# Introduction

Lesson 1

# Plan for this lesson

The basics - very introductory HTML

- Code along

The basics - very introductory CSS

- Code along

Introduction to JavaScript

- Code along
- Code along part two

# The basics - very introductory HTML

# The basics - very introductory HTML Structure

HTML is used to create a basic structure of the website.

Think of it as making the lines between the numbers in one of those books where you draw lines and the colour: you make the structure of the picture with the HTML lines.

# Code along

HTML

# Code along HTML

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Page</title>
        <meta name="description" content="">
        <meta name="viewport" content="width=device-width, initial-scale=1">
        <link rel="apple-touch-icon" href="apple-touch-icon.png">
        <link rel="stylesheet" href="style.css">
    </head>
    <body>
```

```
<body>
    <header class="wrapper clearfix">
        <a href="index.html"><h1 class="title">Page</h1></a>
        <nav>
            <div class="menu">
                <a href="#">First</a>
            </div>
            <div class="menu">
                <a href="#">Second</a>
            </div>
            <div class="menu">
                <a href="#">Third</a>
            </div>
            <div class="menu">
                <a href="#"">Fourth</a>
            </div>
            <div class="menu">
                <a href="#">Fifth</a>
            </div>
        </nav>
    </header>
    <article>
```

# Code along HTML

```
        <article>
            <strong>This is an example page</strong>
        </article>
        <aside id="demo">
            <p>Content goes where?</p>
            <p>Content goes here!</p>
        </aside>
        <footer>
            <p>This is a footer just in case you should want one</p>
            <p>Usually some random copyright text is put here</p>
        </footer>
    </body>
</html>
```

# The basics - very introductory CSS

# The basics - very introductory CSS Styling

CSS is used to style a website: adding colour, fine-tune the placement of content and such.

To continue with the colouring book: You made the picture with the HTML lines and now you’re going to fill it with colour.

# Code along

CSS

# Code along css

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Page</title>
        <meta name="description" content="">
        <meta name="viewport" content="width=device-width, initial-scale=1">
        <link rel="apple-touch-icon" href="apple-touch-icon.png">
        <link rel="stylesheet" href="style.css">
    </head>
    <body>
```

# Code along

Break

# Introduction to JavaScript

# Introduction to JavaScript

Beginning with JS

What can I use JS for?

Where do I code JS?

Where to put JS?

Code along

# Introduction to JavaScript Beginning with JS

## JavaScript *is not Java*

### JavaScript

- An on-the-fly runtime script
  - Typically runs on the client
- Most often used by websites

### Java

- Pre-compiled
- Most often used for program-like solutions
  - Android

# Introduction to JavaScript Beginning with JS

As JavaScript (henceforth JS) is mainly used for creating ways of making websites interactive, especially catching the user's actions on the site and then having stuff happen, we will concentrate on some of these basic uses today.

The code along examples later on will be rather disjointed and disparate, instead of making a full-fledged "product" they are designed to quickly illustrate what a JS code-snippet does.

# Introduction to JavaScript What can I use JS for?

- Interaction
  - Animations
  - Do stuff based on where the user is on the site
- Getting and storing data
  - More advanced forms
  - Validation
  - You can “wait” and load data into a web-site when you need it without reloading the page
- You can check what the browser can do and act accordingly
- Much, much more

# Introduction to JavaScript Where do I code JS?

**In you favourite all-purpose editor!**

---

Suggested editors

- Notepad++
- Sublime
- TextWrangler

Suggested IDEs

- NetBeans

# Introduction to JavaScript Where do I code JS?

## Invaluable tools

- Google Chrome JavaScript Console
  - View / Vis → Developer / Udvikler → JavaScript-console / JavaScript-konsol
  - Having access to a console is mandatory for most work with JS
    - Sure, if you only do graphics it might not be necessary - but who does that?
- CodePen http://codepen.io/
  - There are many only JS editors (http://js.do, http://jsfiddle.net among the better ones), but most do not have a logging console - CodePen does which places it ahead of the pack in my opinion

# Introduction to JavaScript Where to put JS?

You can put your JS three places in your web documents

1. Inline

   ```
   <a href="#" onclick="$(this).next().fadeIn(); return false;">Display my next sibling</a>
   ```

2. In the document header

   ```
   <script type="text/javascript">
           ...
   </script>
   ```

3. Linked in the header like you do external CSS

   ```
   <script type=”text/javascript” src=”external.js”></script>
   ```

# Code along

# Code along JS

Nothing new here so far, just copy from the first examples we made.

```
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>First page</title>
        <meta name="description" content="">
        <meta name="viewport" content="width=device-width, initial-scale=1">
        <link rel="apple-touch-icon" href="apple-touch-icon.png">
        <link rel="stylesheet" href="style.css">
```

Just re-use the CSS stylesheet file from the first examples.

# Code along JS

A little new here, just copy the main part from the first examples we made.

```
    </head>
    <body>
        <header class="wrapper clearfix">
            <a href="index.html"><h1 class="title">Page One</h1></a>
            <nav>
                <div class="menu">
                    <a href="#" onclick="alert('I am an alert box!');">First alert</a>
                </div>
                <div class="menu">
                    <a href="#" onclick="alertFunction()">Second alert</a>
                </div>
                <div class="menu">
                    <a href="#" onclick="confirm('This is a confirmation message. Click OK to continue!');">Confirm</a>
                </div>
                <div class="menu">
                    <a href="#" onclick="alertFunction2()">Second confirm</a>
                </div>
                <div class="menu">
                    <a href="#" onclick="alertFunction3()">Next page</a>
                </div>
            </nav>
        </header>
```

# Code along JS

A little new here, just copy the main part from the first examples we made.

```
59          <article>
60              <strong>This page is about what people often see used in JS: alerts and confirmation boxes</strong>
61          </article>
62          <aside id="demo">
63              <p>Content goes where?</p>
64              <p>Content goes here!</p>
65          </aside>
66          <footer>
67              <p>This is a footer just in case you should want one</p>
68              <p>Usually some random copyright text is put here</p>
69          </footer>
70      </body>
71  </html>
```

We'll be using this as the HTML structure for the the rest of the examples.

We might change some menu titles and explanatory text though, so I suggest duplicating the document when we make a new page.

# Code along JS

Now we add our first JS function to the top

```
10          <script type="text/javascript">
11              function alertFunction() {
12                  alert("I am an alert box!");
13              }
14          </script>
```

Here we have the function we called in line 46.

We just moved the alert box to a separate function instead of calling it inline like in line 43.

# Code along JS

We add our second JS function to the top

```
15        <script type="text/javascript">
16            function alertFunction2() {
17                var x;
18                if (confirm("Press a button!") == true) {
19                    x = "You pressed OK!";
20                } else {
21                    x = "You pressed Cancel!";
22                }
23                document.getElementById("demo").innerHTML = x;
24            }
25        </script>
```

Here we have the function we called in line 52.

We moved the confirm to a separate function instead of calling it inline like in line 49.

# Code along JS

We add our third and final for this page JS function to the top

```
26          <script type="text/javascript">
27              function alertFunction3() {
28                  var x;
29                  if (confirm("Go to next page") == true) {
30                      window.location = "page2.html";
31                  } else {
32                      x = "You decided to stay on page one";
33                  }
34                  document.getElementById("demo").innerHTML = x;
35              }
36          </script>
```

Here we have the function we called in line 55.

We ask if the user want to go to a new page or stay on this one.

We make a variable called x, and if the confirm is true in the if statement we change to a new page, but if false we change the text in the lower area of the site to reflect that the user decided to stay.

# Code along JS

Break

# Code along JS part two

We continue with the same HTML apart from explanatory text, so just duplicate your first file and remove the JS in the header (line 10 to 36) and the text in the nav section (line 41-56).

Call the new file 2.html

# Code along JS part two

The new text for the body

```
57          <nav>
58              <div class="menu">
59                  <a href="#" onclick="alertFunction1()">Last page</a>
60              </div>
61              <div class="menu">
62                  <a href="#" onclick="promptFunction()">Name prompt</a>
63              </div>
64              <div class="menu">
65                  <a href="#" onclick="consoleFunction();">Console log</a>
66              </div>
67              <div class="menu">
68                  <a href="#" onclick="consoleFunction2();">Console log two</a>
69              </div>
70              <div class="menu">
71                  <a href="#" onclick="alertFunction2()">Next page</a>
72              </div>
73          </nav>
```

# Code along JS part two

The new explanatory text section (mainly if you use these files later on as reference)

```
<article>
    <strong>This page is about prompts, where the user can enter text, console logging, variables, different types of data and combining strings</strong>
    <hr>
    <em>Different data types are</em>
    <ol>
        <li>numbers (e.g. 3.14, 134)</li>
        <li>strings (e.g. "Dogs go woof!", "Cats go meow")</li>
        <li>booleans (e.g. false, 7 > 9)</li>
    </ol>
</article>
```

# Code along JS part two

We add our first JS function to the top of 2.html

```
11          <script type="text/javascript">
12              function alertFunction1() {
13                  var x;
14                  if (confirm("Go to last page") == true) {
15                      window.location = "index.html";
16                  } else {
17                      x = "You decided to stay on page two";
18                  }
19                  document.getElementById("demo").innerHTML = x;
20              }
```

```
52          </script>
```

Here we have the function we called in line 59.

The same as we as we had on page one, we're just returning.

# Code along JS part two

We add our second JS function to the top of 2.html

```
21          function alertFunction2() {
22              var x;
23              if (confirm("Go to next page") == true) {
24                  window.location = "page3.html";
25              } else {
26                  x = "You decided to stay on page two";
27              }
28              document.getElementById("demo").innerHTML = x;
29          }
```

Here we have the function we called in line 71.

The same again, we just ask to go to page three - which we have not made.

# Code along JS part two

We add our third JS function to the top of 2.html

```
30  function promptFunction() {
31      var person = prompt("Please enter your name", "James Bond");
32      if (person != null) {
33       document.getElementById("demo").innerHTML =
34      "Hello " + person + "! How are you today?";
35      }
36  }
```

Here we have the function we called in line 62.

We make a person variable, and get the user's name for it via a prompt.
If he entered a name we change the text in the lower area of the site including his name.

# Code along JS part two

We add our fourth JS function to the top of 2.html

```
37          function consoleFunction() {
38              if (8+8===16) {
39                  console.log("It is indeed 16");
40              }
41              document.getElementById("demo").innerHTML = "Check your console!";
42          }
```

Here we have the function we called in line 65.

First we log to the console if the math “8+8===16” is right, then we change the text to make sure the user checks the console to see if there was confirmation.
The === shows that it has to be a number value and nothing else is accepted.

# Code along JS part two

We add our fifth and final JS function to the top of 2.html

```
43  function consoleFunction2() {
44      if (12 / 4 === "Erik".length) {
45          console.log("Will it be the first block?");
46      } else {
47          console.log("Or the second block?");
48      }
49      document.getElementById("demo").innerHTML =
50      "Check your console again!";
51  }
```

Here we have the function we called in line 68.

We check if the math “12/4” has exactly the same length as a string with my name and print the first string to the console if true and the second if false.
Finally we change the text to make sure the user checks the console to see if there was confirmation.

# Good articles and discussions online

- http://programmers.stackexchange.com/questions/86589/why-should-i-avoid-inline-scripting
- https://robertnyman.com/2008/11/20/why-inline-css-and-javascript-code-is-such-a-bad-thing/
- http://longgoldenears.blogspot.dk/2007/09/triple-equals-in-javascript.html