

ICS313 :4.0



Web Programming

Lecturer: Toby Daniel

Introduction to JavaScript



JavaScript

- JavaScript is an interpreted programming or script language.
- It started life as "LiveScript" from Netscape.
- JavaScript uses some of the same ideas found in Java, the compiled object-oriented programming language (but it is different!).
- JavaScript code can be embedded in HTML pages so that it is interpreted by the Web browser.

JavaScript

- Script languages are easier and faster to code in than the more structured and compiled languages such as C and C++.
- Script languages generally take longer to process than compiled languages, but are very useful for shorter programs.
- JavaScript is a cross-platform embedded language that runs in web browsers where it is the most important part of **DHTML**.

JavaScript

- DHTML = Dynamic HTML
- JavaScript is used in Web site development to do such things as:
 - Automatically change a formatted date on a Web page
 - Open pop-up windows
 - Cause text or a graphic image to change during a mouse event
 - Validate the contents of a form
 - Display random banner adverts
 - Ajax (we will cover this later in the course)

JavaScript

- Microsoft web browsers support their own version of JavaScript called **JScript**.
- The resulting inconsistencies sometimes make it difficult to write JavaScript that behaves the same in all browsers.
- Script has to be tested on all potential clients (web browsers) to check that it works.
- Sometimes code has to be duplicated for it to run in both IE and Firefox.

Starting JavaScript

- Development tools:
 - Knowledge of HTML
 - Basic programming skills
 - Text editor
 - Web browser(s) for testing



JavaScript Blocking

- Your web browser may be set to block JavaScript by default .
- This is done because some scripts can be used to collect information from your computer and possibly damage data or install software on your computer without your consent.
- To view JavaScript enabled pages you may need to **Allow blocked content.**



JavaScript Example

```
<HTML> <HEAD> <TITLE>Hello World With JavaScript</TITLE></HEAD>
<BODY>
<FORM Name="Form1" ACTION="">
  <INPUT TYPE=BUTTON VALUE="Click me" NAME="Button1" OnClick="Hello()">
</FORM>
<SCRIPT LANGUAGE="JavaScript">
<!--
  function Hello ()
  {
    alert("Hello World!")
  }
-->
</SCRIPT>
</BODY>
</HTML>
```

JavaScript in Practice

- The JavaScript code examples are all contained in the web pages js1.htm – js10.htm and zipped in a file called [JavaScript_Files.zip](#)
- These are working JavaScript code with comments.
- They are best viewed simultaneously in the browser and a text editor to see the explanations to their workings.

JavaScript Lab Exercises

- There are 5 Lab Exercises contained in the JavaScript_Files.zip
- Exercise 1-3 are straightforward.
- Exercise 4 and 5 will require more thought.