**Foreach loop:**

* The **foreach** loop is used to cycle through the elements of a *collection.* A collection is a group of objects. C# defines several types of collections, of which one is an array.
* The general form of **foreach** is shown here:

**foreach(type loopvar in collection) statement;**

* Here, type loopvar specifies the type and name of an iteration variable.
* The iteration variable receives the value of the next element in the collection each time the foreach loop iterates.
* Here is how foreach works:

When the loop begins, the first element in the array is obtained and assigned to loopvar. Each subsequent iteration obtains the next element from the array and stores it in loopvar. The loop ends when there are no more elements to obtain. Thus, the foreach cycles through the array one element at a time, from start to finish.

* One important point to remember about foreach is that the iteration variable loopvar is read-only. This means you can’t change the contents of an array by assigning the iteration variable a new value.

**Example:**

// Use the foreach loop.

**using System;**

**class** ForeachDemo

{

**public static void Main()**

{

int sum = 0;

int[] nums = new int[10];

// Give nums some values.

for(int i = 0; i < 10; i++)

nums[i] = i;

// Use foreach to display and sum the values.

**foreach(int x in nums)**

**{**

Console.WriteLine("Value is: " + x);

sum += x;

**}**

Console.WriteLine("Summation: " + sum);

}

}