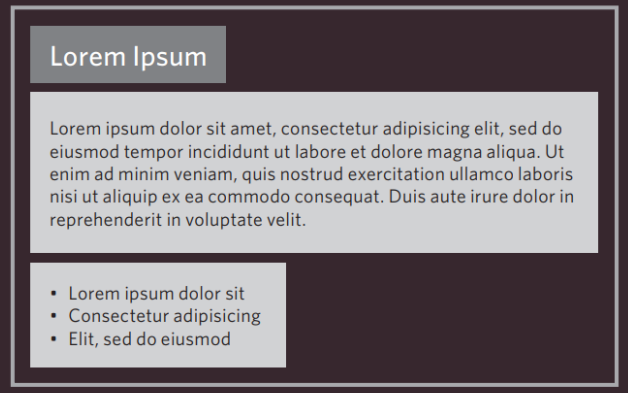
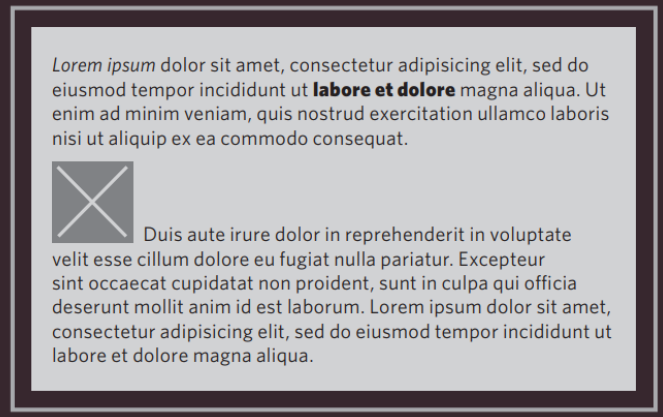
Revisando posicionamento em CSS

- Elementos vistos como em uma caixa
  - Caixas podem ser em **bloco** ou em **linha**

BLOCK-LEVEL ELEMENTS
START ON A NEW LINE
Examples include:
`<h1> <p> <ul> <li>`



INLINE ELEMENTS
FLOW IN BETWEEN SURROUNDING TEXT
Examples include:
`<img> <b> <i>`



Contêineres (Containers)

- Quando um elemento em bloco está dentro de outro elemento em bloco, o bloco externo é um *container* do bloco interno

É comum usar de `<div>` para agrupar elementos em comum dentro de uma página, por exemplo: cabeçalho, corpo e rodapé

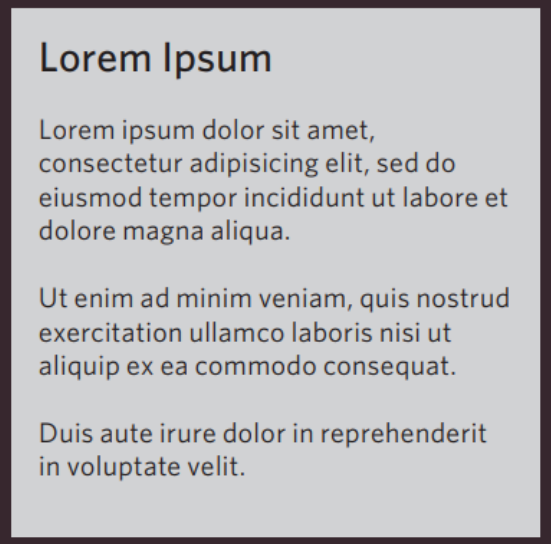
Assim, cada `<div>` é um *container* para os elementos dentro dele

Controlando a posição dos elementos

- CSS possui os seguintes esquemas de posicionamento:

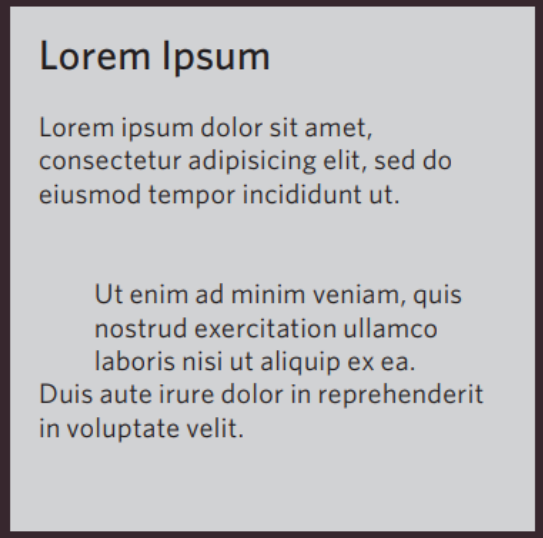
Fluxo normal

Cada elemento em bloco aparece em uma nova linha



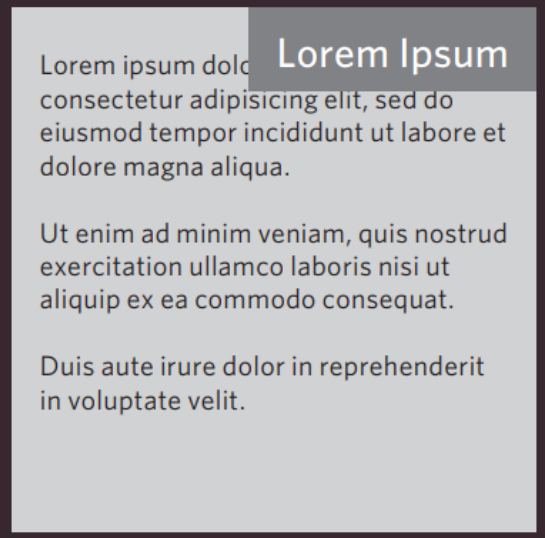
Posicionamento Relativo

Os elementos são movidos de sua posição original, mantendo seu espaço original não ocupado



Posicionamento Absoluto

Posiciona o elemento em relação ao seu *container* e deixa seu espaço livre

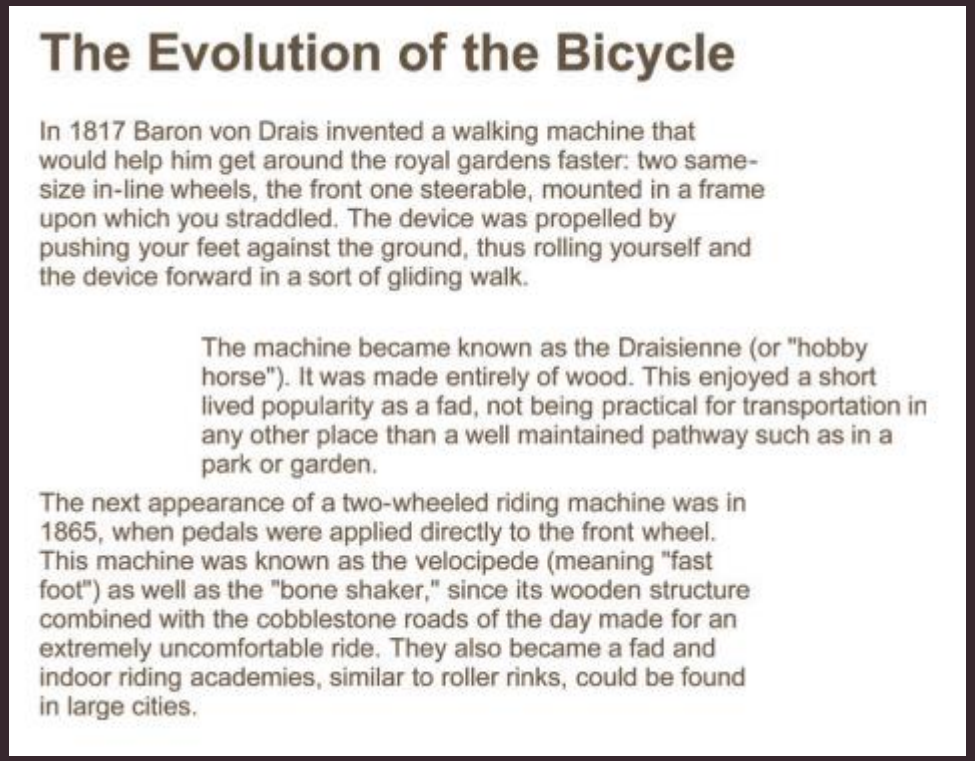


Posicionamento Relativo

- Move um elemento em relação a onde ele estaria pelo fluxo normal

CSS

```
p.example {
  position: relative;
  top: 10px;
  left: 100px;}
```



The Evolution of the Bicycle

In 1817 Baron von Drais invented a walking machine that would help him get around the royal gardens faster: two same-size in-line wheels, the front one steerable, mounted in a frame upon which you straddled. The device was propelled by pushing your feet against the ground, thus rolling yourself and the device forward in a sort of gliding walk.

The machine became known as the Draisienne (or "hobby horse"). It was made entirely of wood. This enjoyed a short lived popularity as a fad, not being practical for transportation in any other place than a well maintained pathway such as in a park or garden.

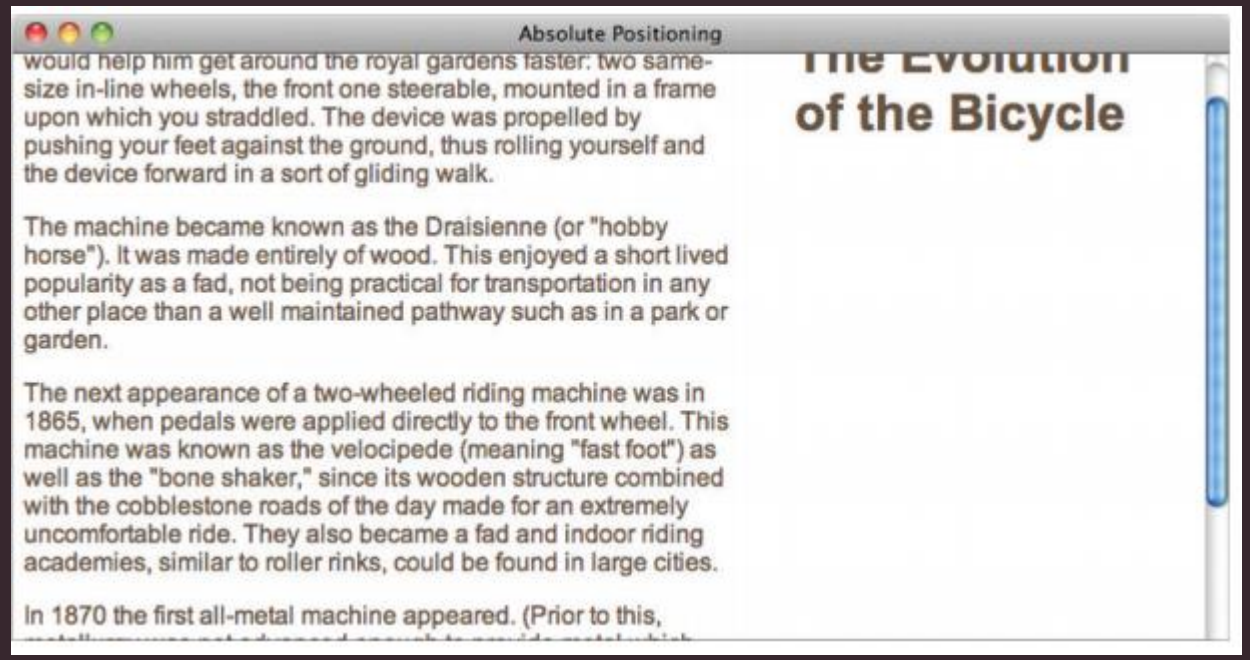
The next appearance of a two-wheeled riding machine was in 1865, when pedals were applied directly to the front wheel. This machine was known as the velocipede (meaning "fast foot") as well as the "bone shaker," since its wooden structure combined with the cobblestone roads of the day made for an extremely uncomfortable ride. They also became a fad and indoor riding academies, similar to roller rinks, could be found in large cities.

Posicionamento Absoluto

- A caixa do elemento é retirada do fluxo normal e não afeta o posicionamento dos outros elementos

CSS

```
h1 {
  position: absolute;
  top: 0px;
  left: 500px;
  width: 250px;}
p {
  width: 450px;}
```

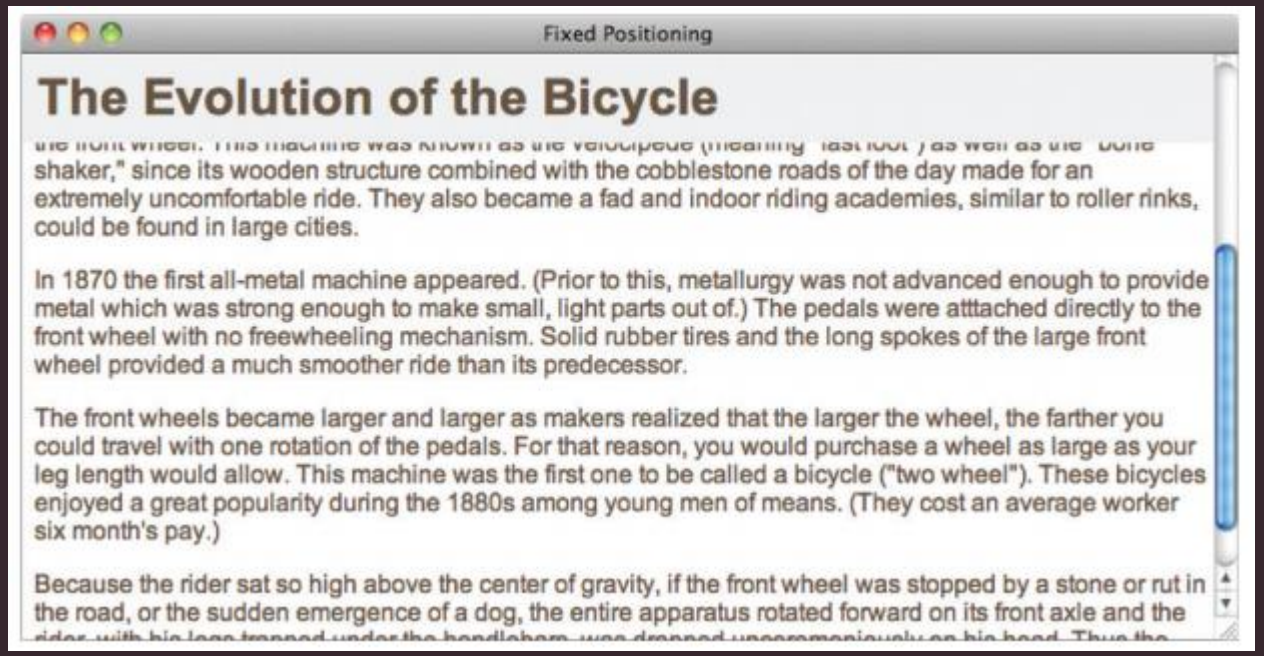


Posicionamento fixo

- Um tipo de posicionamento absoluto que posiciona o elemento em relação à janela do *browser*

CSS

```
h1 {
  position: fixed;
  top: 0px;
  left: 0px;
  padding: 10px;
  margin: 0px;
  width: 100%;
  background-color: #efefef;}
p.example {
  margin-top: 100px;}
```

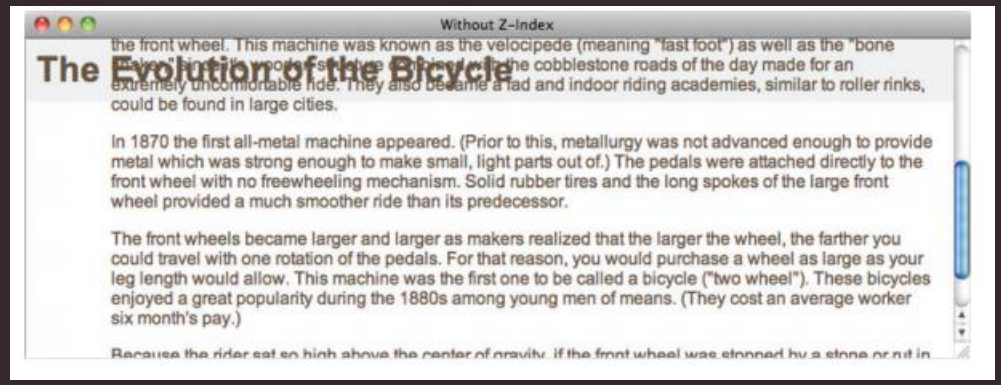


Elementos sobrepostos: z-index

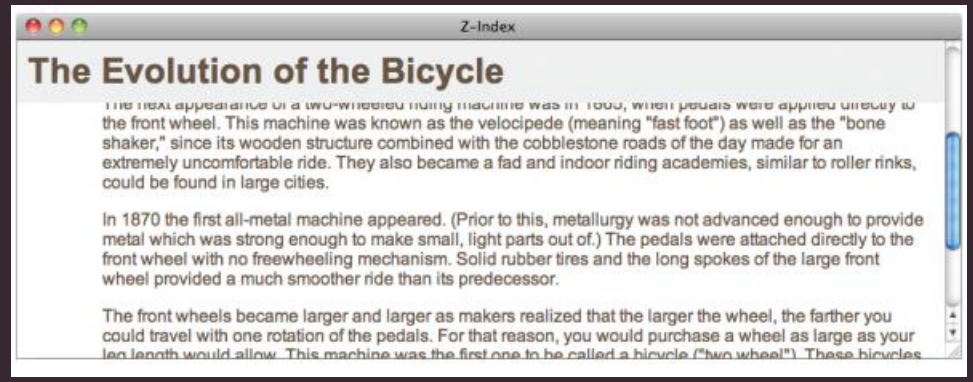
- Define a ordem de sobreposição dos elementos na página

CSS

```
h1 {
  position: fixed;
  top: 0px;
  left: 0px;
  margin: 0px;
  padding: 10px;
  width: 100%;
  background-color: #efefef;
  z-index: 10;}
p {
  position: relative;
  top: 70px;
  left: 70px;}
```



Sem z-index



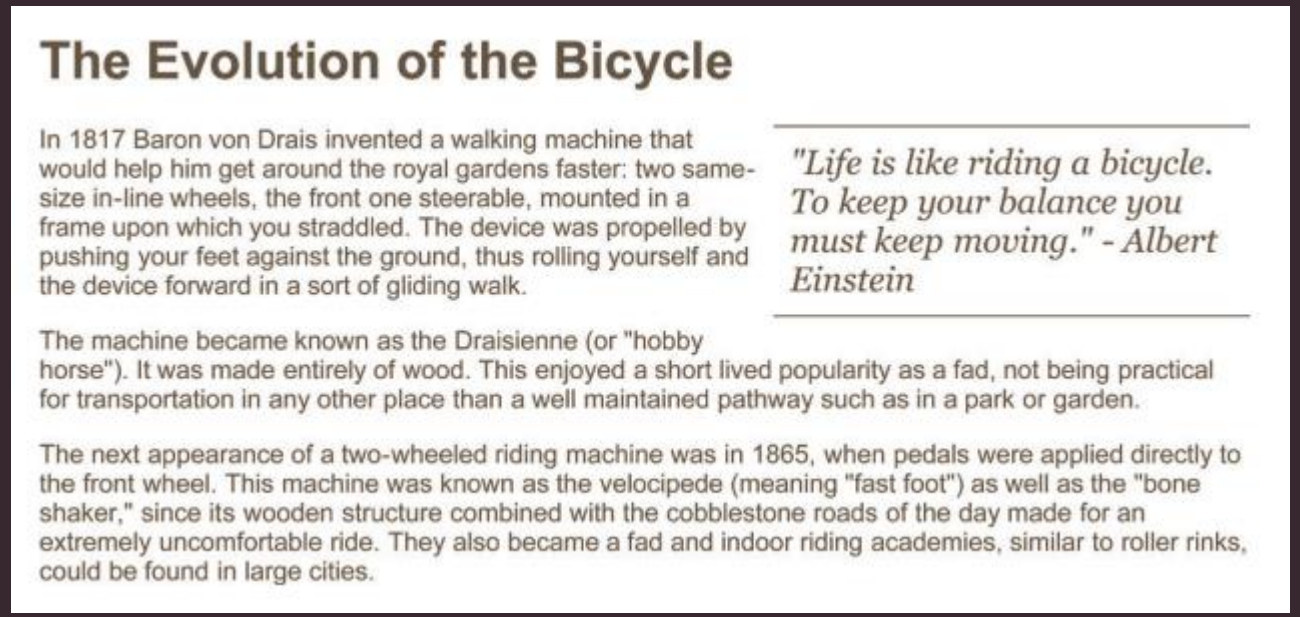
Com z-index

A propriedade `floating`

- Permite deslocar um elemento todo para esquerda ou para direita, deixando seu espaço disponível

CSS

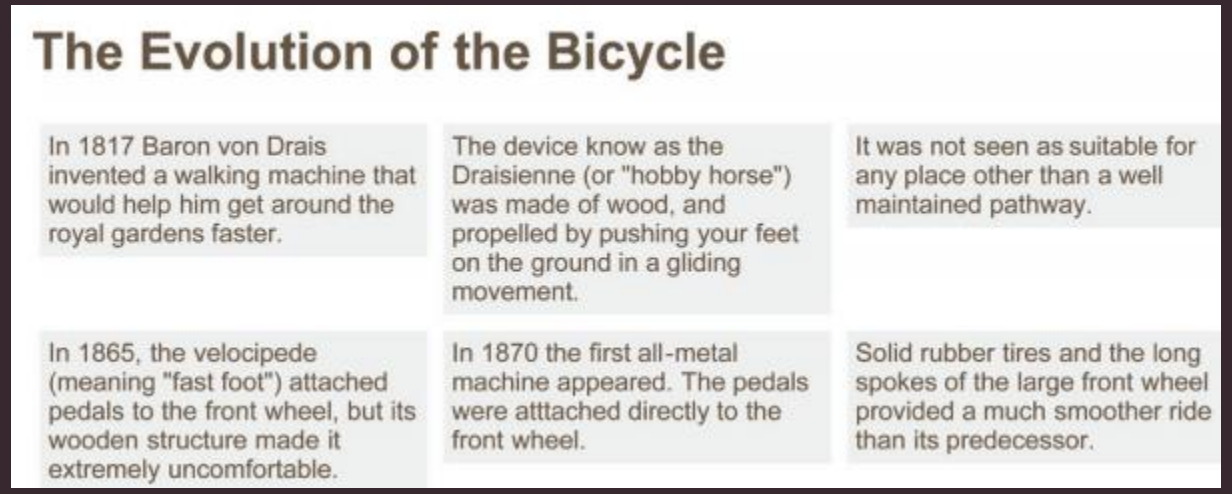
```
blockquote {
        float: right;
        width: 275px;
        font-size: 130%;
        font-style: italic;
        font-family: Georgia, Times, serif;
        margin: 0px 0px 10px 10px;
        padding: 10px;
        border-top: 1px solid #665544;
        border-bottom: 1px solid #665544;}
```



Usando `floating` e `clear`

- A propriedade **`clear`** permite dizer que nenhum elemento deve posicionar do lado escolhido de outro

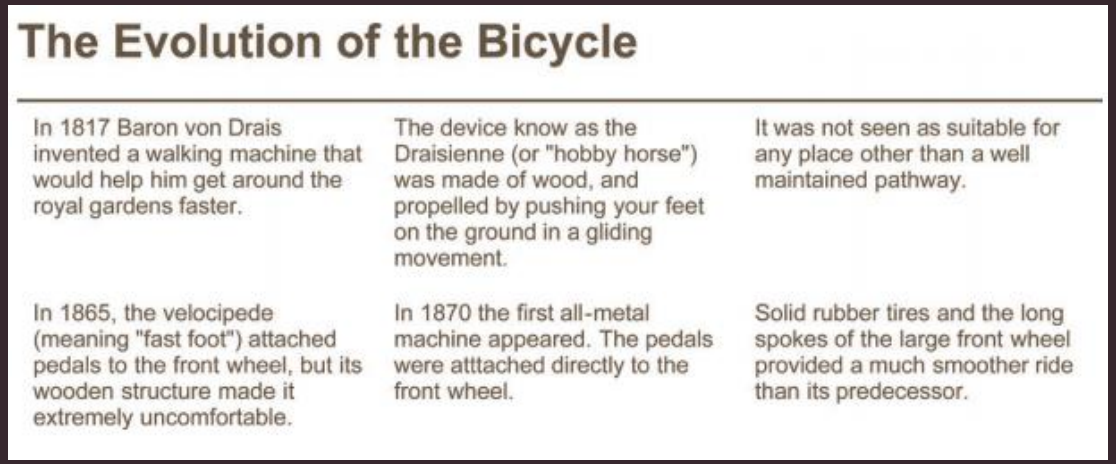
```
body {
  width: 750px;
  font-family: Arial, Verdana, sans-serif;
  color: #665544;}
p {
  width: 230px;
  float: left;
  margin: 5px;
  padding: 5px;
  background-color: #efefef;}
.clear {
  clear: left;}
```



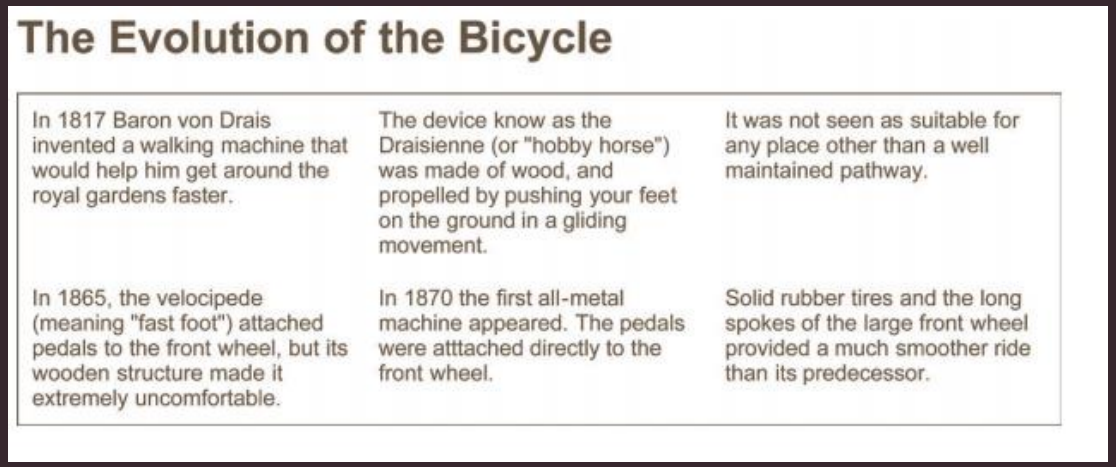
Resolvendo problemas de extrapolação

CSS

```
div {
  border: 1px solid #665544;
  overflow: auto;
  width: 100%;}
```



Sem `overflow:auto`

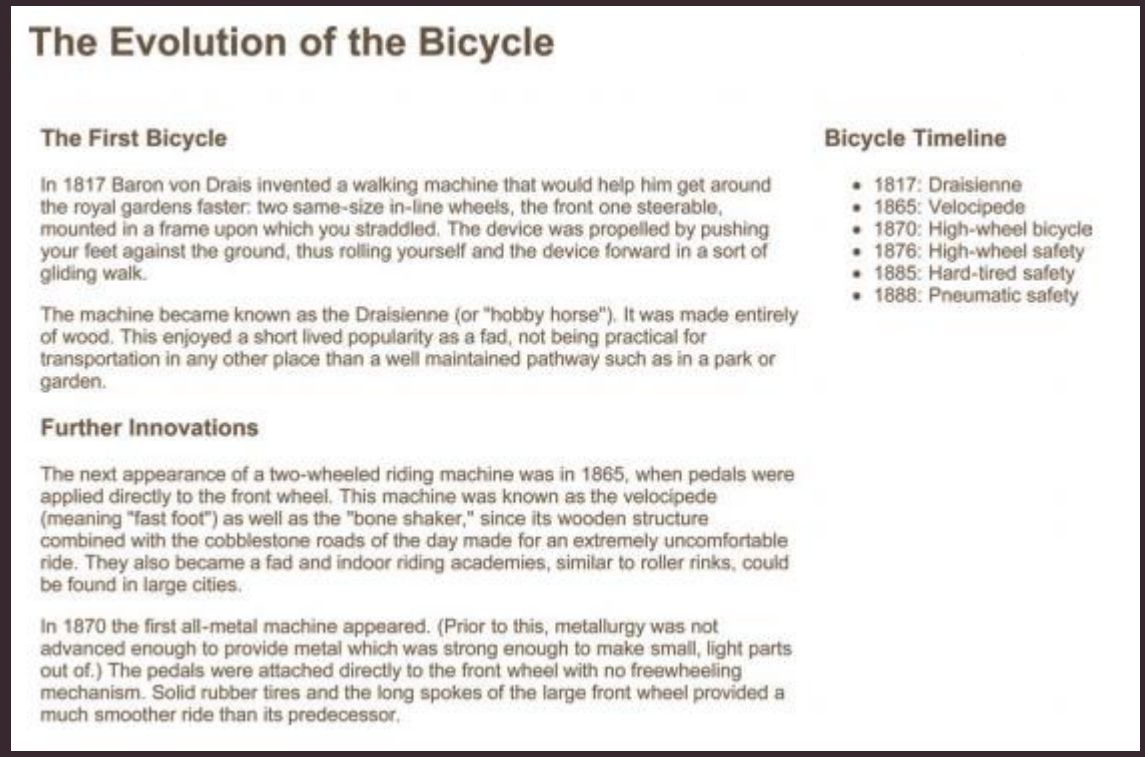


Com `overflow:auto`

Colunas usando `float`

CSS

```
.column1of2 {
  float: left;
  width: 620px;
  margin: 10px;}
.column2of2 {
  float: left;
  width: 300px;
  margin: 10px;}
```



The Evolution of the Bicycle

The First Bicycle

In 1817 Baron von Drais invented a walking machine that would help him get around the royal gardens faster: two same-size in-line wheels, the front one steerable, mounted in a frame upon which you straddled. The device was propelled by pushing your feet against the ground, thus rolling yourself and the device forward in a sort of gliding walk.

The machine became known as the Draisienne (or "hobby horse"). It was made entirely of wood. This enjoyed a short lived popularity as a fad, not being practical for transportation in any other place than a well maintained pathway such as in a park or garden.

Further Innovations

The next appearance of a two-wheeled riding machine was in 1865, when pedals were applied directly to the front wheel. This machine was known as the velocipede (meaning "fast foot") as well as the "bone shaker," since its wooden structure combined with the cobblestone roads of the day made for an extremely uncomfortable ride. They also became a fad and indoor riding academies, similar to roller rinks, could be found in large cities.

In 1870 the first all-metal machine appeared. (Prior to this, metallurgy was not advanced enough to provide metal which was strong enough to make small, light parts out of.) The pedals were attached directly to the front wheel with no freewheeling mechanism. Solid rubber tires and the long spokes of the large front wheel provided a much smoother ride than its predecessor.

Bicycle Timeline

- 1817: Draisienne
- 1865: Velocipede
- 1870: High-wheel bicycle
- 1876: High-wheel safety
- 1885: Hard-tired safety
- 1888: Pneumatic safety

Layouts com tamanho fixo

- Deve-se definir as larguras das caixas em pixels de tamanho fixo

CSS

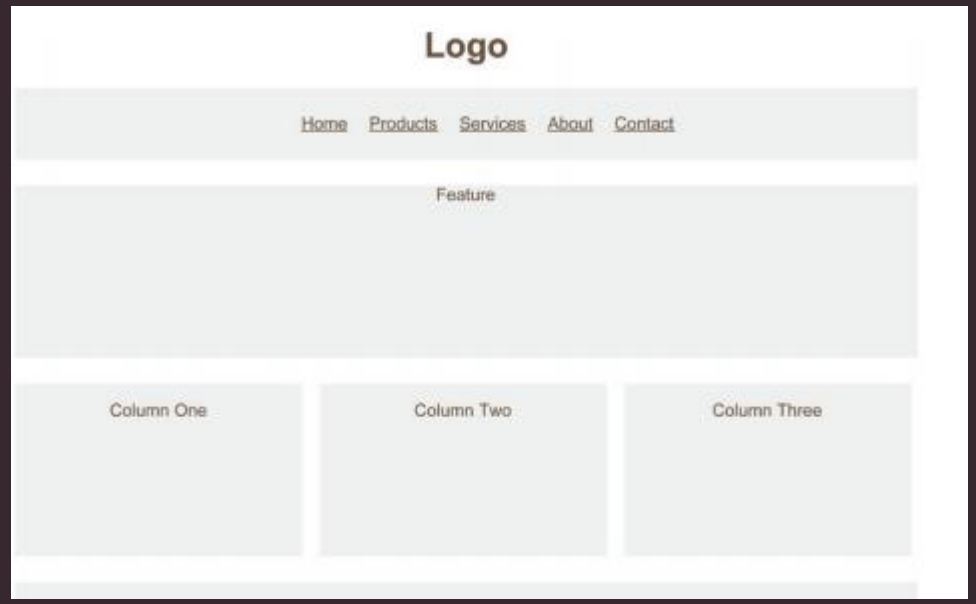
```
body {
  width: 960px;
  margin: 0 auto;}
#content {
  overflow: auto;
  height: 100%;}
#nav, #feature, #footer {
  background-color: #efefef;
  padding: 10px;
  margin: 10px;}
.column1, .column2, .column3 {
  background-color: #efefef;
  width: 300px;
  float: left;
  margin: 10px;}
li {
  display: inline;
  padding: 5px;}
```

Layouts fluidos

- Usa-se porcentagem para especificar a largura de cada caixa

CSS

```
body {
  width: 90%;
  margin: 0 auto;}
#content {overflow: auto;}
#nav, #feature, #footer {
  margin: 1%;}
.column1, .column2, .column3 {
  width: 31.3%;
  float: left;
  margin: 1%;}
.column3 {margin-right: 0%;}
li {
  display: inline;
  padding: 0.5em;}
#nav, #footer {
  background-color: #efefef;
  padding: 0.5em 0;}
#feature, .article {
  height: 10em;
  margin-bottom: 1em;
  background-color: #efefef;}
```



Media queries

- Permitem agrupar estilos e aplica-los a diferentes dispositivos baseados em algum critério

```
@media (max-width: 767px){
  p{
    color: blue;
  }
}
```

```
@media (max-width: 800px){...}
@media (min-width: 800px){...}
@media (orientation: portrait){...}
@media screen {...}
@media print {...}
```

Media queries

- Podem ser combinadas utilizando operadores lógicos

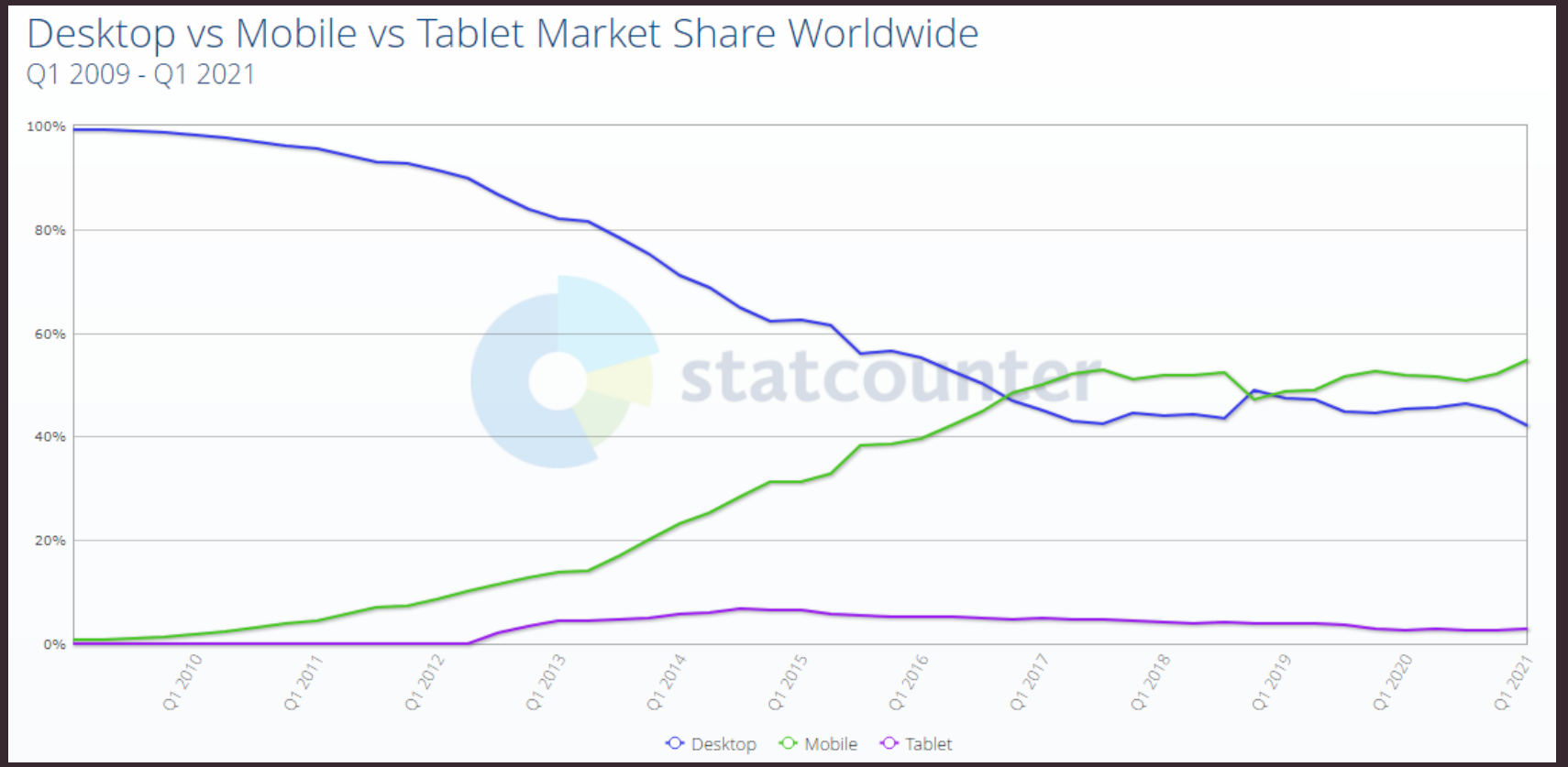
```
@media (min-width: 768px) and (max-width: 991px) {...}

@media (min-width: 767px) , (max-width: 992px) {...}
```

Equivalente a “ou”

- Abordagem comum: criar estilo base e considerar variações

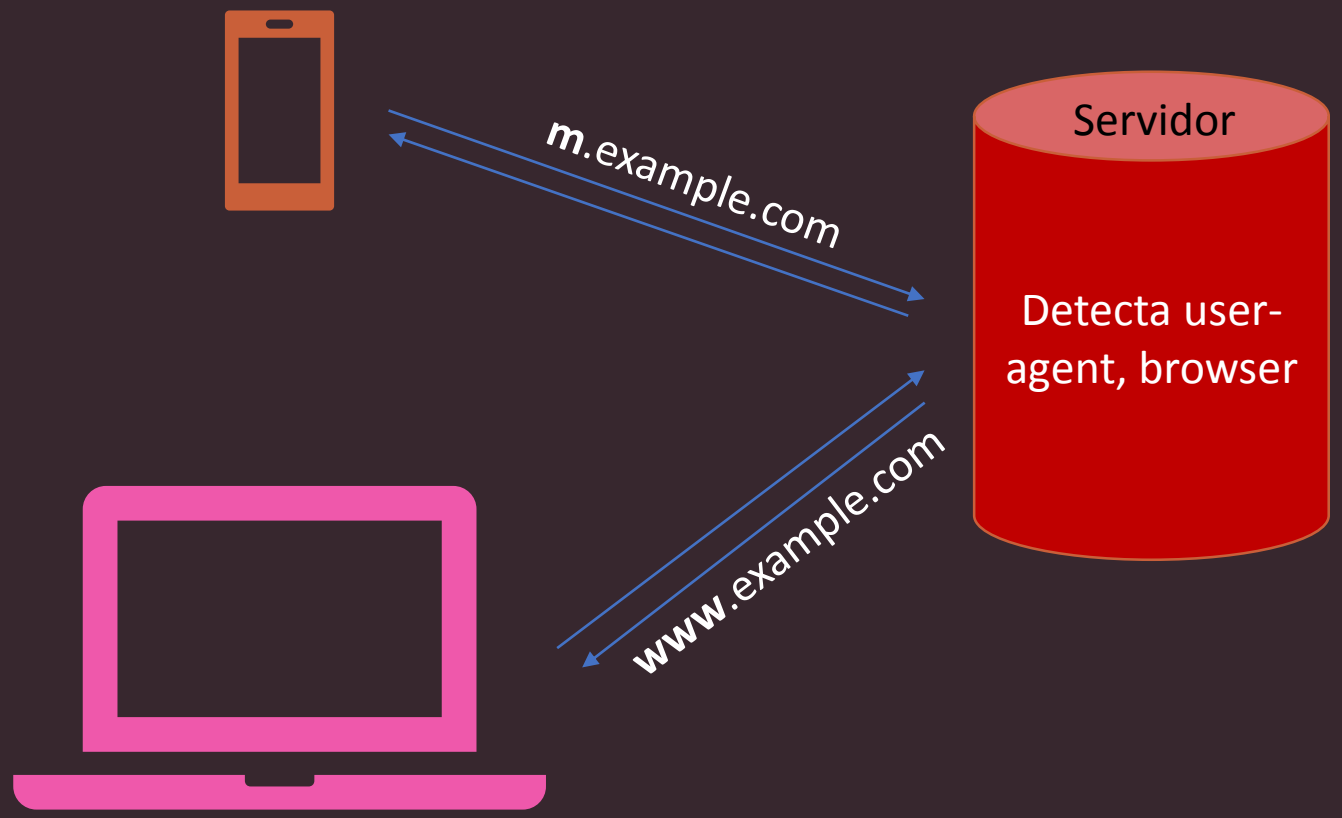
Design Responsivo

- Necessário dada a variedade de dispositivos acessando Web



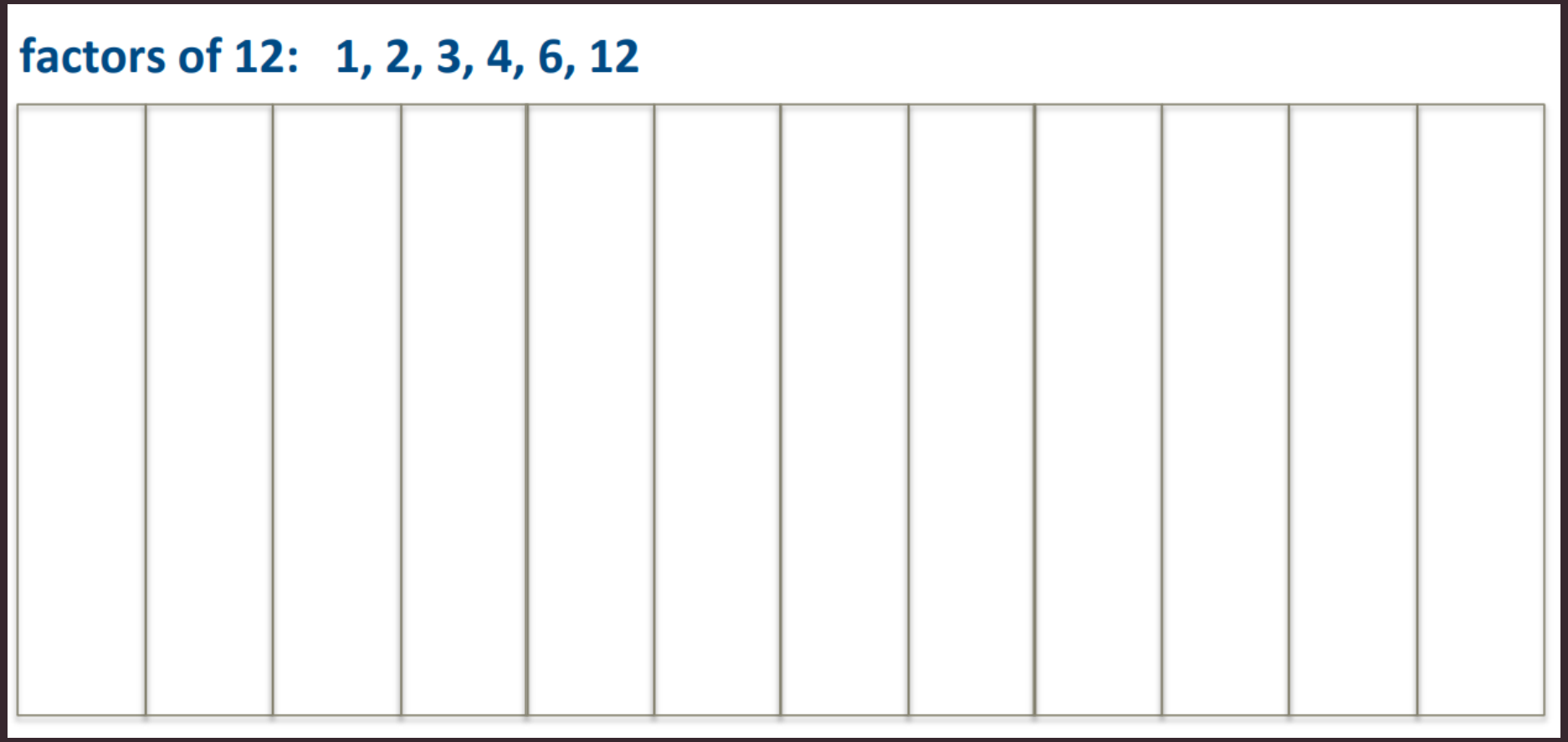
Design Responsivo

- Alternativas
- Problemas:
  - Variedade de mobile
  - Duas Aplicações



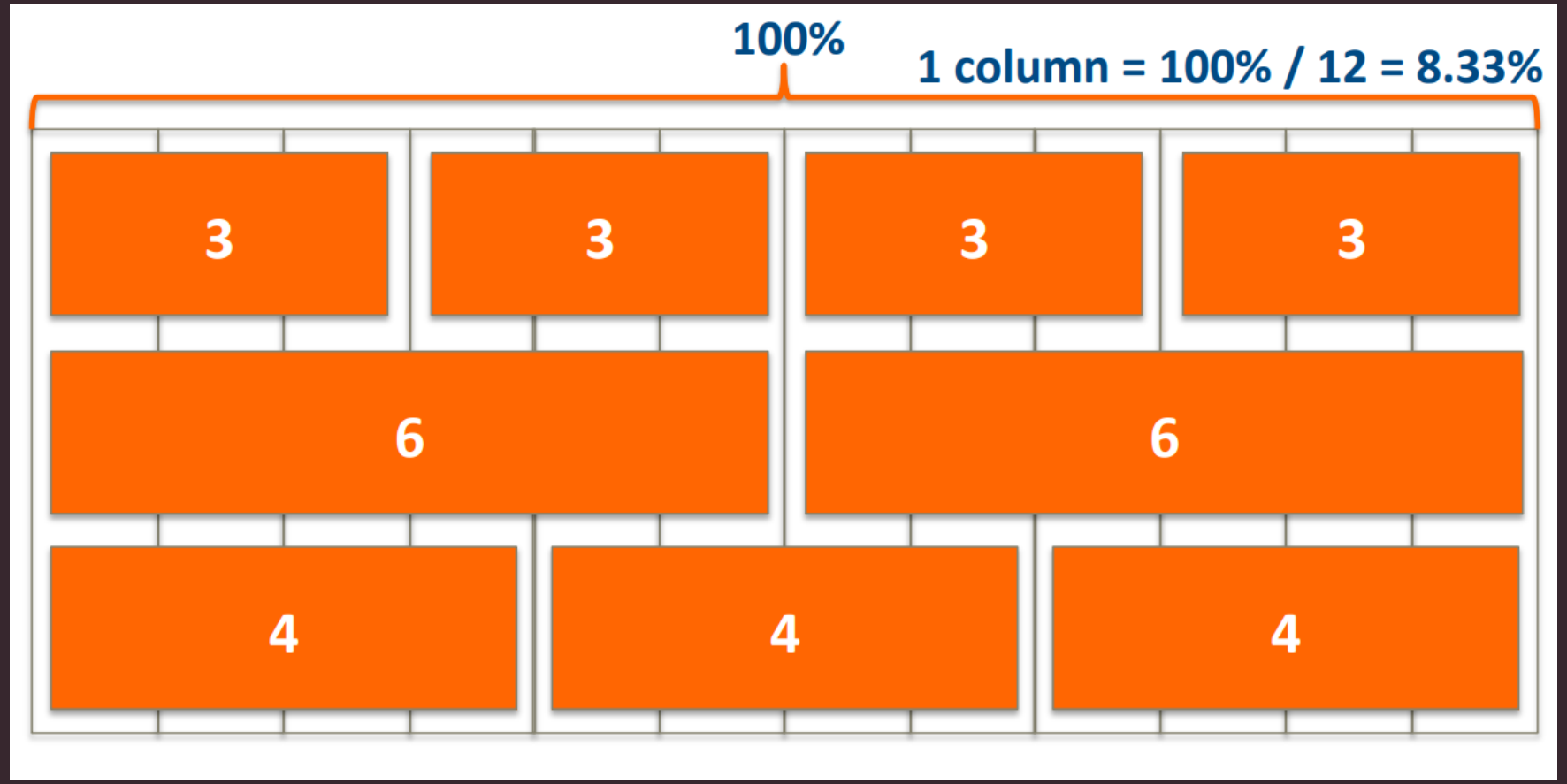
Design Responsivo

- Layout de 12 colunas



Design Responsivo

- Layout de 12 colunas



Design Responsivo

- Layout de 12 colunas