Programming Assignment 2
Due: Thursday, Oct. 5 (**at 11:59pm**)

Groups:
This is a **group assignment**. You will have to work in groups of **two** students. If you need a partner, please send me an email.

Assignment:
As I explained in class, in this assignment you will build on one of the two implementations of the stack ADT that we did in class. I posted the code that we wrote in class for both the array and linked list implementations. You are free to use any of the two implementations for this assignment.

The assignment is to write code that:

1. Asks the user to enter a number N
2. Reads the number N entered by the user
3. Reads N (odd and even) integers
4. When an integer is read, it is added to a stack, called mainStack
5. After the user finishes entering all N integers, all entered integers must be printed out in the **reverse order** in which they were entered.
6. Your code should then print out, in this order, all the odd integers entered and then all the even integers entered in the **same order** in which they were entered.

Important:
As I explained in class:

1. In addition to the main stack, use two stacks oddStack and evenStack to store the odd integers and even integers respectively.
2. You should write one single function to push integers in any of the three lists. Similarly, you should write one single function to pop integers from any of the three stacks. This also applies to any other function that manipulates stacks (e.g., isEmpty(), peek(), etc.)

Submission:
You should submit two files: stack.h that will contain your interface and a file stack.c that will contain your implementation of that interface. Compress the two files in a single .zip or .tar file. Name that file as follows:

`LastName1_LastName2_PA2.zip`
or: **`LastName1_LastName2_PA2.tar`**

Test your code thoroughly before submission.

Submit your file using the link for PA2 on Canvas.