INTRODUÇÃO A LAYOUT

Dr. Sóstenes P. Gomes

Layouts – blocos de construção

- CSS trata elementos HTML como se tivessem dentro de uma **caixa**

- Caixas podem ser de dois tipos:
  - Blocos
  - Inline

Caixas bloco iniciam em uma nova linha:
<h1> <p> ...

Lorem Ipsum

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit.

- Lorem ipsum dolor sit
- Consectetur adipisicing
- Elit, sed do eiusmod

Caixas inline fluem entre o texto:
<img> <b> <i>...

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut **labore et dolore** magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

 Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Contendo elementos

- Um elemento do tipo bloco que possui internamente outro elemento do tipo bloco é considerado container ou elemento pai do bloco interno

- É comum agrupar elementos dentro de um elemento

- Por exemplo você pode agrupar todos os elementos que formam o cabeçalho de um site (ex.: logotipo e o nav)

Contendo elementos

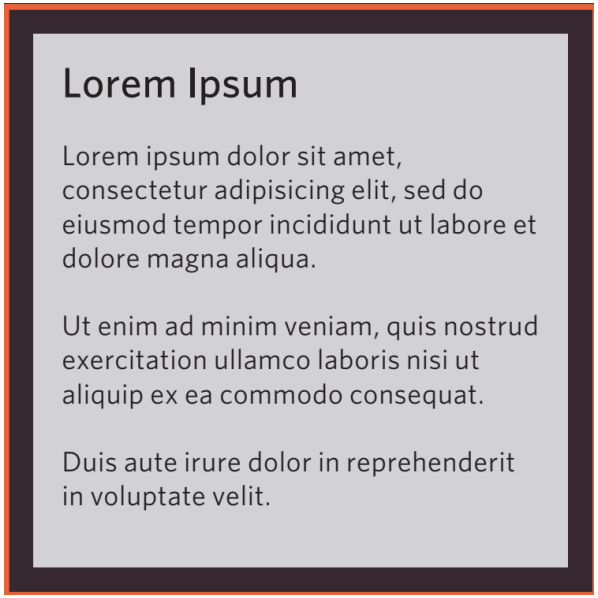
Linhas cor laranja representam um elemento ** **

Controlando a posição dos elementos

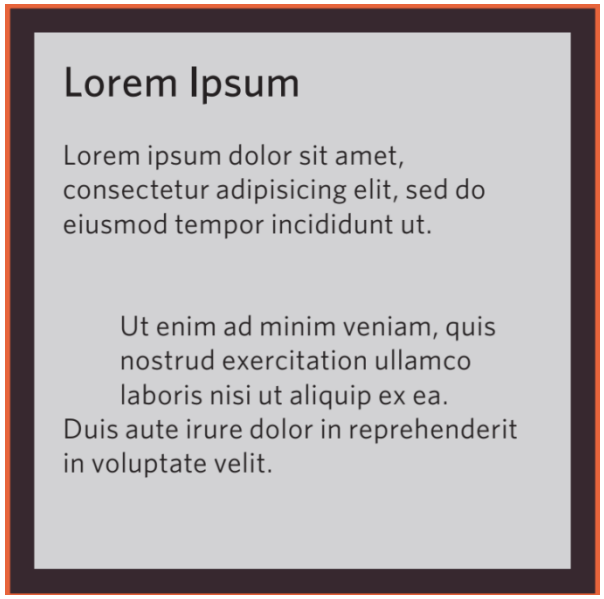
- O CSS tem três esquemas de posicionamento para controle do layout
- Fluxo normal: cada elemento bloco aparece em uma nova linha
- Posicionamento relativo: altera a posição do elemento de onde ele deveria aparecer, para uma posição top, right, bottom ou left
  - **Afeta a posição dos outros elementos em volta**
- Posicionamento absoluto: posiciona o elemento em relação a seu elemento container
  - **Não afeta a posição de outros elementos**

Controlando a posição dos elementos

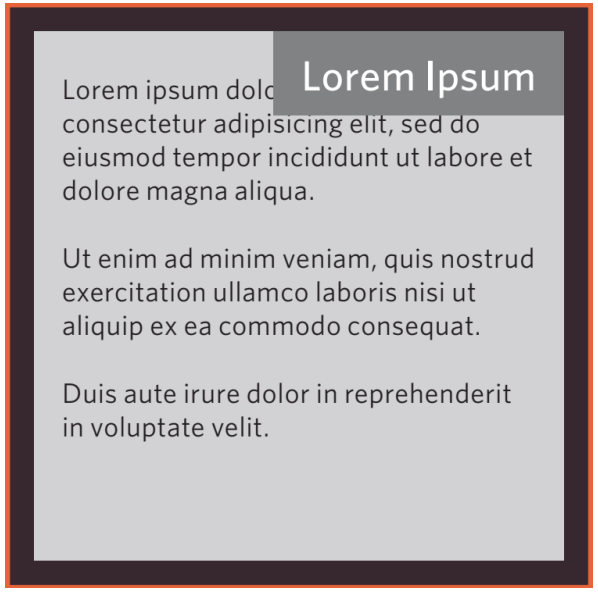
Fluxo normal



Posicionamento relativo



Posicionamento absoluto



Fluxo normal – exemplo1.html

- Adicionar o seguinte estilo

```
body {
  width: 750px;
  font-family: Arial, Verdana, sans-serif;
  color: #665544;}
h1 {
  background-color: #efefef;
  padding: 10px;}
p {
  width: 450px;}
```

Fluxo normal – exemplo1.html

- O fluxo normal é o comportamento padrão do HTML, porém a sintaxe no CSS seria **position: static**
- A largura da caixa <body> foi especificada para 750px
- A largura de uma caixa <p> foi especificada para 450px
- A caixa de <h1> tem um padding de 10px de sua caixa container

Posicionamento relativo – exemplo1.html

- Definir class="example" para um parágrafo de exemplo1.html

- Adicionar o seguinte estilo

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

Posicionamento relativo – exemplo1.html

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 it's 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 relativo – exemplo1.html

- A caixa de <p class="example"> foi deslocada 10px de top e 100px de left
- Desloca relativamente à posição onde deveria ter sido renderizada
- É possível deslocar de right e bottom
- É possível utilizar porcentagem para o valor, como 20%

Posicionamento absoluto – exemplo1.html

- Adicionar o seguinte estilo

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

Posicionamento absoluto – exemplo1.html

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

The Evolution of the Bicycle

Posicionamento absoluto – exemplo1.html

- Quando é informado que o valor de posicionamento é absoluto, a caixa é movida do fluxo normal
- Os outros elementos são ignorados
- Verifique alterar
  - left: 100px;

Posicionamento absoluto fixo – exemplo1.html

- Adicionar o seguinte estilo

```
h1 {
  position: fixed;
  top: 0px;
  left: 50px;
  padding: 10px;
  margin: 0px;
  width: 100%;
  background-color: #efefef;}
p.example {
  margin-top: 100px;}
```

Posicionamento absoluto fixo – exemplo1.html

The Evolution of the Bicycle

could be found in large cities.

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

The front wheels became larger and larger as makers realized that the larger the wheel, could travel with one rotation of the pedals. For that reason, you would purchase a whee leg length would allow. This machine was the first one to be called a bicycle ("two wheel enjoyed a great popularity during the 1880s among young men of means. (They cost an six month's pay.)

Because the rider sat so high above the center of gravity, if the front wheel was stopped

Posicionamento absoluto fixo – exemplo1.html

- Posiciona o elemento em relação à janela do navegador
- As propriedades de deslocamento foram utilizadas
- Os elementos <p> ignoram o espaço que <h1> teria

Sobrepondo elementos – exemplo1.html

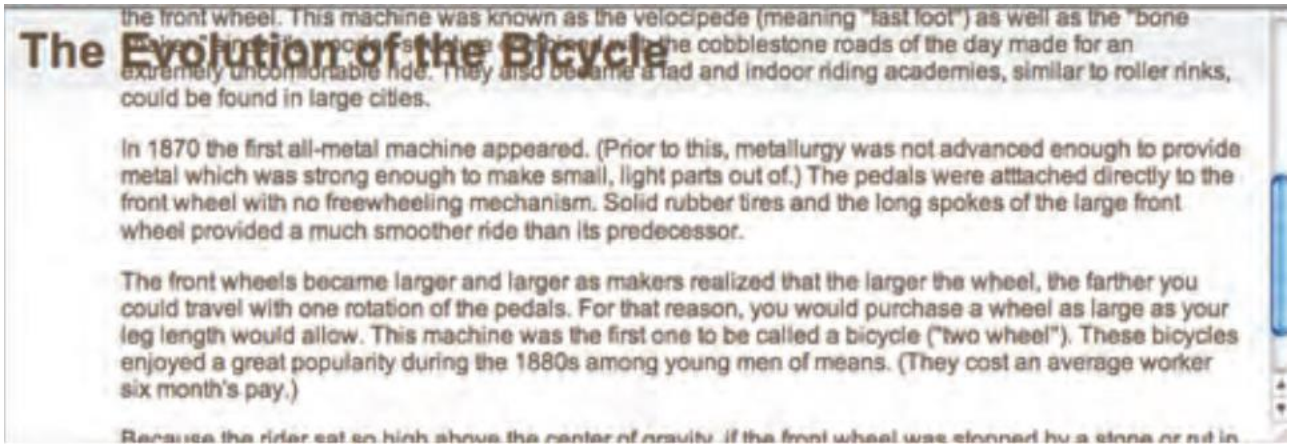
- As caixas podem acabar sobrepondo umas às outras
- É possível controlar a prioridade de sobreposição através da propriedade z-index
- Quanto maior o valor desta propriedade, maior a prioridade de sobreposição
- Um elemento estilizado com z-index: 10; aparecerá sobre um elemento com z-index: 5;

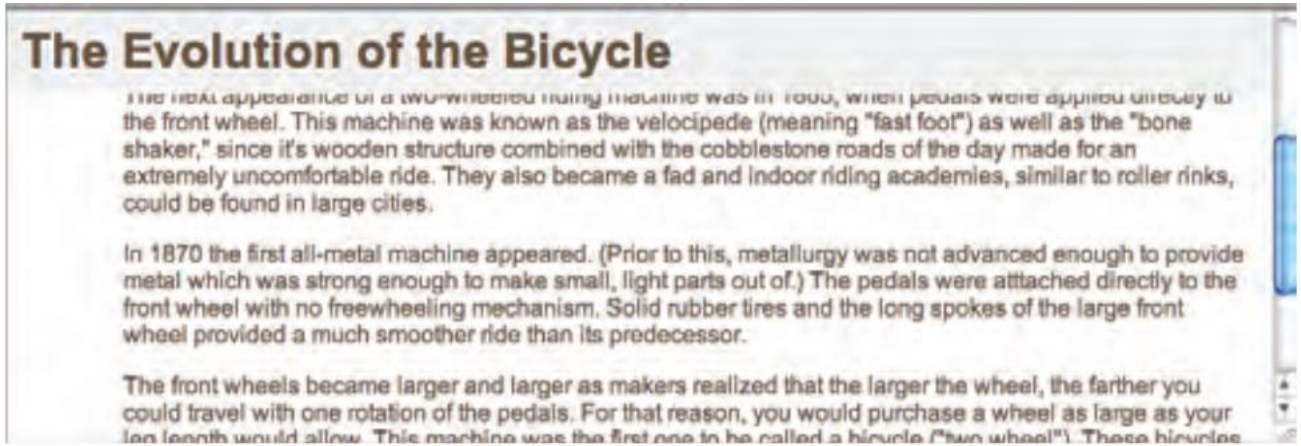
Sobrepondo elementos – exemplo1.html

- Adicione o estilo:

```
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;}
```

Sobrepondo elementos – exemplo1.html





“Flutuando” elementos - exemplo1.html

- A propriedade float permite posicionar um elemento o mais à esquerda ou à direita possível
- Todos os outros elementos dentro do mesmo container do elemento “flutuado” irá fluir ao redor
- Sempre use float em conjunto com a propriedade width

“Flutuando” elementos - exemplo1.html

- HTML

```
<h1>The Evolution of the Bicycle</h1>
<blockquote>"Life is like riding a bicycle.
   To keep your balance you must keep moving." -
   Albert Einstein</blockquote>
<p>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 ... </p>
```

- 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;}
```

“Flutuando” elementos - exemplo1.html

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.

"Life is like riding a bicycle. To keep your balance you must keep moving." - Albert Einstein

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 it's 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.

Usando float para criar colunas – exemplo2.html

- Vários esquemas de layout exigem o uso de diversas colunas

- É possível estilizar elementos para gerar colunas com as seguintes propriedades:
  - width – Largura da coluna
  - float – posiciona as colunas ao lado umas das outras
  - margin – cria um espaço entre as colunas

Usando float para criar colunas – exemplo2.html

- Adicione o seguinte estilo

```
body {
width:960px;
font-family: Arial, Verdana, sans-serif;
color: #665544;}

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

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

Usando float para criar colunas – exemplo2.html

RESULT

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 it's 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

Usando float para criar colunas – exemplo2.html

- O estilo reparte largura do container body em duas partes
- A primeira parte ocupa largura de 620px de body
- A segunda ocupa largura de 300px de body
- Note que se a largura de body for menor que a quantidade de px necessários para rendererizar estas larguras, haverá inconsistência na apresentação
- Exercício: altera as larguras para porcentagens

Atividades para casa

- Pesquisar todos os elementos HTML e propriedades CSS apresentadas nesta aula