

# **ANNOUNCEMENTS**

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- ❖ Check class announcements daily
- ❖ You must implement programming projects by yourself
- ❖ Web Fonts by Google:
  - ❖ <http://code.google.com/apis/webfonts/>

# 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 parenthesis
- ❖ **Example:** ForLoop.html
- ❖ **Example:** ForLoopVariations.html

# NESTED LOOPS

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- ❖ You can combine if, while and do while statements in several ways
  - ❖ You can have 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

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- ❖ 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`

# **TOP-DOWN DESIGN**

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