

Introduction to JavaScript

Introduction

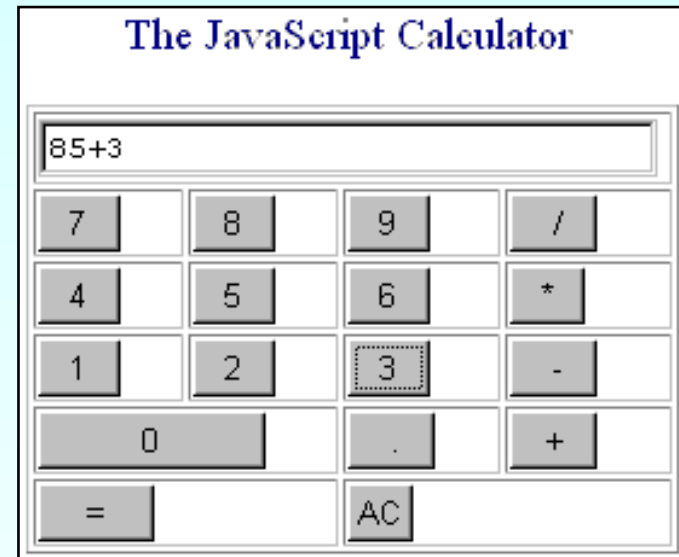
- What is it?
- How does it work?
- What is Java?
- Learning JavaScript
 - JavaScript Statements
 - JavaScript and HTML forms

What is JavaScript?

- Browsers have limited functionality
 - Text, images, tables, frames
- JavaScript allows for interactivity
- Browser/page manipulation
 - Reacting to user actions
- A type of programming language
 - Easy to learn
 - Developed by Netscape
 - Now a standard exists –
www.ecma-international.org/publications/standards/ECMA-262.HTM

JavaScript Allows Interactivity

- Improve appearance
 - Especially graphics
 - Visual feedback
- Site navigation
- Perform calculations
- Validation of input
- Other technologies



`javascript.internet.com`

How Does It Work?

- Embedded within HTML page
 - View source
- Executes on client
 - Fast, no connection needed once loaded
- Simple programming statements combined with HTML tags
- Interpreted (not compiled)
 - No special tools required

What is Java?

- Totally different
- A full programming language
- Much harder!
- A compiled language
- Independent of the web
- Sometimes used together


Learning JavaScript

- Special syntax to learn
- Learn the basics and then use other people's (lots of free sites)
- Write it in a text editor, view results in browser
- You need to revise your HTML
- You need patience and good eyesight!

JavaScript Statements

```
<html>  
<head><title>My Page</title></head>  
<body>  
<script language="JavaScript">
```

```
document.write('This is my first →  
JavaScript Page');
```



```
</script>  
</body>  
</html>
```

Note the symbol for
line continuation

JavaScript Statements

```
<html>
<head><title>My Page</title></head>
<body>
<script language="JavaScript">

document.write('<h1>This is my first →
JavaScript Page</h1>');

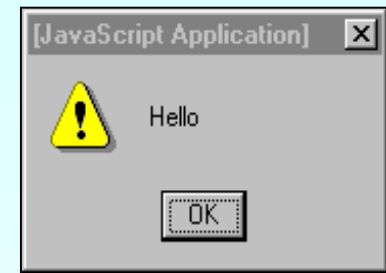
</script>
</body>
</html>
```

HTML written
inside JavaScript



JavaScript Statements

```
<html>
<head><title>My Page</title></head>
<body>
<p>
<a href="myfile.html">My Page</a>
<br />
<a href="myfile.html"
onMouseover="window.alert( 'Hello' );">
My Page</A>
</p>
</body>
</html>
```



An Event

JavaScript written
inside HTML

Example Statements

```
<script language="JavaScript">  
window.prompt('Enter your name:', '');  
</script>
```

Another event

```
<form>  
<input type="button" Value="Press"  
  onClick="window.alert('Hello');">  
</form>
```

Note quotes: " and '

HTML Forms and JavaScript

- JavaScript is very good at processing user input in the web browser
- HTML `<form>` elements receive input
- Forms and form elements have unique names
 - Each unique element can be identified
 - Uses JavaScript Document Object Model (DOM)

Naming Form Elements in HTML

Name:

Phone:

Email:

```
<form name="addressform">  
Name:  <input name="yourname"><br />  
Phone: <input name="phone"><br />  
Email: <input name="email"><br />  
</form>
```

Forms and JavaScript

document.formname.elementname.value

Thus:

document.addressform.yourname.value

document.addressform.phone.value

document.addressform.email.value

Name:

Phone:

Email:

Using Form Data

Personalising an alert box

Enter your name:



```
<form name="alertform">
```

Enter your name:

```
<input type="text" name="yourname">
```

```
<input type="button" value= "Go"  
  onClick="window.alert('Hello ' + →  
    document.alertform.yourname.value);">
```

```
</form>
```

Tips

- Check your statements are on one line
- Check your " and ' quotes match
- Take care with capitalisation
- Lay it out neatly - use tabs
- Remember → in the workbook denotes a continuing line
- Be patient