

programming for the internets



Pretty Essential:

- html5
- css
- javascript
- jquery

Also Quite Useful:

- ajax
- php
- node.js

we're going to look at:

- html5 and css basic/review
- javascript intro
- intro to canvas
- p5.js
- jquery
- using apis (twitter, flickr)
- possibly ajax, node.js

in the meantime, download SublimeText2

it's a great development environment for the web (all the cool kids are using it these days)



Minimum HTML page

```
<!DOCTYPE html>
<html>

<head>
<meta charset="UTF-8">
<title>Title of the document</title>
</head>

<body>

</body>

</html>
```

Cascading Style Sheets

- used to describe the style/formatting of html document
- separates content from styling

```
<!DOCTYPE html>
<html>

<head>
<meta charset="UTF-8">
<title>Title of the document</title>

<style>
#hello{ color: red; }
</style>

</head>

<body>
<p id="hello">Hello World</p>
</body>

</html>
```

External Style Sheet

```
<link href="path/to/file.css" rel="stylesheet">
```

Styles can apply to html elements

```
p {  
    text-align: center;  
    color: red;  
}
```

or to a class

```
.center {  
    text-align: center;  
    color: red;  
}
```

or to an id

```
#para1 {  
    text-align: center;  
    color: red;  
}
```

```
p {
    font-family: verdana;
    color: red;
}

.center {
    text-align: center;
}

#para1 {
    color: blue;
}
```

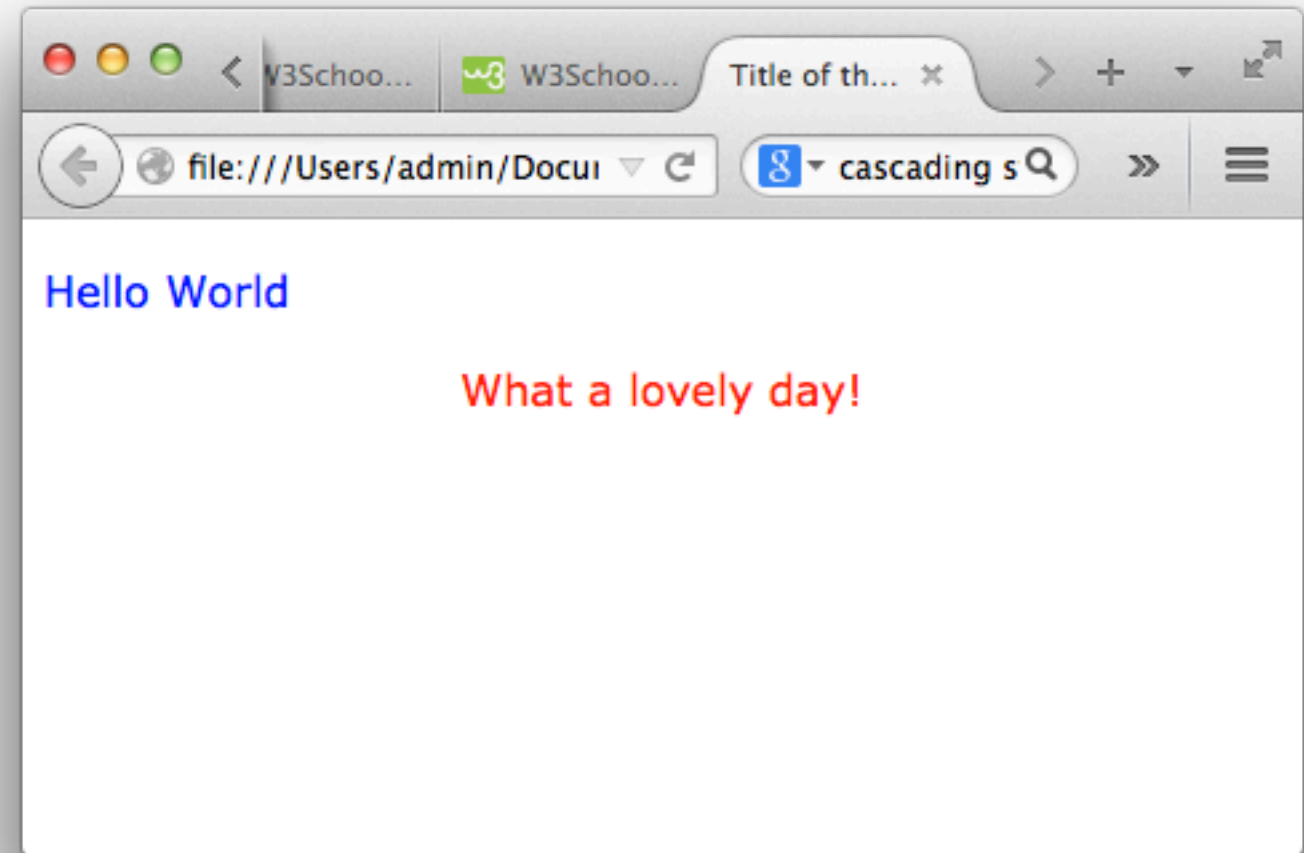
```
<!DOCTYPE html>
<html>

<head>
<meta charset="UTF-8">
<title>Title of the document</title>
<link href="styles.css" rel="stylesheet">
</head>

<body>
<p id="para1">Hello World</p>
<p class="center">What a lovely day!</p>

</body>

</html>
```

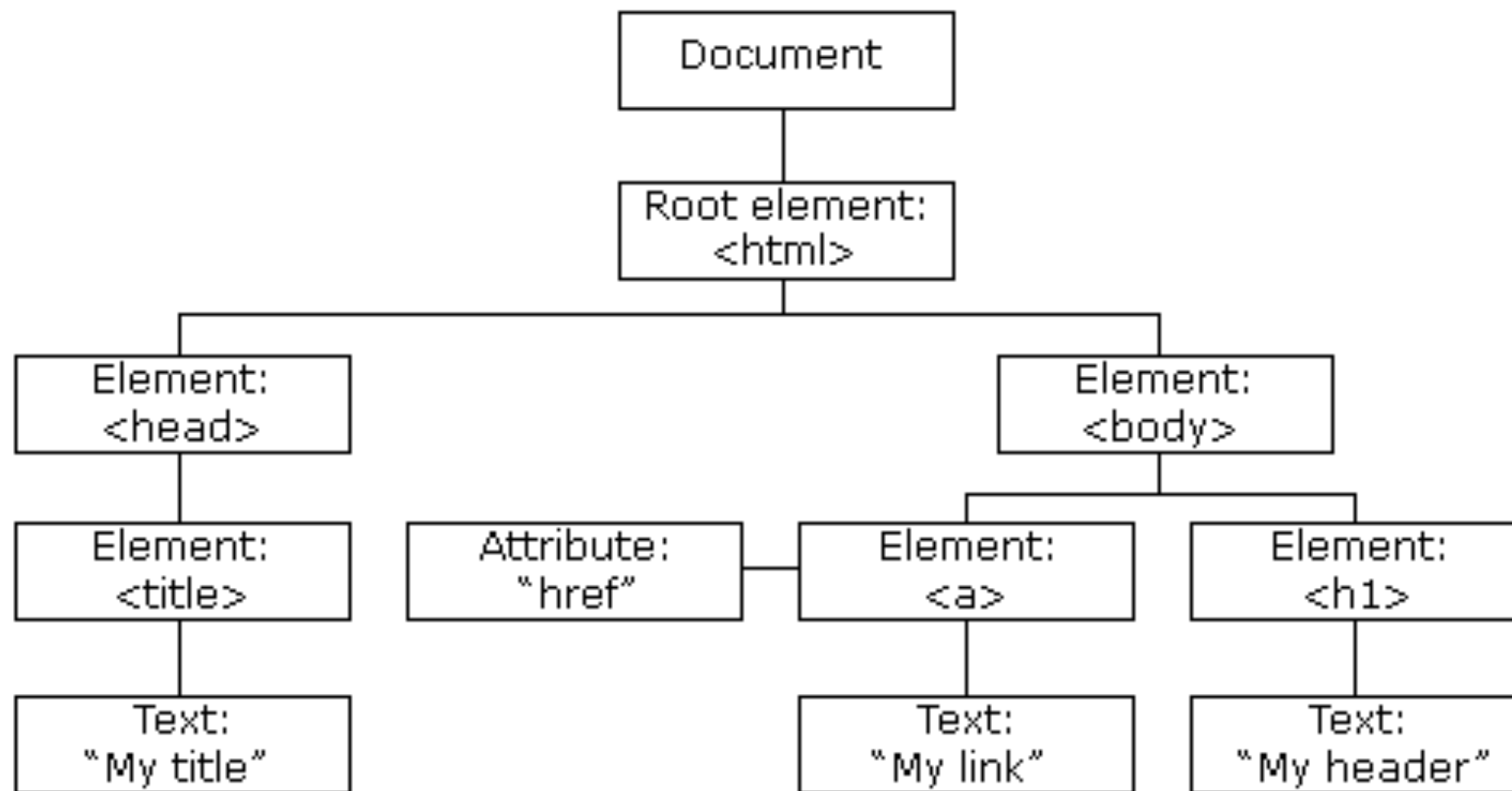


Intro to Javascript

- programming language mostly used for web
- allows html document content and formatting to be altered
- allows interaction with user on client-side
- also used in server-side programming (node.js)

DOM - Document Object Model

- a standard for accessing documents
- html dom: when browser loads an html page it creates a DOM for the page
- dom has a tree structure (see image), tree of objects
- allows javascript to change html elements on the page



javascript can be written inside the script tag

```
<script>  
var myName = "chris";  
</script>
```

or in a separate .js file

```
<script src = "myCode.js"></script>
```

note: external .js files cannot contain script tags

variables and arrays

get ready to love *var*

variables are all type var (no int, float, boolean etc)

```
var day = 27;
```

```
var name = "chris";
```

arrays are also var

```
var food = ["chocolate", "apples", "oatmeal", "pasta"];
```

```
var scores = [10, 8, 6, 6, 3, 1, 9];
```

functions

- always type *function*
- do not need variable type for parameters

```
function addSomething(a,b) {  
    return a + b;  
}
```

```
var total = addSomething(5,10);
```

DOM and JS

- get and change document elements, attributes and css

document.getElementById()

Find an element by element i

element.innerHTML=

Change the inner HTML of an element

```
var myName = document.getElementById("chris");  
myName.innerHTML = "christine";
```

Events

- things that happen to html elements - button is clicked, window is resized, key is pressed etc.

```
<button onclick="changeName()">Chris</button>
```

```
<!DOCTYPE html>
<html>
<head>
<script>
function changeName() {
var myName = document.getElementById( "name" );
myName.innerHTML = "Chris";
}
</script>
</head>

<body>
<p id="name">Who's there?</p>
<button onclick="changeName( )" >Click Me</button>

</body>
</html>
```