## Finding a number in an array - Linear Search

**The goal for this exercise** is to create a method that will do a linear search of an array, which should be fairly easy. A secondary goal include the introduction of a pattern that consists of you creating a ‘Find’ method, then try it out.

For this exercise, you should implement the FindIntegerLinear method in the SearchingAndSorting class. This is located in the starter solution in the **Student\_Answers.cs** file. The method should have two parameters: an int to search for, and an array of ints to search within. The function should return a bool value: true if the number to search for is contained in the array, false if it isn't. You must do the search using a LINEAR searching, meaning that you use a simple for loop, and check each element one by one until you find the element you're looking for (or find that the target isn't in the array). The FindIntegerLinear method should be implemented in the SearchingAndSorting class.

Once you’ve done that, you should test the function (once you've written it). You’ll need to do this by adding code to main which searches through various arrays (which you’ll also need to create)

**What you need to do for this exercise:**

1. Implement and the FindIntegerLinear method, as described above.
2. The following is NOT required (which is why it’s crossed out).  
   I may want to add it back in a future quarter, though, which is why it’s still here. ~~Once you’ve done this, all the tests in the NUnitTests\_FindIntegerLinear class should pass. This class is located in the starter solution, in the~~ **~~PCE\_ForTests~~** ~~project, in the file named~~ **~~PCE\_Test.cs.~~**
   1. ~~You may need to set another project as the start up project (such as the PCE\_Test\_Runner project), by right-clicking on that other project, and selecting the “Set As Startup Project” menu option. Within the test runner project, you may (or may not) need to change the code in the RunTests.cs file, particularly at the top of the Main method.~~