5)

```java
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package week1project;

import java.util.Scanner;

/**
 *
 * @author 33170193
 */
public class Week1Question5 {

    public static void main(String[] args) {

        int inputNum = 0;
        final int invalidNum = -999;
        Scanner keyboard = new Scanner(System.in);

        while (inputNum != invalidNum) { //Check Input number is not -999

            System.out.println("Enter a line:");
            inputNum = keyboard.nextInt(); //Input result

            System.out.println("Your line: " + inputNum); //Output result
            System.out.println();
        }
    }

}
```

6)

Continuously keep track of: Running Total + Average + Smallest number + Largest number

8)

```java
package weeklproject;

import java.util.Scanner;

public class WeeklQuestion6 {

    public static void main(String[] args) {

        int inputNum, largeNum = 0, smallNum = 0, counter = 2, total = 0;
        float avg;
        final int invalidNum = -999;

        Scanner keyboard = new Scanner(System.in);


        System.out.println("Enter a number:");
        inputNum = keyboard.nextInt(); //Input initial result


        if (inputNum != invalidNum) { //Assign the initial largest number, smallest number and total for initial comparision
            total = inputNum;
            largeNum = inputNum;
            smallNum = inputNum;

            avg = (float) inputNum;

            System.out.printf("Total: %d Average: %f Largest Number: %d Smallest Number: %d", total, avg, largeNum, smallNum); //Outpit initial result
            System.out.println();
        }



        while (inputNum != invalidNum) { //Check whether input is valid

            System.out.println("Enter a number:");
            inputNum = keyboard.nextInt(); //Input result


            total += inputNum;              //Keep track of running total
            avg = (float) total / counter; //Keep track of average input



            if (inputNum > largeNum) {     //Compare input to get current largest number
                largeNum = inputNum;

            }

            if (inputNum < smallNum) {  //Compare input to get current smallest number
                smallNum = inputNum;
            }



            System.out.printf("Total: %d Average: %f Largest Number: %d Smallest Number: %d", total, avg, largeNum, smallNum); //Output result
            counter++;

            System.out.println();
        }

    }

}
```

```java
package week1project;

/**
 *
 * @author 33170193
 */
import java.util.Scanner;

public class Week1Question8 {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);
        boolean go = true;


        while (go) {

            System.out.println("Enter a floating point:");
            double inputNum = input.nextDouble(); //Input number

            if (outOfRange(inputNum)) { //Check if number is out of range

                System.out.println("Out of range");

                go = false; //End the while loop

            } else {

                System.out.println("Not out of range");

            }
        }

        System.out.println("You quit.");

    }



    static boolean outOfRange(double d) {

        if (d > 100) {
            return true;

        }

        if (d < -100) {
            return true;
        }

        return false;

    }

}
```

Continuously get input but stop when out of range

How to Round float (input) → whole number

```java
package weeklproject;
import java.util.Scanner;
public class Rounder {

    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.println("Enter a floating point:");
        double d = input.nextDouble();

        calcWholeNum("The rounded value is", d); //Round float --> Number

    }

    static void calcWholeNum(String msg, double num) {

        double floatNum = num;
        int wholeNum = 0;
        double decimalInInput = 0;
        int roundDownWholeNum = 0;
        int  roundUpWholeNum = 0;
        double decNumToRoundUp = 0;

        boolean neg = (floatNum < 0);
        if (neg) {
            floatNum = -num; //Convert negative float to positive float
        }

        wholeNum = (int) floatNum;
        decimalInInput = floatNum - wholeNum;  //Core algorithm

        if (decimalInInput < 0.5) {

            if (neg) {
                wholeNum = -wholeNum;   //Convert negative whole number to positive number
            }

            roundDownWholeNum = wholeNum;

            System.out.println(msg + "" + roundDownWholeNum);
        } else {


            decNumToRoundUp = 1 - decimalInInput; //Core algorithm

            if (neg) {
                floatNum = -floatNum - decNumToRoundUp;
            } else {
                floatNum = floatNum + decNumToRoundUp; //Core algorithm

            }

            roundUpWholeNum = (int) floatNum;

            System.out.println(msg + "" + roundUpWholeNum);

        }

    }


}
```