Practice using Arrays

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

Declare the following arrays in a global scope (external to any method).   
static char[] vowels = {'a', 'e', 'i', 'o', 'u'};

Although it is convenient to use global variables, it is considered poor programming practice. Can you explain why this is so?

static int[] primes = {2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37};

static int[] numbers = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20};

static string[] poem = {"Mary", "had", "a", "little", "lamb"};

static string[] obama = {"Barack", "Hussein", "Obama"};

Because the above variables are in global scope, all your methods will be able to access and mutate them, so you don’t have to pass them as arguments to your methods.

1. Write a method that prints the string array obama. Each element must be on a separate line.  
   From your main, call this method. [Your method will not take any parameters and it does not return a value.]
2. Write a method that prints the string array poem in reverse order. All the items must be in the same line. Your method will not take any parameters and it does not return a value.  
   From your main, call this method.
3. Write a method that sums all the items of the array primes, and then display this sum.  
   From your main, call this method. [Your method will not take any parameters and it does not return a value.]
4. Write a method that doubles all the items of the int array primes.  
   This method does not display anything.  
   From your main, call the previous method, this method and then the previous method again. Because the previous method was called twice, you will have two printouts, one with the original value and the second one with the doubled values. [Your method will not take any parameters and it does not return a value.]
5. A) Write a method that will subtract 32 from each item of the char array vowels. The result of any arithmetic operation is a number, so you will have to cast your result to a char in order to assign the resulting value to the char array   
   B) Write a second method that will display all the items of the char array vowels on a single line   
   C) From your main, call the second method, then the first and then the second again  
     
   Subtracting or adding 32 is a common technique for converting from lower case alphabet to upper case alphabet and vice-versa
6. Modify your solution for Question 3 so that the method calculates the sum, but return this value instead of displaying it  
   From your main, call this new method and display the return value
7. Write a method that displays on the items that are greater than 10 in the primes array. Your method will not take any parameters and it does not return a value.  
   From your main, call this method.
8. Write a method that display the number of even and odd items in the numbers array. Your method will not take any parameters and it does not return a value.  
   From your main, call this method.
9. Write a method with the following specifications:  
   name: CreateIntArray  
   argument: int indicating the size of the array  
   return: int array  
   tasks: a) create an int array of suitable size  
    b) allocate storage  
    c) prompts the user for each item that will going into the array  
    d) assign each of the above value into the array  
    e) return the results  
   From your main method, call the CreateIntArray method and assign the return value to a suitable variable and then print that variable.
10. Write a method with the following specifications:  
    name: PrintStringAsCharArray  
    argument: A string and a char. The first is a string to convert to char array. The second is a char that will separate each item of the converted first argument.  
    return: nothing  
    tasks:
    1. Use the **ToCharArray()** method to convert the first argument to an array
    2. Print each item of the above array separate by the second argument

From your main method, call the PrintStringAsCharArray method several times.