JavaScript Introduction

JavaScript is the most popular scripting language on the internet, and works in all major browsers, such as Internet Explorer, Firefox, Chrome, Opera, and Safari.

What is JavaScript?

- JavaScript was designed to add interactivity to HTML pages
- JavaScript is a scripting language
- A scripting language is a lightweight programming language
- JavaScript is usually embedded directly into HTML pages

Are Java and JavaScript the same?

NO! Java and JavaScript are two completely different languages in both concept and design!

Java (developed by Sun Microsystems) is a powerful and much more complex programming language - in the same category as C and C++.

What Can JavaScript do?

- **JavaScript gives HTML designers a programming tool -** HTML authors are normally not programmers, but JavaScript is a scripting language with a very simple syntax! Almost anyone can put small "snippets" of code into their HTML pages
- **JavaScript can react to events -** A JavaScript can be set to execute when something happens, like when a page has finished loading or when a user clicks on an HTML element
- **JavaScript can read and write HTML elements -** A JavaScript can read and change the content of an HTML element
- **JavaScript can be used to validate data -** A JavaScript can be used to validate form data before it is submitted to a server. This saves the server from extra processing
- **JavaScript can be used to detect the visitor's browser** - A JavaScript can be used to detect the visitor's browser, and - depending on the browser - load another page specifically designed for that browser
- **JavaScript can be used to create cookies** - A JavaScript can be used to store and retrieve information on the visitor's computer

Example #1 ~ Buttons

```
function changecolor(code) {
document.bgColor=code
}
```

This page is an excellent example of one function being used by several buttons in the same document. Our function is called **changecolor(code).** It has only one line:

document.bgColor=code.

You probably guessed that **bgColor** stands for background color. If I type **document.bgColor="red"** the background will turn red.

By writing the command **document.bgColor=code** I am allowing myself to define the variable code as any color I want.

Later, in the form. I define a button with the command: **onClick="changecolor('green')"**

onClick="changecolor('green')" is telling the program 2 things:

1. Run the function named changecolor(code).
2. code='green'

Example #2 ~ Password

```
function password() {
answer = prompt("Enter password.  Psst it is castle. ");
if(answer=="castle") {
location = "SamplePage.htm";
```

The first line of the function, password() is:

answer = prompt("Enter password. Psst it is castle. ");

This command tells the computer to open a prompt box, and assign whatever the user types to the variable, **answer**. Therefore if the user types "chickensoup", the computer will execute the command **answer**="chickensoup"

I can then compare the variable **answer** with other text to determine if the user typed in the correct password, in this case I prompt it with an **alert** box.

```
} else {
alert("Please try again")
}
```

Example #3 ~ Rotate Images

<!-- Paste this code into an external JavaScript file named: banner.js.js -->

```javascript
var imageList = new Array();

  imageList[0]="Jets.png";
  imageList[1]="giants.png";
  imageList[2]="Bills.png";

var imageNumber = 0;
var totalImages = imageList.length;

function cycleImages()
{
  imageNumber++;
  if (imageNumber == totalImages)
  {
    imageNumber = 0;
  }
  document.banner.src=imageList[imageNumber];
  // set the time below for length of image display
  // i.e., "4*1000" is 4 seconds
  setTimeout("cycleImages()", 4*1000);
}
window.onload=cycleImages;
```

<!-- Paste this code into the HEAD section of your HTML document.
    You may need to change the path of the file. -->

```html
<script type="text/javascript" src="banner.js.js"></script>
```

<!-- Paste this code into the BODY section of your HTML document -->

```html
<img src="Jets.png" name="banner">
```