Working with Arrays

The purpose of arrays is to model a list of common items.

There are two steps involved in programming arrays.

Step 1 – Setting Up the Array

Before you can set up the array in your program you must know what type of data (i.e. numbers, strings, characters…) your array will store and how many items will be stored in your array.

A. Declaring the Array (Naming it and giving it a data type)
B. Allocating memory to the array (defining its size)
C. Initializing the array. (entering values into the array elements).

If everything about the array is known (ie. Size & all values) when you are writing your program you can declare, allocate memory and initialize all in one programming step.

The size of an array can be defined by asking a user how many items they need to enter.

Step 2 – Processing the Array

Elements in an array are referenced using an array integer index starting at 0.

A for loop is a very common method for working through the elements in an array. The term arrayname.length can be used to set your loop limit. Remember arrays start at index 0 so the last index in array is always length-1.

Passing as a Method Parameter

When passing arrays as parameters, the value passed to the method is a reference that provides the memory location of the array. This means the called method can alter the contents of the array in the calling method. Note it is the same for when you pass objects are arguments.

Note primitive data types are passed by value, a copy is passed to called method. Changing the contents of this passed copy does not affect the value in calling method.