Section F, Lab 3

In this lab, two functions and a main program need to be implemented.

1. The first function receives the number of elements in an array and the size of each element. It then allocates an array of any data type using the following prototype:

void\* createArray(int elemSize, int elemNumber);

1. The second function searches the number of even integers and the number of odd integers in the given integer array and returns them by reference. This function takes an integer array, its size, and two integer pointers as inputs. This function does not have an output value.
2. In the main program, an integer array should firstly be created using the first function. Then students need to initialize all the integers in array with values between 1 and 10 using a random generator (see 4). After all the integers have been initialized, students should print out the values in the array, and print out numbers of integers that are larger/smaller than the given threshold value computed by the second function.
3. Random generator:

Int randInt = (rand() % (upperValue - lowerValue + 1)) + lowerValue

Example output (your output may not be the same as shown below):

Array is: 8, 10, 4, 3, 4, 9, 9, 8, 8, 4,

Array has 7 even numbers and 3 odd numbers

Grading Criteria:

Function createArray: 3 points

Function computeEvenOdd: 3 points

Main program: 3 points

Comments: 1 point

Not doing error checking or not freeing the allocated memory will lead to a points deduction.

General note:

1. If your code does not compile, you will receive an automatic 0 for this assignment.

2. Changing the given function prototype will lead to an automatic zero grade.

3. Using any global variables will lead to an automatic zero grade.

4. The implementation of the function should include comments describing what it is intended to do and how this function should be called. Example can be found in CS 2050 lab policy.

5. If your submission does not include a source file, you will receive an automatic zero grade.