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" >
    alert(" your message goes here" );
< /script>
```

JavaScript prompt(" string") function:

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

Static write to a window:

```
window.document.write(" This is a statement" );

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

alternate version:
< script language= " JavaScript" >
    document.write(" This is a statement" );
    document.bgColor =  " yellow" ;
< /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.