

Announcements

- ❖ Check class announcements daily
- ❖ You must implement programming projects by yourself

For Loop

- ❖ Iteration statement
- ❖ General form

***for (initialize; test; expression)
statement***

basically equivalent to

***Initialize
while (test) {
 statement
 expression
}***

- ❖ If more than one statement use { }
- ❖ Semicolons are required
- ❖ Beware of infinite loop if semicolon after)
- ❖ **Example:** ForLoop.html
- ❖ **Example:** ForLoopVariations.html

Nested Loops

- ❖ You can combine if, while and do while statements in several ways
 - ❖ You can have an several nested if statements
 - ❖ You can have if statements within while statements
 - ❖ You can have while statements within if
- ❖ **Example:** NestedLoops.html
- ❖ **Example:** MultiplicationTable.html

One-Dimensional Arrays

- ❖ **Problem** → You need to keep track of the scores of students in a class
 - ❖ Declaring and handling 50 variables is not an easy task
 - ❖ Arrays come to the rescue
- ❖ **Array** → Collection of values that can be treated as a unit or individually

```
var a = new Array(4)
```
- ❖ You can visualize an array as a set of variables one after another
- ❖ **Indexing** → We access an element using []
 - ❖ First element associated with index 0 (e.g., a[0])
- ❖ An element of an array can be of any type and an array can hold different types of elements
- ❖ The length property represents the length of the array (e.g., a.length)
- ❖ We can print the contents of an array by using alert
- ❖ **Example:** ArrayEx.html

Definition of One-Dimensional Arrays

- ❖ Via array literal → comma separated list of elements within square brackets
var a = [2, 3, 5];
var b = []; // empty array
- ❖ Specified in the Array constructor
var c = new Array();
var e = new Array(4); // defines array of size 4

Handling ERRORS

- ❖ We can detect errors by using window.onerror
- ❖ **Example:** ErrorHandler.js, Error.html
- ❖ Let's introduce some errors in Error.html

Top-Down Design

- ❖ What is Top-Down Design?
- ❖ Let's go over an example
 - ❖ Video Store Software
- ❖ Bottom-Up Design