

COMP 1409 Lab 9-a (2 points)

In-class lab

This lab will give you practice thinking through program logic and using a while loop without a collection. Copy the **InputReader** class below into a BlueJ project.

```
import java.util.Scanner;
import java.util.InputMismatchException;
/**
 * InputReader - accepts keyboard input for various data types.
 *
 * @author Colleen
 * @version 2013.10.15
 */
public class InputReader
{
    private Scanner reader;
    /**
     * Constructor for objects of class InputReader
     */
    public InputReader()
    {
        reader = new Scanner(System.in); // default input
    }

    /**
     * Reads string input from keyboard.
     * @return input string
     */
    public String readString()
    {
        return reader.nextLine();
    }

    /**
     * Reads integer input from keyboard.
     * @return input or zero if int not typed
     */
    public int readInt()
    {
        int theInt = 0;
        try {
            theInt = reader.nextInt();
        }
        catch(InputMismatchException e) {} // won't crash if not an int
        reader.nextLine(); // clear buffer ready for next input
        return theInt; // still 0 if exception caught
    }
}
```

```

/**
 * Reads double input from keyboard.
 * @return input or zero if double not typed
 */
public double readDouble()
{
    double theDouble = 0.0;
    try {
        theDouble = reader.nextDouble();
    }
    catch(InputMismatchException e) {} // won't crash if not double
    reader.nextLine(); // clear buffer ready for next input
    return theDouble; // still 0.0 if exception caught
}

/**
 * Reads boolean input from keyboard.
 * @return input or false if boolean not typed
 */
public boolean readBoolean()
{
    boolean theBoolean = false;
    try {
        theBoolean = reader.nextBoolean();
    }
    catch(InputMismatchException e) {} // won't crash if not boolean
    reader.nextLine(); // clear buffer ready for next input
    return theBoolean; // still false if exception caught
}

/**
 * Method readChar reads a character input from keyboard
 *
 * @return char input
 */
public char readChar(){
    return reader.next().charAt(0);
}

} // end of InputReader class

```

Create a class called **Play** that has an InputReader as an instance variable. Be sure to initialize it in the constructor. The class has two methods. Write a method with this signature:
public int numberSum()

The method prompts the user for a number. (Put the prompt on the terminal window.)
The user types their choice of number and it is read into a variable using the appropriate method from `InputReader`. Then using a while loop, the method calculates and returns the sum of numbers from 1 to that number inclusive.

Write a method with this signature:
`public void stringPlay()`

The method prompts the user for a string, reads it in, and then displays the string as many times as the length of that string. The output string should be formatted with the first letter uppercase and the rest lowercase. For example:

If the user enters hi
The result will be Hi Hi

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