

Introduction to JavaScript

JavaScript is a high-level language that is **interpreted** - translated into machine language at the time of usage (run-time)

JavaScript allows for dynamic, real-time changes to the web page the user is accessing. The user causes an "event" (e.g., moving the mouse to press a button) and the programmer can use JavaScript to program a response.

JavaScript was developed by Netscape as a web programming language.

Characteristics of the language:

- allows interactive content on a Web page.
- client based (works on the user machine).
- does not manipulate files.
- does not carry out graphics.

Important Issues for JavaScript:

- the instructions are written in lowercase.
- all instructions must be spelled correctly or the interpreter will not understand them.
- parts of an instruction must be separated by a space and not run together.
- the correct punctuation must be used.

Overview of JavaScript

JavaScript alert("string") function:

The alert function requests that the browser pop-up a small window that contains the words in the string.

Inserting JavaScript into a Web page:

```
<script language = "JavaScript" type = "text/javascript" >  
    alert("your message goes here");  
</script >
```

JavaScript prompt("string") function:

```
<script language = "JavaScript" type = "text/javascript" >  
    var mytext = prompt("Please enter some text");  
    alert(mytext);  
</script >
```

Static write to a window:

```
<script language = "JavaScript" type = "text/javascript" >  
    window.document.write("This is a statement");  
</script >
```

alternate version:

```
<script language = "JavaScript" type = "text/javascript" >  
    document.write("This is a statement");  
    document.bgColor = "yellow";  
    document.fgColor = "blue";  
</script >
```

JavaScript confirm() method:

```
var reply = confirm("Do you like this color?");  
document.write("Your answer was " + reply);
```

Mouse Events:

OnMouseOver Event Handler:

- The user moves the mouse over a particular part of the Web page.
- First, the programmer has to define the part of the Web page to be monitored.
- If the user has moved the mouse there, the program will detect this and react in some way.

```
<a href = "#"  
  onMouseOver = "document.bgColor = 'red';  
  return true"  
>  
  Watch me!  
</a>
```

Note: two levels of quotes are needed.

OnMouseOut Event Handler:

- The user moves the mouse away from the referenced part of the Web page.
- The program will detect this and react.

```
<a href = "#"  
  onMouseOver = "document.bgColor = 'red';  
  return true"  
  onMouseOut = "document.bgColor = 'white';  
  return true"  
>  
  Watch me!  
</a>
```

Button Events:

user clicks on a button - invokes an event handler.