

Web программирование

Frontend - HTML, CSS, JS

Игорь Родионов

Омский Государственный Технический Университет
кафедра Информатики и вычислительной техники

ОмГТУ, 2014.

HTML element - tag

```
1 <NAME attr1="value" attr2 > CONTENT </NAME>  
2 <NAME/>
```

HTML - Document structure

```
1 <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//  
   EN" "http://www.w3.org/TR/html4/strict.dtd">  
2 <html>  
3   <head>  
4     <meta http-equiv="Content-Type" content="text/html;  
       charset=utf-8">  
5     <title>Title will be here</title>  
6   </head>  
7   <body>  
8     <span>BLABLA</span>  
9   </body>  
10 </html>
```

XHTML

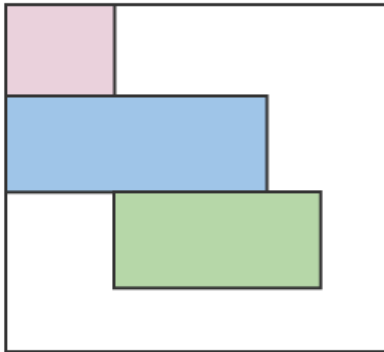
```
1 <html xmlns="http://www.w3.org/1999/xhtml"  
2     xmlns:og="http://ogp.me/ns#"  
3     xmlns:fb="http://www.facebook.com/2008/fbml">  
4 </html>
```

Questions

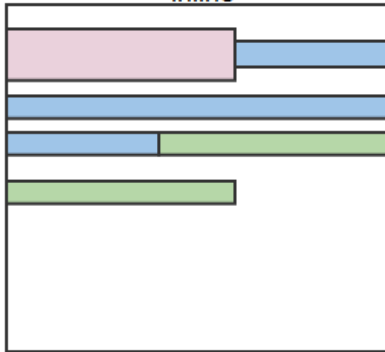
Вопросы?

HTML - tag types

Block



Inline



HTML - box model

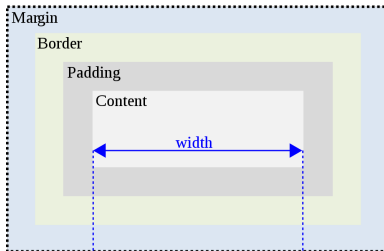


HTML - box model issue

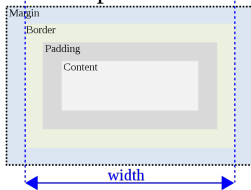


HTML - box model issue

W3C box model



Internet Explorer box model



Questions

Вопросы?

CSS (Cascading Style Sheets) —
формальный язык описания внешнего
вида документа, написанного с
использованием языка разметки.

CSS

```
1 div.devop#div-0 {  
2   background-color: white;  
3 }
```

CSS - selectors

```
1 * {margin:0; padding:0;}
2
3 p {font-family: Garamond, serif;}
4
5 .note {color: red; background: yellow;}
6
7 #paragraph1 {margin: 0;}
8
9 a[href="http://somesite.com"] {color: red;}
```

CSS - selectors

```
1 div#paragraph1 {color: red;}
2
3 div#paragraph1 p.note {color: red;}
4
5 div#paragraph1,
6 div#paragraph1 p.note {color: red;}
7
8 p.note > b {color: green;}
9
10 h1 + p {font-size: 24pt;}
```

CSS - selectors

```
1 a:active {color:yellow;}  
2  
3 p::first-letter {font-size: 32px;}
```


CSS - cascade rule

- ▶ Стилль браузера
- ▶ Пользовательские настройки браузера
- ▶ Наследованные от предков
- ▶ Заданные в подключаемых css файлах
- ▶ #id (1,0,0)
- ▶ .class, [attr="value"], (:pseudo-class) (0,1,0)
- ▶ tag, ::pseudo-element (0,0,1)
- ▶ !important

Questions

Вопросы?

CSS - include

```
1 <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//  
   EN" "http://www.w3.org/TR/html4/strict.dtd">  
2 <html>  
3 <head>  
4   <link rel="stylesheet" type="text/css" href="class.css"  
     media="all" />  
5 </head>  
6 <body>  
7   <div style="color: red; font-size: 2em">Left column</div>  
8 </body>  
9 </html>
```

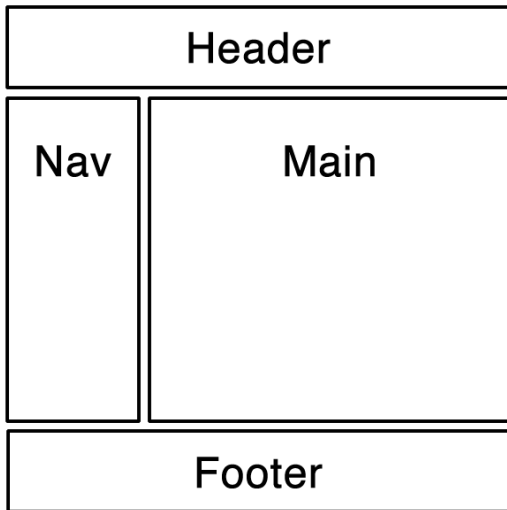
CSS - include

```
1 <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//  
   EN" "http://www.w3.org/TR/html4/strict.dtd">  
2 <html>  
3 <head>  
4   <style type="text/css" media="print">  
5     @import "/style/main.css" screen;  
6     h1 {  
7       font-size: 120%;  
8       font-family: Verdana, Arial, Helvetica, sans-serif;  
9       color: #333366;  
10    }  
11   </style>  
12 </head>  
13 <body>  
14 </body>  
15 </html>
```

Questions

Вопросы?

HTML layout



HTML layout - table

```
1 <table width="500">
2   <tr>
3     <td colspan="2">
4       <h1>Main Title of Web Page</h1>
5     </td>
6   </tr>
7
8   <tr>
9     <td style="width:100px;">
10      <b>Menu</b>
11      <br>HTML<br>CSS<br>JavaScript
12    </td>
13    <td style="height:200px;width:400px;">
14      Content goes here
15    </td>
16  </tr>
17
18  <tr>
19    <td colspan="2" style="text-align:center;">
20      Copyright W3Schools.com
21    </td>
22  </tr>
23 </table>
```

HTML layout - frame

```
1 <!DOCTYPE html>
2 <html>
3 <frameset rows="20%,80%">
4   <frame src="header.htm">
5   <frameset cols="25%,75%">
6     <frame src="menu_adv.htm" name="menu">
7     <frame src="chapter1.htm" name="content">
8   </frameset>
9   <frame src="footer.htm">
10 </frameset>
11 </html>
```


HTML layout - div

```
1 <div id="container" style="width:500px">
2
3   <div id="header" style="background-color:#FFA500;">
4     <h1 style="margin-bottom:0;">Main Title of Web Page</h1>
5   </div>
6
7   <div id="menu" style="height:200px;width:100px;float:left;">
8     <b>Menu</b>
9     <br>HTML<br>CSS<br>JavaScript
10  </div>
11
12  <div id="content" style="height:200px;width:400px;float:left;">
13    Content goes here
14  </div>
15
16  <div id="footer" style="clear:both;text-align:center;">
17    Copyright W3Schools.com
18  </div>
19
20 </div>
```

CSS - manage flow

- ▶ float: left | right | none
- ▶ clear: none | left | right | both
- ▶ position: absolute | fixed | relative | static

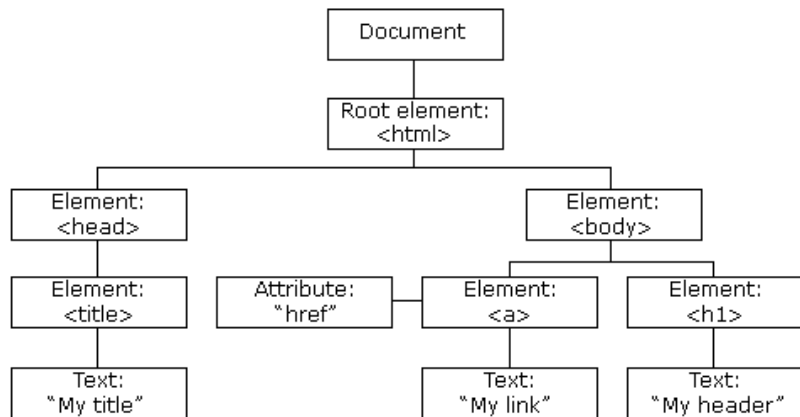
Questions

Вопросы?

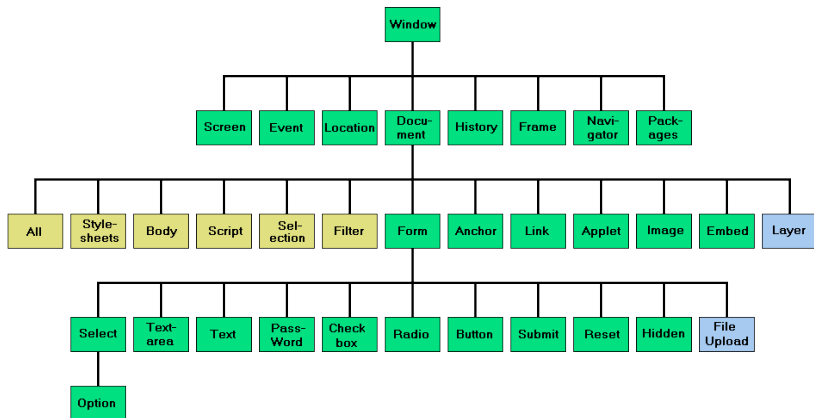
Javascript

JavaScript —
прототипно-ориентированный сценарный
язык программирования. Обычно
используется как встроенный язык для
программного доступа к объектам
браузера, для придания
интерактивности веб-страницам.

Document Object Model



Browser Object Model



Questions

Вопросы?

Javascript - include

```
1 <head>
2   <script type="text/javascript" src="http://example.com/
   scriptFile.js"/>
3   <script type="text/javascript">
4     function exampleFunctionDeclaration(n){
5       return (n * 4);
6     }
7   </script>
8 </head>
```


Javascript - Dom manipulations

```
1 var ol = document.getElementsByTagName('ol')[0]
2 var hiter = ol.removeChild(ol.firstChild)
3 var kovaren = ol.removeChild(ol.firstChild)
4 ol.appendChild(kovaren)
5 ol.appendChild(hiter)
```

Javascript events

```
1 <html>
2 <head>
3   <script type="text/javascript">
4     function count_rabbits() {
5       for (var i = 1; i <= 3; i++) {
6         alert("Rabbit "+i+"!")
7       }
8     }
9   </script>
10 </head>
11 <body>
12   <input type="button" onclick="count_rabbits()" value="
      Count rabbits!" />
13 </body>
14 </html>
```

Javascript events

```
1 document.getElementById('myElement').onclick = function() {  
2   alert('Thanks!')  
3 }
```

jQuery

```
1 $(document).ready(function () {  
2     $('#devop').bind('click', function () {  
3         alert('Warning!!!');  
4     });  
5  
6     $('#select-all-select').click(  
7         function () {  
8             $('#input.test').attr('checked', 'checked');  
9         }  
10    );  
11 });
```

Same origin policy

Same origin policy — концепция безопасности для Javascript. Политика разрешает сценариям, с одного сайта, доступ к методам и свойствам друг друга без ограничений, но предотвращает доступ к большинству методов и свойств для страниц на разных сайтах.

Same origin policy

- ▶ `http://www.example.com/dir/page.html` - OK
- ▶ `http://www.example.com/dir2/other.html` - OK
- ▶ `http://www.example.com:81/dir/other.html` - NOK
- ▶ `https://www.example.com/dir/other.html` - NOK
- ▶ `http://en.example.com/dir/other.html` - NOK
- ▶ `http://example.com/dir/other.html` - NOK
- ▶ `http://v2.www.example.com/dir/other.html` - NOK

Questions

Вопросы?

HTML - HTTP request

- ▶ Link
- ▶ Form
- ▶ Images, JS, CSS, etc... includes

HTML - Form

```
1 <form action="app/profile" method="get"  
2     enctype="application/x-www-form-urlencoded">  
3   <label for="username">Name: </label>  
4   <input type="text" id="username" /><br />  
5   <input type="submit" value="Send"/>  
6   <input type="reset" value="Reset"/>  
7 </form>
```

GET /app/profile?username=name_value

HTTP/1.1

Host: example.com

HTML - Form

```
1 <form action="app/profile" method="post"  
2     enctype="application/x-www-form-urlencoded">  
3   <label for="username">Name: </label>  
4   <input type="text" id="username" /><br />  
5   <input type="submit" value="Send"/>  
6   <input type="reset" value="Reset"/>  
7 </form>
```

POST /app/profile HTTP/1.1

Host: example.com

username=name_value

HTML - Form upload

```
1 <form action="upload/file" method="post"
2   enctype="multipart/form-data">
3   <label for="username">Name: </label>
4   <input type="text" id="username" /><br />
5   <input type="file" name="attachment">
6   <input type="submit" value="Send"/>
7 </form>
```

HTML - Form upload

POST /upload/file HTTP/1.1

Content-Type: multipart/form-data; boundary=Asrf456BGe4h

Content-Length: (суммарный объём, включая дочерние заголовки)

Host: example.com

-Asrf456BGe4h

Content-Disposition: form-data; name="username"

name_value

-Asrf456BGe4h

Content-Disposition: form-data; name="attachment"; filename="horror-photo-1.jpg"

Content-Type: image/jpeg

(двоичное содержимое файла)

Questions

Вопросы?

Additional



JavaScript.ru



htmlacademy.ru

