Assignment 4 **Rashmi C R**

1.Write a program to print numbers from 1 to 10.

```
public class PrintNumbers
{
public static void main(String[]args) {
        //to print numbers from 1 to 10
        for(int i=1;i<=10;i++)//using for loop for printing numbers from 1-10
        {
                System.out.println(i);
        }
}
}
```

2.Write a program to calculate the sum of first 10 natural number.

```
public class SumOfNatural {
public static void main(String[] args) {
        //Program to print the sum of first 10 natural numbers.
                int sum = 0;
                for (int i = 1; i <= 10; i++)
                {
                sum = sum + i; //expression to calculate sum of nautral
numbers
                }
                System.out.println(sum);
               }
```

```
        }
```

3. Write a program that prompts the user to input a positive integer. It should then print the multiplication table of that number.

```
import java.util.Scanner;

public class MultiplicationTable{

public static void main(String[] args) {

        //to print the multiplication table of that number.

System.out.println( "Enter the positive integer");

 Scanner sc =new Scanner(System.in);

 int n = sc.nextInt();

 for (int i = 1; i <= 10; i++) {

 for (int j = 0; j <= n; j++) {

 }

 System.out.println( +n +"*" +i +"=" + i*n);

 }

}

}
```

4. Write a program to find the factorial value of any number entered through the keyboard.

```
import java.util.Scanner;

public class Factorial {

        public static void main(String[] args)
```

```
	//program to find the factorial value of any number entered through the keyboard.

	{

		int i = 1, num;

		int fact = 1;

		Scanner sc = new Scanner(System.in);

		System.out.println(" Please Enter any number : ");

		num = sc.nextInt();

		while (i <= num)  {

			fact = fact * i; // to calculate factorial of a number

			i++;

		}

		System.out.println(" The factorial of "+num+" is "+fact);

	}

}
```

5. Two numbers are entered through the keyboard. Write a program to find the value of one number raised to the power of another. (Do not use Java built-in method)

```
import java.util.Scanner;

public class Power {

public static void main(String[] args) {

	//to find the value of one number raised to the power of another. (without bultin)

 System.out.println("Enter the fisrt number");
```

```
 Scanner sc = new Scanner(System.in);

 int a = sc.nextInt();

 System.out.println("Enter second number");

 int b = sc.nextInt();

 System.out.println(+a + "^" + b);

 int value = 1;

 for (; b != 0; --b)

 {

 value *= a;

 }

 System.out.println(value);

}

}
```

6. Write a program that prompts the user to input an integer and then outputs the number with the digits reversed. For example, if the input is 12345, the output should be 54321.

```
import java.util.Scanner;

public class ReverseOfNumber {

	public static void main(String[] args) {

		//program that prompts the user to input an integer and then outputs the number with

		//the digits reversed.

		 System.out.println("enter the number");
```

```
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int sum = 0, r;
        while (n > 0) { // to check wheter the number is positive or not
        r = n % 10;
        sum = (sum * 10) + r;
        n = n / 10;
        }
       System.out.println(sum);
       }
}
```

7. Write a program that reads a set of integers, and then prints the sum of the even and odd integers.

```
    import java.util.Scanner;
public class SumOfEvenOdd {
        public static void main(String[] args) {
//program that read a set of integer,and then prints the sum of odd and even numbers.
        Scanner sc = new Scanner(System.in);
        int number, chioce, evenSum = 0, OddSum = 0;
        do {
           System.out.print("Enter the number ");
           number = sc.nextInt();
```

```
                if (number % 2 == 0) {
                    evenSum += number;
                } else {
                    OddSum += number;
                }
                System.out.println("Do you want to continue? Press 1 for yes
or 0 for no");
                chioce = sc.nextInt();
            } while (chioce == 1);
            System.out.println("Sum of even numbers: " + evenSum);
            System.out.println("Sum of odd numbers: " + OddSum);
        }
    }
```

8. Write a program that prompts the user to input a positive integer. It should then output a message indicating whether the number is a prime number.

```
import java.util.Scanner;
public class PrimeNumber{
public static void main(String[] args) {
    //to check the number is prime or not
 System.out.println("Enter the positive integer");
 Scanner sc = new Scanner(System.in);
 int a = sc.nextInt();
```

```
 System.out.println(((a % 2) > 0) ? "It is a prime number" : "It is not a
prime number");

 //conditional operator is used to check multiple conditions

}

}
```

9. Write a program to calculate HCF of Two given number.

```
import java.util.Scanner;

public class Hcf {

public static void main(String[] args) {

        //program to calculate HCF of Two given number.

 Scanner sc = new Scanner(System.in);

 System.out.println("Enter the first number:");

 int a = sc.nextInt();

 System.out.println("Enter the second number:");

 int b = sc.nextInt();

 int hcf=0;

 for(int i=1;i<=a||i<=b;i++) {

 if(a%i==0 && b%i==0)

 hcf=i;

 }

 System.out.println("The HCF of the given numbers is:"+hcf );

 }

}
```

10. Write a do-while loop that asks the user to enter two numbers. The numbers should be added and the sum displayed. The loop should ask the user whether he or she wishes to perform the operation again. If so, the loop should repeat; otherwise it should terminate.

```
import java.util.Scanner;

public class DoWhileUsage {

	public static void main(String[] args) {

		/*Do while loop that asks the user to enter two numbers ,the number should be added

and the sum displayed,the loop should ask the users whether he or she

wishes to perrform the operation again,if so the loop should repeat otherwise it should terminate.

*/

			int ch;

			Scanner sc = new Scanner(System.in);

			int a, b, sum;

			do {

			System.out.println("Enter two numbers");

			a = sc.nextInt();

			b = sc.nextInt();

			sum = a + b;

			System.out.println("The sum is:" + sum);

			System.out.println("Do u want to continue with this operation:( if yes press 1 else press 0)");

			ch = sc.nextInt();
```

```
}
while (ch == 1);
}
}
```

11. Write a program to enter the numbers till the user wants and at the end it should display the count of positive, negative and zeros entered.

```
import java.util.Scanner;
public class CountPosNegNumbers {
    public static void main(String[] args) {
        //program to enter the numbers till the user wants and at the end it should
        //display the count of positive, negative and zeros entered
        Scanner sc= new Scanner(System.in);
        char opt;int num;int pc=0,nc=0,zc=0;
        do {
        System.out.println("Enter the number");
        num =sc.nextInt();
        if(num>0)
        pc++;
        else if(num<0)
        nc++;
        else
        zc++;
        System.out.println("If u want to enter more type y");
```

```
opt=sc.next().charAt(0);
}
while(opt=='y');

System.out.println("the count of positive numbers is "+pc );
System.out.println("the count of negative numbers is "+nc );
System.out.println("the count of zeros numbers is "+zc );
}
}
```

12. Write a program to enter the numbers till the user wants and at the end the program should display the largest and smallest numbers entered.

```
import java.util.Scanner;
public class SmallestLargest {
    public static void main(String[] args) {
        //Program to enter the numbers till user wants and at the end of the program should
        //display the largest and smallest number entered.
        Scanner sc= new Scanner(System.in);
        char opt;int num;int
        //bulit in methods are used to find max and min values
        largest=Integer.MIN_VALUE,smallest=Integer.MAX_VALUE;
        do {
        System.out.println("Enter the number");
        num =sc.nextInt();
```

```
            if(num>largest)
            largest=num;
            else if(num<smallest)
            smallest=num;

            System.out.println("If u want to enter more type y");
            opt=sc.next().charAt(0);
            }
            while(opt=='y');

            System.out.println("the largest numbers is "+ largest);
            System.out.println("the negative numbers is "+smallest);

            }
}
```