

Lecture Three: Variables & Arrays

Variables

- **Variables** are **objects** that are named by the author and are assigned **values** – thus storing the value(s) as a set of data information
- The **variable** will then get referenced in the script – the reference actually refers to the **value(s)** that are assigned to the **variable**

Arrays

- An **array** is an **object** that contains a **set of related information** and is also a **data type** that holds, contains and **stores values in a numbered sequence**
- An **array** is set up by **using the `array()` constructor**
- Each value in that array is called an **“element”** (of that array)
- Each **element** (of an array) is assigned within the array starting with the first element being positioned (indexed) at **zero**

Today's Date

- JavaScript can determine the current date and time from the user's computer by numbers
- We will use **variables** that will call the proper **value** from an **array**

```
dayName = new Array  
("Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday")
```

```
monName = new Array ("January", "February", "March", "April", "May",  
"June", "July", "August", "September", "October", "November", "December")
```

```
now = new Date
```

```
// first, you need to create three variables: "dayName", "monName", and  
"now "
```

```
// The variable "dayName" will be assigned the values for the days of the  
week
```

```
// The variable "monName" will be assigned the values for the months of  
the year
```

```
// The variable "now" will be assigned a value that contains the command  
"new Date"
```

```
// The "new Date" command contains the keyword "new" which creates a new-  
object called "Date"
```

```
// The variables "dayName", "monName", and "now " will be used by the
script contained in the <body> of your HTML page to write the date on the
screen
```

```
document.write("<p> " + dayName[now.getDay()] + ", " +
monName[now.getMonth()] + " " + now.getDate() + "</p>")
```

```
// second, create a statement that will write our current date into a
browser window when viewed using the "document.write()" method
```

```
// the "document.write()" method is what will actually do the writing of
our date and time into the browser window
```

```
// contained within the "document.write()" method will be a string value
that will access the data from the variables that we defined
```

```
// The string-value will essentially contain and write the "dayName" +
"monName" + "now" using the ("<p> " + ... + ", " + ... + " " + ... + "</p>")
syntax
```

```
// The "+" operator at the beginning and end of each of the values of the
text string lets each of the values to be joined together when being
written in the document window – called "concatenation"
```

```
// Concatenation is a standard operation in computer programming
languages of joining two character strings end to end.
```

```
// The "dayName" and "monName" variables in the string use the "[ ]"
operators to access the "dayName" and "monName" array elements from the
arrays we set up
```

```
// The "dayName" and "monName" variables in the string will also call
other predefined-functions: "getDay()" and "getMonth()" which accesses
the "new Date" object by using the "now" variable we set up earlier
```

```
// The predefined-functions: "getDay()" , "getMonth()" and "getDate()"
will access the day, month and (numerical) date from the computer's
clock
```