

# Exercises: passing and returning Arrays

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## Assignment 5 – Due in Week 11

Once you are done with your programs, upload them to eCentennial under Assessments / Assignment / Assignment 5

### In a single project, code the following methods and call them from your main

Declare the following arrays in your main method

```
char[] letters = "the quick brown fox jumps over the lazy dog".ToCharArray();
```

```
int[] numbers = {0, 2, 3, 5, 7, 1, 1, 2, 5, 6, 7, 2, 5, 2};
```

```
string[] poem = "mary had a little lamb its fleece was white as snow".Split();
```

1. Write a method that takes an argument (an int array) and print each item on a single line separated by a space. From your main, call this method with numbers as argument
2. Write a method that takes an argument (a string array) and print each item on a single line separated by a space. From your main, call this method with poem as argument
3. In your main method use the method in question 1 to display the letters array, then use the `Array.Reverse()` method to reverse the letters array and then again call the appropriate method to print it
4. In your main method use the method in question 3 to display the poem array, then use the `Array.Sort()` method to sort the poem array and then again call the appropriate method to print it
5. In your main method use the method in question 2 to display the numbers array, then use the `Array.Binarysearch()` method to try to find the position of 3 in the numbers array. What is your answer?  
Now repeat the same steps **after** you have sorted the array and printed the sorted array

Try to practice your **foreach** loop

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For questions 4-6 you do not need to make additional methods. You simply write the necessary code in your Main method.

Because a **foreach** loop is readonly, you should not use it here!

6. Write a method that creates and return an array of ints. The method

takes a single int argument that represents the how many items will be in the resulting array and does the following:

- Declare an array of the required type.
- Allocate memory for the intended number of items.
- Using any looping structure, prompt the user for a number and then assign to each element.
- Return the array after the loop.

In your main method do the following:

(a) call this method (you will need to supply an argument), assign the resulting value to at suitable variable and then

(b) display this variable.

7. Write another method that creates and return an array of ints. The method takes a single argument that represents the number of items in the resulting array and does the following:

- Declare an array of the required type.
- Allocate memory for the intended number of items.
- Using any looping structure, assign to each element a random integer in the range 100 to 200.
- Return the array.

You will need the following statement in global scope.

```
static Random rand = new Random();
```

The following statement will give you a random letter

```
rand.Next(100, 200);
```

Exercise this method in a similar fashion as you did for question 6