

## ASSIGNMENT – 4

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

**Program:**

```
public class ForLoop
{
    public static void main(String[] args)
    {
        for(int i=1; i<=10; i++)
        {
            System.out.println(i);
        }
    }
}
```

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

**Program:**

```
public class NaturalNum
{
    public static void main(String[] args) {

        int i, j = 10, sum = 0;

        for(i = 1; i <=j; i++) {
            sum = sum + i; }

        System.out.println("Sum of the First 10 Natural
Numbers is = " + sum);
    }
}
```

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

**Program:**

```
import java.util.Scanner;

public class Multiplication {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter number:");

        int num= scanner.nextInt();
        for(int i=1; i <= 10; i++)
        {
            System.out.println(num+" * "+i+" = "+num*i);
        }
    }

}
```

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

**Program:**

```
import java.util.Scanner;

public class Factorial {

    public static void main(String args[]) {

        int num, i, f=1;

        System.out.println("Enter an integer to calculate its factorial");
```



```

Scanner scanner = new Scanner(System.in);
num = scanner.nextInt();

if (num < 0)
    System.out.println("Number should be non-
negative.");
else {
    for (i = 1; i <= num; i++)//1 1<=4
        f = f*i;
    System.out.println("Factorial of "+num+" is =
"+f);
}
}
}

```

**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)**

**Program:**

```

import java.util.Scanner;

public class Power {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter the number: ");
        int num1 = scanner.nextInt();

        System.out.println("Enter the power of that number:");
        int num2 = scanner.nextInt();

        int power = 1;
    }
}

```



```

        if (num2 >= 1) {
            for (int i = 1; i <= num2; i++) { // 1 1<=3
                power = power * num1;
            }
            System.out.println("'" + num1 + " power " + num2 + " is = "
                + power);
        }

    }

}

```

**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.**

**Program:**

```

import java.util.Scanner;
public class Reverse {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter number:");
        int num= scanner.nextInt();
        int reversed = 0;

        System.out.println("Original Number: " + num);

        while(num != 0) {

            int digit = num % 10;
            reversed = reversed * 10 + digit;

            num /= 10;

```



```

    }

    System.out.println("Reversed Number: " + reversed);
}
}

```

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

**Program:**

```

import java.util.Scanner;

public class Even_Odd {

    public static void main(String []args) {

        int sumOdd= 0;
        int sumEven= 0;
        Scanner keyboard= new Scanner(System.in);
        System.out.println("Enter integers other than Zero: ");
        int num=keyboard.nextInt();

        for (int i =num; i !=0; i=i)
        {
            if (i % 2 == 0) {
                sumEven = sumEven + i;
                System.out.println("Entered number is even: " +
sumEven);
            } else {
                sumOdd = sumOdd + i;
                System.out.println("Entered number is odd: " +
sumOdd);}
            i = keyboard.nextInt();
        }

    }
}

```



**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.**

**Program:**

```
import java.util.Scanner;

public class PrimeNumber {

    public static void main(String[] args) {

        Scanner scanner= new Scanner(System.in);
        System.out.println("Enter the number : ");
        int num=scanner.nextInt();
        for (int i = 2; i <= num / 2; ++i)
            if (num % i == 0) {
                System.out.println(num + " is a prime number.");
            }
        else {
            System.out.println(num + " is not a prime number.");
        }
    }
}
```

**9) Write a program to calculate HCF of Two given number**

**Program:**

```
import java.util.Scanner;

public class Hcf {

    public static void main(String args[]){
        int a, b, i, hcf = 0;

        Scanner sc = new Scanner(System.in);
        System.out.println("Enter first number :: ");
```



```

a = sc.nextInt();

System.out.println("Enter second number :: ");
b = sc.nextInt();

for(i = 1; i <= a || i <= b; i++) {
    if( a%i == 0 && b%i == 0 )
        hcf = i;
}

System.out.println("HCF of given two 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. )

**Program:**

```

import java.util.Scanner;
public class Addition {

    public static void main(String[] args) {

        System.out.println("1:Addition \n2: exit");
        Scanner scanner =new Scanner(System.in);
        System.out.println("enter the option");

        int option,sum,num1,num2;
        option=scanner.nextInt();
        char ch ;

        switch(option){

```



```

        case 1:
            System.out.println("Adding customer");
            do {
                System.out.println("Enter the first
number:");
                num1=scanner.nextInt();
                System.out.println("Enter the second
number:");
                num2=scanner.nextInt();
                sum = num1+num2;
                System.out.println("Sum:" +sum);

                System.out.println("Do you want to continue
with options press yes else press no");
                ch=scanner.next().charAt(0);
            }
            while( ch=='y' || ch=='Y');
            System.out.println("You have entered
wrong");

        case 2: System.exit(0);

        default: System.out.println("Enter only 1 , 2 ");
        break;

    }
}
}

```

**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.**

**Program:**

```
import java.util.Scanner;
```



```
public class Count {
    public static void main(String[] args)
    {
        Scanner scanner = new Scanner(System.in);

        int number, countPositive = 0, countNegative = 0, countZero
= 0;

        char ch;

        do
        {
            System.out.print("Enter the number ");
            number = scanner.nextInt();

            if(number > 0)
            {
                countPositive++;
            }
            else if(number < 0)
            {
                countNegative++;
            }
            else
            {
                countZero++;
            }

            System.out.print("Do you want to continue y/n? ");
            ch = scanner.next().charAt(0);

        }while(ch=='y' || ch == 'Y');

        System.out.println("Positive numbers: " + countPositive);
        System.out.println("Negative numbers: " + countNegative);
        System.out.println("Zero numbers: " + countZero);
    }
}
```



```
}  
}
```

**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.**

**Program:**

```
import java.util.Scanner;  
public class MinMax  
{  
    public static void main(String[] args)  
    {  
        Scanner scanner = new Scanner(System.in);  
  
        int number;  
        int max = Integer.MIN_VALUE;  
        int min = Integer.MAX_VALUE;  
  
        char ch;  
  
        do  
        {  
            System.out.print("Enter the number ");  
            number = scanner.nextInt();  
  
            if(number > max)  
            {  
                max = number;  
            }  
  
            if(number < min)  
            {  
                min = number;  
            }  
        }  
    }  
}
```



```
        System.out.print("Do you want to continue y/n? ");
        ch = scanner.next().charAt(0);

    }while(ch=='y' || ch == 'Y');

    System.out.println("Largest number: " + max);
    System.out.println("Smallest number: " + min);
}
}
```