

# JavaScript

Extending the Functionality of Your Web Pages

# JavaScript

## History

- Netscape started a client-side scripting language called LiveScript
- Incorporated into the web browser at the same time as Java support started
- Changed name to JavaScript with Sun's OK
- Standardized version is called ECMAScript

# JavaScript

## Integrating with HTML

- Use the `<script>` tag to designate what is code
- Make sure to end the script
- HTML comment tags aren't necessary (left over from old browsers)

```
<html>
  <head>
    <script type="text/javascript">
      // JavaScript code goes here
    </script>
  </head>
  <body>
    <!-- content goes here -->
  </body>
</html>
```

# JavaScript

## Language Components

- Variables are NOT explicitly typed (int, string, date, etc.)
- Control statements are just like regular programming (if, while, for)
- End of statement = ‘;’
- Code blocks use ‘{’ & ‘}’

```
<script type="text/javascript">  
var message="Welcome to my web page";
```

```
function Display_Message() {  
    alert(message);  
}  
</script>
```

# JavaScript

## Language Components

Variable declaration is intended to be simple

- No explicit typing - JavaScript handles this for you
- Variables can hold any type of data (numbers, string, etc.)
- Variables can change their type

```
<script type="text/javascript">  
var message="Welcome to my web page";  
  
function Display_Message() {  
    alert(message);  
}  
</script>
```

# JavaScript

## Language Components

The keyword 'var' declares the variable

```
<script type="text/javascript">  
var message="Welcome to my web page";  
message=message+"It's a work in process.";  
var today=new Date();  
today="Today is "+today;  
</script>
```

Variables can be modified:

+ - \* /    Numeric Arithmetic  
+ \*       String Concatenation

Dates include the time

Pulling information out of dates  
can be cumbersome

Be careful about how variables are used  
(variables can change their type)

# JavaScript

## Language Components

Several commands exist for use in JavaScript

- Help to interact with the user
- Get information from the web page (from forms, etc.)
- Modify the web page (change content, appearance, etc.)

```
<script type="text/javascript">  
var message="Welcome to my web page";  
  
function Display_Message() {  
    alert(message);  
}  
</script>
```

# JavaScript

## Language Components

### Data Types

- Boolean: True / False (yes / no)
- Numeric: -5 / 42 / 1.21
- String: “Hello World”
- Object: new Date()



# JavaScript

## Language Components

### Numeric Addition & Subtraction

- `myVar = myVar + 1; // standard method*`
- `myVar += 1; // shortcut*`
- `myVar++; // increment by 1`

\* Works on strings also