LAB 5 – Startup Questions

Q1) Write a java program that will read an integer **n** and then print the line: "You are in CSC111" **n** times. Create a project **Lab05** for all your classes and Name your class **Line.**

Sample run:

Enter n : 3 ↲
You are in CSC111
You are in CSC111
You are in CSC111

Q2) Write a two player java program guessing game. First player will look away while second player enters a 3 letter string that is a day of the week (for example, **MON**, **TUE WED** etc…). Then the first player will guess the day and your program should tell him whether his guess is right or wrong until he guess correctly. Finally, print how many guesses he made. The winner is the one with least amount of guesses.

Sample run:

Player One:
Enter Secret Word : SAT ↲
Player Two:
Enter Your Guess: SUN ↲
Wrong! Guess again: WED ↲
Wrong! Guess again: MON ↲
Wrong! Guess again: SAT ↲
You Are Correct. It was SAT! It took you 4 Guesses.

Q3) Write a Java program that will read an unspecified number of integers and then print number of positives, number of negatives, their count, sum and average. Your program should stop reading numbers when the user enter 0.

Name your class **CountPosNeg**

Sample run 1

```
Enter integers ending with 0: 1  2  -1  3  0 ↲
The number of positives is 3
The number of negatives is 1
The count is 4
The sum is 5
The average is 1.25
```

Q4) Write a java program that will read a specific number of integers n and then print the maximum number.

Name your class **Maximum**

Note: The two constants **`Integer.MIN_VALUE`** and **`Integer.MAX_VALUE`** represent the minimum and maximum integer in Java respectivly. You can use them in the finding the maximum or minimum algorithm.

Try printing them and see the number being printed. Is it higher or lower than you expected? Also try to print for Double and Short.

Sample run 1

```
Enter how many numbers you have? 7
Enter the numbers : 1  200  -1  3  0 23 14 ↲
The Maximum is 200
```

Q5) Write a java program that will read a specific number of integers **n** and then print the minimum number.

Name your class **Minimum.**

Q6) Write a Java program that will operate as sale cashier in a supermarket. The program should read items and their prices and print the final bill.

For every item in the customer basket, your program should read item **name**, item **price** and item **quantity**, then multiply price and quantity to get subtotal for that item.

Your programDo this for all the customer items while adding the subtotals to get the total bill. Your program should stop reading items when you enter "stop" as item name. Name your class **Cashier1**

Hint: To compare two String variables s1 and s2 use **s1.equals(s2)** or **s1.equalsIgnoreCase(s2)**. DO NOT USE s1 == s2

Sample Run:

```
Welcome to the Cashier System
==========================
Enter name: Fish
Enter price: 50
Enter quantity: 3
Subtotal = 150.0 SR
Enter name: Oranges
Enter price: 40
Enter quantity: 2
Subtotal = 80.0 SR
Enter name: Milk
Enter price: 10
Enter quantity: 3
Subtotal = 30.0 SR
Enter name: Stop
**********
The Total Bill is 260.0 SR
**********
```

Q7) Modify program in **Q6)** to compute the total bill for many customers. After printing the bill for your customer, display a menu asking the user if he/she wants to compute bill for another customer, if the answer is **Yes** then you should do the same for the new customer. If the answer is **No** then you should terminate the program. Name your class **Cashier2**

Sample Run:

```
Welcome to the Cashier System
==========================
Enter item name: Fish
Enter price: 50
Enter quantity: 3
Subtotal = 150.0 SR
Enter name: Oranges
Enter price: 40
Enter quantity: 2
Subtotal = 80.0 SR
Enter name: Milk
Enter price: 10
Enter quantity: 3
Subtotal = 30.0 SR
Enter name: Stop
**********
The Total Bill is 260.0 SR
**********
Is There Another Customer? Yes
Enter name: Meat
Enter price: 50
Enter quantity: 2
Subtotal = 100.0 SR
Enter name: Bananas
Enter price: 20
Enter quantity: 2
Subtotal = 40.0 SR
Enter name: Stop
**********
The Total Bill is 140.0 SR
**********
```

Is There Another Customer? No

Goodbye…

Q8) Write a Java program that reads a character c and an integer n, then prints a square of c with n as square length. Name your class **Square**

Hint: To read a char c, use **c=kb.next().charAt(0);**

Sample Run:

Please enter a character: *

Please enter a number: 5

*****
*****
*****
*****
*****

Sample Run:

Please enter a character: A

Please enter a number: 3

AAA
AAA
AAA

Solutions:

Q1)

```
import java.util.Scanner;
public class Line {
public static void main(String[] args) {
	Scanner kb = new Scanner(System.in);
	System.out.print("Enter n: ");
	int n = kb.nextInt();
	while (n>0) {
		System.out.println("You Are in CSC111");
		n--;
		}
	}
}
```

Q2)

```
import java.util.Scanner;
public class Game {
	public static void main(String[] args) {
		Scanner kb = new Scanner(System.in);
		System.out.print("Player One:\nEnter Secret Word : ");
		String day = kb.next();
		System.out.print("Player Two:\nEnter Your Guess: ");
		String guess = kb.next();
		int count = 0;
		boolean stop = false;
		while (!stop) {
			count ++;
			if ( day.equalsIgnoreCase(guess) ) {
				System.out.println("You Are Correct. It was
"+day+"! It took you " +count+" Guesses.");
				stop = true;
			} else {
				System.out.print("Wrong! Guess again: ");
				guess = kb.next();
			}
		}
		System.out.println("Goodbye! Thanks for playing");
		kb.close();
	}
}
```

Q3)

```
import java.util.Scanner;
public class CountPosNeg {
	public static void main(String[] args) {
		Scanner kb = new Scanner(System.in);
		int x, pos=0, neg=0, sum = 0, count=0;
		double avg;

		System.out.print("Enter integers ending with 0: ");
		x=kb.nextInt();

		while (x!=0) {
			count++;
			sum+=x;
			if (x>=0) pos++; else neg++;
			x = kb.nextInt();
		}
		avg = (double) sum / count;
		System.out.println("The number of positives is "+pos);
		System.out.println("The number of negativess is "+neg);
		System.out.println("The count "+count);
		System.out.println("The sum "+sum);
		System.out.println("The average "+avg);
		kb.close();
	}
}
```

Q4)

```
import java.util.Scanner;
public class Maximum {
	public static void main(String[] args) {
		Scanner kb = new Scanner(System.in);
		int x, n, max= Integer.MIN_VALUE;
		System.out.print("Enter how many numbers you have: ");
		n = kb.nextInt();
		System.out.print("Enter the numbers: ");

		for (int i=1; i<=n;i++) {
			x = kb.nextInt();
			if (x>max) max = x;
		}
		System.out.println("The maximum is: "+max);
		kb.close();

	}
}
```

Q5)

Q6)

```
import java.util.Scanner;
public class Cashier1{
	public static void main(String args[]) {
		Scanner kb = new Scanner(System.in);
		double price =0, quantity = 0, subtotal =0, total =0;
		String name;
		System.out.println("Welcome to the Cashier System");
		System.out.print("Enter name: ");
		name = kb.next();
			while (!name.equalsIgnoreCase("stop")) {
				System.out.print("Enter price: ");
				price = kb.nextDouble();
				System.out.print("Enter quantity: ");
				quantity = kb.nextDouble();
				subtotal = price * quantity;
				total = total + subtotal;
				System.out.println("Subtotal = "+subtotal+" SR");
				System.out.print("Enter name: ");
				name = kb.next();
			}
			System.out.println("The Total Bill is "+total+" SR");
		}
}
```

Q7)

Q8)