

Tecnologias Web

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WWW

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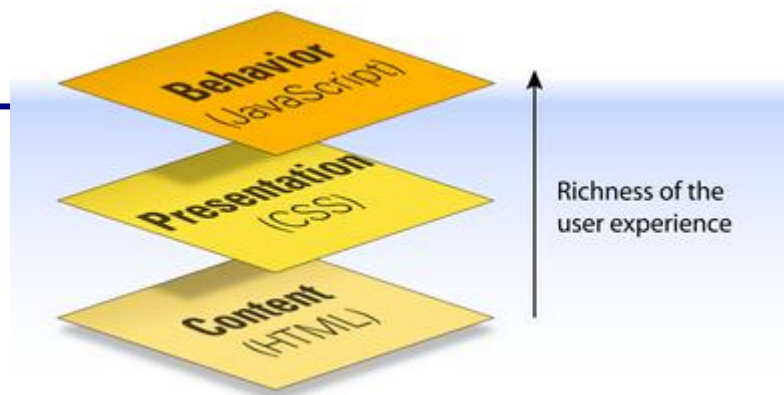
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JavaScript

Motivação



Aumento da interactividade das páginas em HTML

Validação de formulários

Gerar conteúdos dinâmicos

Linguagem interpretada

Processamento do lado da máquina cliente

Código aberto

API sobre DOM

Orientada a eventos, objectos



<https://pt.wikipedia.org/wiki/JavaScript>

https://www.w3schools.com/js/js_history.asp

JavaScript



Sintaxe básica

Código interno

```
<html>
<head> </head>
<body>
  <script type="text/javascript">
    document.write("Olá Mundo!")
  </script>
</body>
</html>
```

Comentários:

```
/* comentário */
// comentário
```

JavaScript



Sintaxe básica

Código interno

```
<html>
<head>
    <script type="text/javascript">
        document.write("Olá Mundo!")
    </script>
</head>
<body>
    <!-- o que vai aparecer? -->
</body>
</html>
```

JavaScript



Sintaxe básica

Código externo

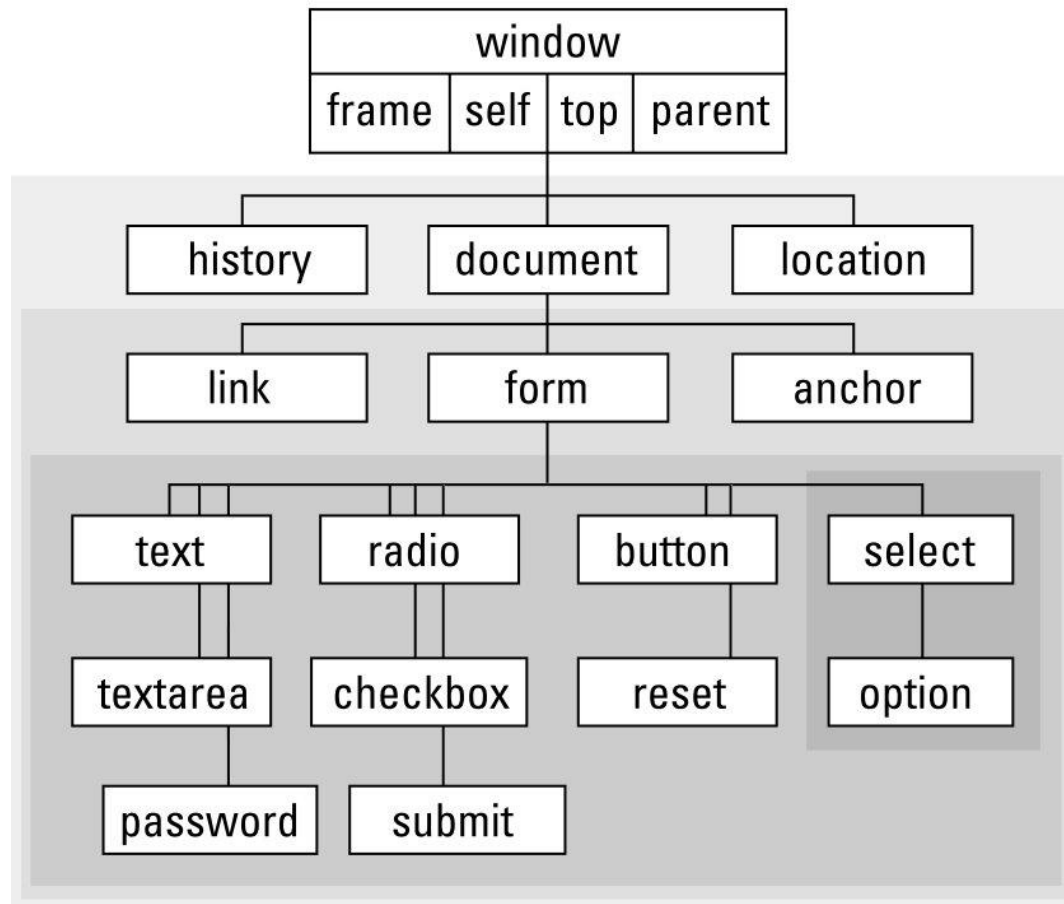
```
<html>  
<head>  
  <script src="funcoes.js">  
  
  </script>  
</head>  
<body>  
</body>  
</html>
```

Ficheiro: funcoes.js sem elemento **<script>**

JavaScript



DOM – Document Object Model

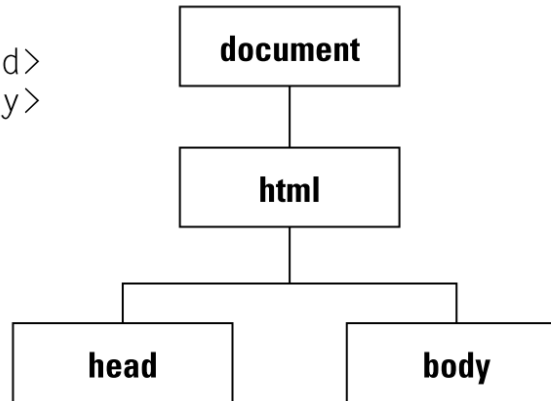


JavaScript

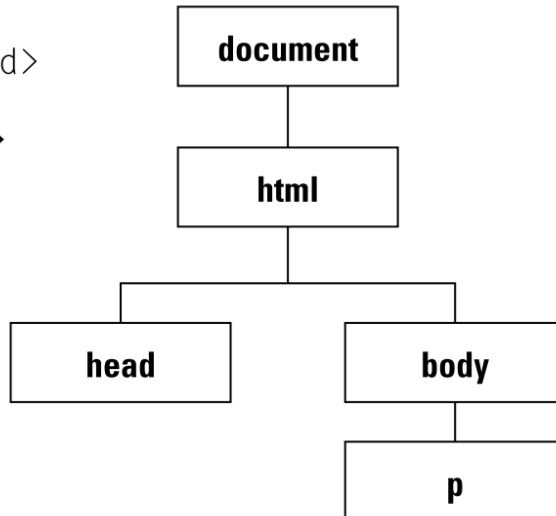


DOM

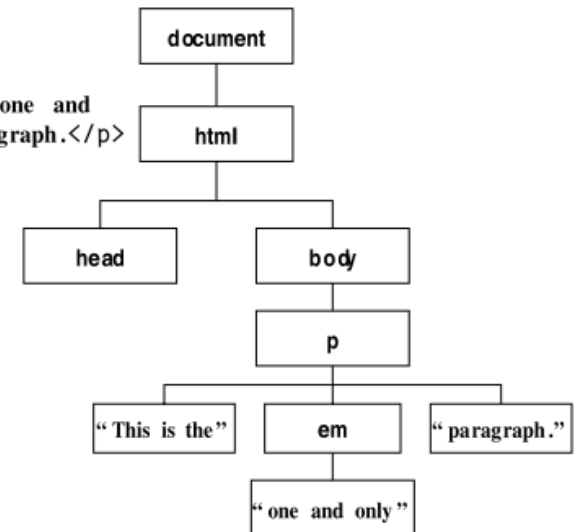
```
<html>
  <head></head>
  <body></body>
</html>
```



```
<html>
  <head></head>
  <body>
    <p></p>
  </body>
</html>
```



```
<html>
  <head></head>
  <body>
    <p>This is the <em>one and
      only </em> paragraph.</p>
  </body>
</html>
```





Referência aos objectos do DOM

```
<html>
<head> <title>Minha pagina</title>
</head>
<body>
<form name="atexto" action="teste1.php" method="POST">
<textarea cols="40" rows="5" name="T1" id="Obs" ></textarea>
<input type="submit" value="ok" />
</form>
</body>
</html>
```

teste1.php

```
<?php
    echo $_POST [ 'T1' ];
?>
```

document.getElementById("Obs")

document.getElementById("Obs").value

JavaScript



Objectos (do DOM)?

Propriedades: definidas pelos atributos que lhes atribuídos,

```
<input type="text" id="entry" name="entry" value="User Name?">  
<input type="button" id="clicker" name="clicker" value="Hit Me...">
```

Métodos: definem comportamentos dos objectos

```
document.getElementById("orderForm").submit()  
document.getElementById("entry").focus()
```

Eventos: objectos tem associados manipuladores de eventos.

```
<input type="button" value="Click Me" onclick="window.alert  
( 'Ai!' )">
```

JavaScript



```
<html>
<head> <title>Minha pagina</title>
</head>
<body>
<form name="atexto" >
<textarea cols="40" rows="5" name="T1" id="Obs"> </textarea>
<input type="button" value="ok" onclick=window.alert ("Ops")>
</form>
</body>
</html>
```



MsgAlerta()

```
<script type="text/javascript">
  function MsgAlerta(){
    alert("ops!");
  }
</script>
```

JavaScript



```
<html>
<head> <title>Minha pagina</title>
</head>
<body>
<form name="atexto" >
<textarea cols="40" rows="5" name="T1" id="Obs"> </textarea>
<input type="button" value="ok" onclick=window.alert ("Ops")>
</form>
</body>
</html>
```



MsgAlerta()

```
<script type="text/javascript">
  function MsgAlerta(){
    alert(document.getElementById("Obs").value);
  }
</script>
```

JavaScript



Acesso genérico aos **<form>**s e aos seus conteúdos

3= document.forms.length

document.forms[0]

document.forms[1]

document.forms[2]

2= document.forms[0].length

document.forms[0].elements[0].value

document.forms[0].elements[1].value

<http://www.w3schools.com/jsref/default.asp>

JavaScript



Exemplos

```
1. <html> <head> </head>
   <body>
   <form id="myForm">
   Firstname: <input id="fname" type="text" value="Rato" />
   Lastname: <input id="lname" type="text" value="Mickey" />
   <input id="sub" type="button" value="Submit" />
   </form>
   <script type="text/javascript">
   var x=document.getElementById("myForm");
   for (var i=0;i<x.length;i++)
   { document.write(x.elements[i].value);
   document.write("<br />"); }
   </script>
   </body>
   </html>
```

To do: Alterem o código de modo a colocarem o *script* dentro do elemento <head>

JavaScript



Exemplos

```
2. <html>
  <head>
    <script type="text/javascript" src="funcoes.js" >
    </script>
  </head>

  <body>
    <form action="sucesso.htm" onsubmit="return validate()">
    Nome (max 10 characters): <input type="text" id="fname" size="20"><br />
    Idade (1 to 100): <input type="text" id="age" size="20"><br />
    E-mail: <input type="text" id="email" size="20"><br />
    <br />
    <input type="submit" value="Submit">
  </form>
</body>

</html>
```

JavaScript



```
funcoes.js
function validate(){
  var at=document.getElementById("email").value.indexOf("@");
  var age=document.getElementById("age").value;
  var fname=document.getElementById("fname").value;
  submitOK="true";

  if (fname.length>10){
    alert("The name must be less than 10 characters");
    submitOK="false";
  }
  if (isNaN(age)||age<1||age>100){
    alert("The age must be a number between 1 and 100")
    submitOK="false"
  }
  if (at== -1) {
    alert("Not a valid e-mail!"); submitOK="false";
  }
  if (submitOK=="false")
    { return false; }
  return submitOK;
}
```

programação? Rever!!!!
Contém erros!...

JavaScript



Objectos javascript associados ao browser

Object	Description
<u>Window</u>	The top level object in the JavaScript hierarchy. The Window object represents a browser window. A Window object is created automatically with every instance of a <body> or <frameset> tag
<u>Navigator</u>	Contains information about the client's browser
<u>Screen</u>	Contains information about the client's display screen
<u>History</u>	Contains the visited URLs in the browser window
<u>Location</u>	Contains information about the current URL

JavaScript



Objectos HTML DOM

Object	Description
<u>Document</u>	Represents the entire HTML document and can be used to access all elements in a page
<u>Anchor</u>	Represents an <a> element
<u>Area</u>	Represents an <area> element inside an image-map
<u>Base</u>	Represents a <base> element
<u>Body</u>	Represents the <body> element
<u>Button</u>	Represents a <button> element
<u>Event</u>	Represents the state of an event
<u>Form</u>	Represents a <form> element
<u>Frame</u>	Represents a <frame> element
<u>Frameset</u>	Represents a <frameset> element
<u>Iframe</u>	Represents an <iframe> element
<u>Image</u>	Represents an element
<u>Input button</u>	Represents a button in an HTML form
<u>Input checkbox</u>	Represents a checkbox in an HTML form
<u>Input file</u>	Represents a fileupload in an HTML form
<u>Input hidden</u>	Represents a hidden field in an HTML form

JavaScript



Objetos HTML DOM

Object	Description
<u>Input password</u>	Represents a password field in an HTML form
<u>Input radio</u>	Represents a radio button in an HTML form
<u>Input reset</u>	Represents a reset button in an HTML form
<u>Input submit</u>	Represents a submit button in an HTML form
<u>Input text</u>	Represents a text-input field in an HTML form
<u>Link</u>	Represents a <link> element
<u>Meta</u>	Represents a <meta> element
<u>Option</u>	Represents an <option> element
<u>Select</u>	Represents a selection list in an HTML form
<u>Style</u>	Represents an individual style statement
<u>Table</u>	Represents a <table> element
<u>TableData</u>	Represents a <td> element
<u>TableRow</u>	Represents a <tr> element
<u>Textarea</u>	Represents a <textarea> element



Perguntas?