Annexure No.: 1

AIM:- Write a program to display Hello World message in console window.

CODE:-

```
Import java.utill.*;
import java.lang.*;

public class main {
    public static void main (string[],args){
        System.out.println("Hello World!");
    }
}
```

OUTPUT:-

Hello World!

Annexure No.: 2

AIM:- Write a program to perform arithmetic and bitwise operations in a single source program without object creation.

CODE:-

```
import java.util.*;
import java.lang.*;
public class Arithmetic {
    public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter the value A:");
     int A = sc.nextInt();
    System.out.println("Enter the value B:");
     int B = sc.nextInt();
     int bitwise = a<<b;
     int total = a+b;
    System.out.println("Sum of two
                        vale:" +total);
    System.out.println("Bits
                        operation vale:" +bitwise;
```

33

Output:-

Enter value for A : 13

Enter value for B : 2

Sum of two value : 15

Bits operation value : 52

Annexure No.: 3

AIM:- Write a program arithmetic and bitwise operations by creating individual methods and classes than create an object to execute the individual methods of each operation.

CODE:-

```
import java.util.*;
Class Calculate {
    int A,B;
  Void getdata() {
  Scanner sc = new scanner(system.in);
  System.out.println("Enter value For A:");
   A = sc.nextInt();
  System.out println("Enter value For B:");
   B = sc.nextInt(); }

  Void display() {
      int bitwise = a<<b;
      int total = a+b;
  System.out.println("Sum of two value:" +total);
   System.out.println(" Bits operation val:" +bitwise);
```

```
public static void main(String[] args){
    Calculate obj = new calculate();
    obj.getData();
    obj.display();
}
```

Output:-

```
13
4
Enter value for A: 13
Enter value for B: 4
Sum of Two value: 17
Bits operation value: 208
```

Annexure No.: 4

AIM:- Write a Java program to display the employee details using Scanner class.

CODE:-

```
import java.util.*;
Class employee {
    String name;
    String address;
    Float salary;

void getdata() {
Scanner sc = new scanner (system.in);
System.out.println ("Enter your name:");
name = sc.nextLine();
System.out.println ("Enter your address:");
address = sc.nextLine();
System.out.println ("Enter your salary");
salary = sc.nextFloat(); }

void display() {
System.out.println ("your name:" +name);
System.out.println ("your address:" + address);
System.out.println (" Salary:" + salary);
}
```

```
Public Static void main (String[] args) {
    Employee obj = new employee ();
    obj.getData ();
    obj.display (); } }
```

Output:-

```
Enter your Name: SACHIN KUMAR
Enter your Address: BIHAR
Enter your Salary: 22000000

Your name: SACHIN KUMAR
Your Add name: BIHAR
Salary: 22000000
```

AIM:- Write a Java program that prints all real solutions to the quadratic eqn $ax^2+bx+c=0$. Read in a, b, c and use the Quadratic formula. If the discriminate b^2-4ac is negative, display a message stating that there are no real solutions?

CODE:-

```
import java.util.Scanner;
public class QuadraticEquationSolver {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter coefficient");
        System.out.println("a:");
        double a = sc.nextDouble();
        System.out.println("b:");
        double b = sc.nextDouble();
        System.out.println("c:");
        double c = sc.nextDouble();
        double discriminant = b*b - 4*a*c;
        if (discriminant > 0) {
```

```
double root1 = (-b + math.sqrt(discriminant))/(2*a);
double root2 = (-b - math.sqrt(discriminant))/(2*a);
System.out.println("two distinct real solution");
System.out.println("Root1 = " + root1);
System.out.println("Root2 = " + root2); }
else if (discriminant == 0) {
    double root = -b/(2*a);
System.out.println("one real solution");
System.out.println("Root = " + root); }
else {System.out.println("No real solution
                          exist:"); }}
```

Output:-

Enter Coefficient For $ax^2+bx+c=0$

a: 4

b: 5

c: 6

No real Solution exist.