

Introduction to JavaScript - Notes Lecture 1 R. Berdan

Get acquainted with JavaScript

Outcome: Students will learn what JavaScript is, where to put scripts in an HTML document and how to write simple scripts.

Objectives:

- 1.1 JavaScript vs Java vs HTML, automatic & triggered scripts
- 1.2 Where to put your scripts in an HTML document
- 1.3 How to hide scripts from old web browsers
- 1.4 How to put comments in scripts
- 1.5 Alert boxes
- 1.6 Confirm & Prompt boxes
- 1.7 Calling functions with a button - MCQ assignment

1. What is JavaScript and how is different from JAVA and HTML?
see table

2. Types of JavaScript

Client side - runs in browser

Server side - runs on server - embeded in web page but processed on server

3. Scripts can run automatically or be user triggered

4. Placing Scripts

- a) in Head tag - this prevents user triggered errors during downloading
- b) in body - including within body tag as an attribute
- c) within forms as Event handlers - script tag not required

5. <SCRIPT> TAGS

```
<script></script>
```

```
<script language="JavaScript"> Can include version but don't recommend doing this
```

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

```
<script type=""text/javascript" src="program.js or program.txt">  
src attribute not supported by Internet Explorer.
```

alternative Scripting langues used in web pages:
tcl tool control language Sun\Unix requires plugin
VB script I.E. only or Netscape with plugin

How HTML, Javascript and Java Compare - note the differences!

HTML	JAVASCRIPT	JAVA
Developed in Geneva Particle Physics lab	Developed by Netscape as Live Script - changed to JavaScript when endorsed by Sun 1993, version 1.0 released with Netscape 2.0	Developed by Sun Microsystems James Gosling 1993 (originally called Oak changed to Java 1993)
markup language interpreted at runtime platform independent	scripting language interpreted at runtime	True programming compiled to bytecode (not machine code)
Currently version 4.0 Requires web browser	platform independent	platform independent
Some differences depending on Browser	Object based - has limited number of built in objects	Object oriented - can create their own classes
not case sensitive	Currently version 1.3 Requires web browser	Currently version 1.2
Can be copied from web page	Some differences depending on Browser limited number of base objects - not fully extensible	Requires machine specific interpreter or can use a web browser fully extensible i.e. has unlimited no of objects including classes with inheritance
Dynamic HTML - combination of HTML, JavaScript and Stylesheets	case sensitive	case sensitive
code can be copyrighted but very rare	syntax and basic structure similar to JAVA	can be used for client server interaction
	can not yet be used for client server interaction (at least not yet)	In web pages - Applets <applet></applet>
	client side scripts server side scripts	can not be copied from web page - user must make program available
	<script></script>	code can be copyrighted
	Can be copied from web page	
	code can be copyrighted	

6. Comment TAGS

HTML <!-- comment here -->

JavaScript // single line comment

/* multiple line comments */

Adding comments to your script is very important so that you and others know what the various components do especially if you examine the script after several months.

Netscape 1.0 does not support JavaScript

Internet Explorer 2.0 earlier does not support JavaScript

Some other browsers including most WYSIWYG HTML editors do not support JavaScript

Make sure you view scripts in both major browsers to see if it works!

7. Dot Syntax

`document.write()`

`document = object`

`write()` = method something the object does

`object.property.method()`

Hierarchy window is the top not necessary to include

`window.document.write()`

`window.alert()`

Note JavaScript is case sensitive!

8. Parenthesis

" " or ' ' double or single can mix " ' " always pair properly

"" says treat as a literal value

9. Braces - Chicken lips - used with functions

```
{  
{  
}  
}
```

10. Outputting to Screen (Can not send to printer)

`document.write("Hello World")`

`document.writeln("Hello World")` I is small letter L
need `<PRE>` tag before and script tag to work

Can include HTML tags inside

`document.write("<H1>Hellow World</H>")`

Need to use <P> or
 tag to move to next line
Can also use \n

see Chapter 2 page 14

11) **Alert boxes** - see Chapter 2 page 17 - Negrino Book.

```
alert("message")
```

automatic alert by placing in <Head> tags

top object is window.alert("message") not necessary to include window

user triggered alert by placing in form button using no script tags just event Handler onClick="alert('message')" and form

note use of two "" " parenthesis

Then create a function saySomething() activate with a button - this will be the basis of homework assignment.

CAUTION: when using notepad to input code do not place a carriage return inside a JavaScript statement or line of code - it will not work! Also make sure you add the .html extension to the file name when saving your scripts in web page.

12) **Confirm(" Question")**

returns Boolean True or False if you choose cancel returns null - ie nothing

```
Confirm('Are aliens visiting our planet?')
```

Include and If else statement and write out a reply

13) Prompt box - user input

```
prompt("Question", "text")
```

you can store information in the prompt by assigning a variable to the prompt

```
var=prompt("What is your name", "name")  
document.write("<H1>Greetings" + var + "</H1>")
```