

COMP 1451 Lab 10-a (2 points)

For this lab you will work in teams of two or three. Write three classes: `InputReader`, `InvalidInputException`, and `NumberReader`. You may use the following code for your `InputReader` class:

```
import java.util.Scanner;

public class InputReader
{
    private Scanner scanner;

    public InputReader()
    {
        scanner = new Scanner(System.in);
    }

    /**
     * This method returns the number typed by the user. If the number is
     * not an integer it throws a custom checked exception that will be
     * caught by the calling method.
     * @throws InputMismatchException, InvalidInputException
     */
    public int getNumber() throws InvalidInputException
    {
        int number = 0;
        try {
            number = scanner.nextInt();
        }
        // catch any non-integer input
        catch(java.util.InputMismatchException exc) {
            scanner.nextLine();           // clear the buffer
            throw new InvalidInputException("not a valid number!");
        }
        return number;
    }
}
```

`InvalidInputException` is a custom checked exception that you will write.

`NumberReader` has a single field, of type `InputReader`. It has a method that repeatedly prompts the user to type a non-zero whole number. The user will type a zero to stop the loop. After the loop has finished, the sum of the input numbers will be displayed on the screen. This method must have a **try catch block** to catch a thrown `InvalidInputException` and display an error message if the user types something that is not an integer.

Demonstrate your completed project to your instructor or TA before leaving the lab and be sure we have checked it off for each member of the team. A suggested solution will be given during the next class and labs that have not been checked off will not receive any points.

If you have to miss class it is your responsibility to do the lab at home and submit it to the appropriate D2L dropbox before next class.