Lab Record

of

OOP

(01CT0105)

Submitted to :-

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Assistant Professor
Dept of ICT
MU

Submitted by :-

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92200133030
ICT – 2TK1
2nd Semester

Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Subject:- OOP (01CT0105)	**Aim:-** Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer.	
Experiment No:- 1	**Date:-** 03-03-2023	**Enrolment No:- 92200133030**

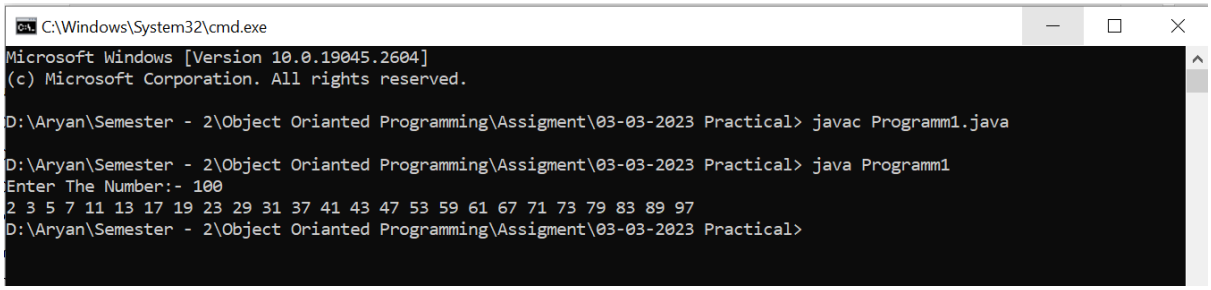
Experiment – 1

Objective :- Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer.

Code:-

```
import java.util.*;
public class Programm1
{
   public static void main(String args[])
   {
      Scanner sc = new Scanner (System.in);
      int n,j,i;
      System.out.print("Enter The Number:-");
      n = sc.nextInt();
      for(i=2;i<=n;i++){
         for(j=2;j<i;j++){
            if(i%j==0){
               break;
            }}
         if(i==j){
            System.out.print(i + " ");
         }}}}
```

Output:-



Marwadi University	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Subject:- OOP (01CT0105)	**Aim:-** Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer.	
Experiment No:- 2	**Date:-** 03-03-2023	**Enrolment No:- 92200133030**

Experiment – 2

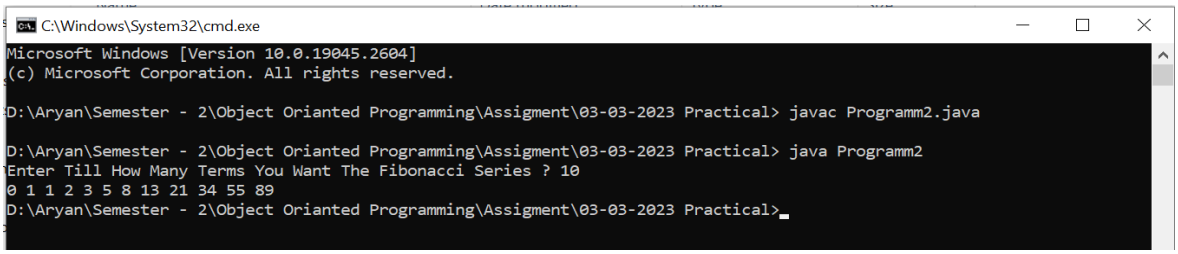
Objective :- Write a java program to find the Fibonacci series using non-recursive Functions.

Code:-

```
import java.util.*;

public class Programm2
{
   public static void main (String args[])
   {
      Scanner sc = new Scanner (System.in);
      int a=0,b=1,num;
      System.out.print("Enter Till How Many Terms You Want The Fibonacci Series ?");
      num = sc.nextInt();
      System.out.print(a + " " + b + " ");
      Fibonacci(num); }
   public static  void Fibonacci(int num)
   {
      int a=0,b=1,c;
      for(int i=1;i<=num;i++) {
         c = a + b;
         System.out.print(c + " ");
         a=b;
         b=c; } } }
```

Output:-



Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Subject:- OOP (01CT0105)	**Aim:-** Write a java program to find the Fibonacci series using recursive Functions.	
Experiment No:- 3	**Date:-** 03-03-2023	**Enrolment No:- 92200133030**

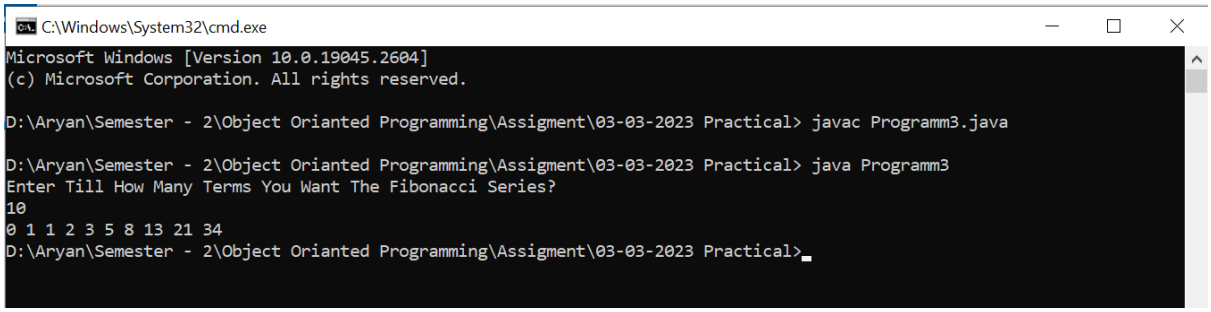
Experiment – 3

Objective :- Write a java program to find the Fibonacci series using recursive Functions.

Code:-

```
import java.util.* ;
public class Programm3
{public static void main(String args[]){
      Scanner sc =new Scanner (System.in);
      int num,a=0,b=1;
      System.out.println("Enter Till How Many Terms You Want The Fibonacci Series?");
      num = sc.nextInt();
      System.out.print(0 + " " + 1 + " ");
      int c = Fibonacci(a,b,num);
      System.out.print(c + " "); }
   public static int  Fibonacci(int x,int y,int num){
      num--;
      int z=x+y;
      if(num<=2) { return x + y ; }
      else {
         System.out.print(z + " ");
         return  Fibonacci(y,z,num) ; }}}
```

Output:-



Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Subject:- OOP (01CT0105)	**Aim:-** Write a java program to display the employee details using Scanner class.	
Experiment No:- 4	**Date:-** 10-03-2023	**Enrolment No:- 92200133030**

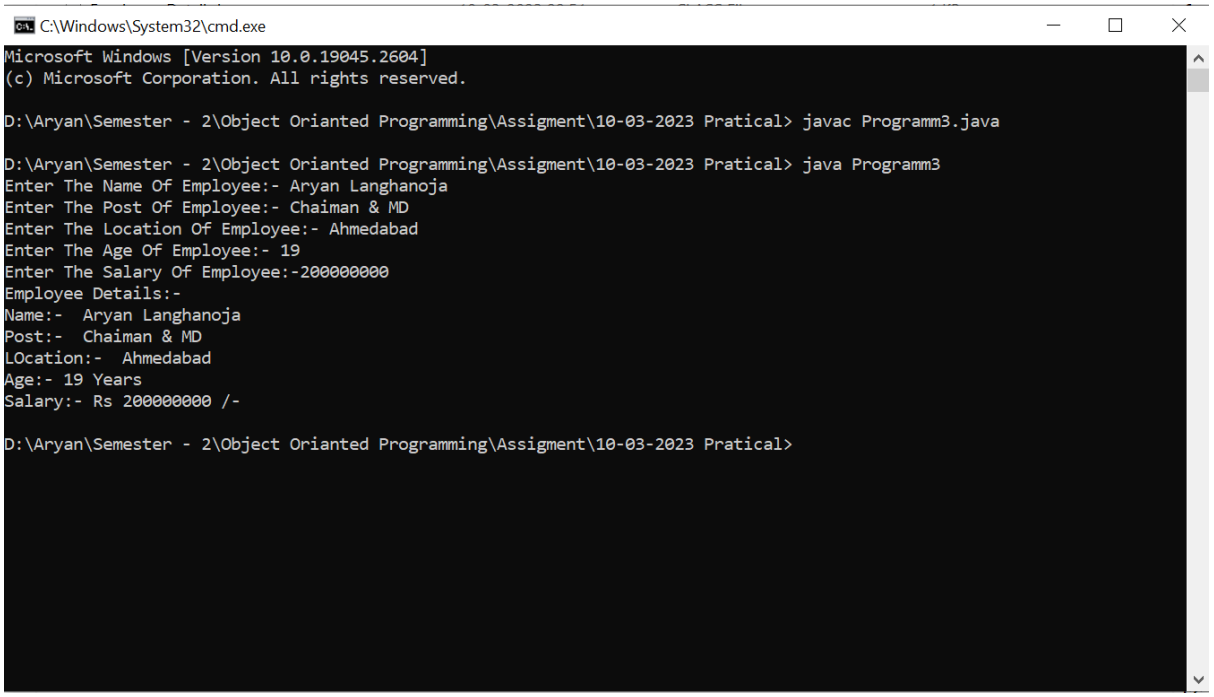
Experiment – 4

Objective :- Write a java program to display the employee details using Scanner class.

Code:-

```
import java.util.*;
class Employee_Detail
{ String Name;
   String Post;
   String Location;
   int age;
   int salary ;
   public static void Details(int n)
   { for(int i=0;i<n;i++){
         System.out.print("Enter The Name Of Employee-" + i+1 +":-");
         Employye[i].Name = sc.nextLine();
         System.out.print("Enter The Post Of Employee-" + i+1 +":-");
         Employye[i].Post = sc.nextLine();
         System.out.print("Enter The Location Of Employee-" + i+1 +":-");
         Employye[i].Location = sc.nextLine();
         System.out.print("Enter The Age Of Employee-" + i+! +":-");
         Employye1[i].age = sc.nextInt();
         System.out.print("Enter The Salary Of Employee-" + i+1 +":-");
         Employye[i].salary = sc.nextInt(); }}
   public static void print(int n) { for(int j=0;j<n;j++) {
System.out.println("Employee Details:-\nName:- "+ Employye[i].Name + "\nPost:- " +
Employye[i].Post + "\nLOcation:- " + Employye[i].Location+ "\nAge:- "+ Employye[i].age
+" Years" + "\nSalary:- Rs " + Employye[i].salary + " /-"); }}}
public class Programm1
{ public static void main(String args[]) {
Scanner sc = new Scanner(System.in);
      System.out.print("How Many Employee's etail You Want To Save:-");
      int num = sc.nextInt();
      Employee_Detail  Employye[] = new  Employee_Detail [num];
      Employee_Detail.Details(num);
      Employee_Detail.print(num); }}
```

Output:-


C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2604]
(c) Microsoft Corporation. All rights reserved.
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\10-03-2023 Pratical> javac Programm3.java
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\10-03-2023 Pratical> java Programm3
Enter The Name Of Employee:- Aryan Langhanoja
Enter The Post Of Employee:- Chaiman & MD
Enter The Location Of Employee:- Ahmedabad
Enter The Age Of Employee:- 19
Enter The Salary Of Employee:-200000000
Employee Details:-
Name:- Aryan Langhanoja
Post:- Chaiman & MD
LOcation:- Ahmedabad
Age:- 19 Years
Salary:- Rs 200000000 /-
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\10-03-2023 Pratical>

Marwadi University **Faculty of Technology** **Department of Information and Communication Technology**		
Subject:- OOP (01CT0105)	**Aim:-** Write a java program that checks whether a given string is palindrome or not.	
Experiment No:- 5	**Date:-** 10-03-2023	**Enrolment No:- 92200133030**

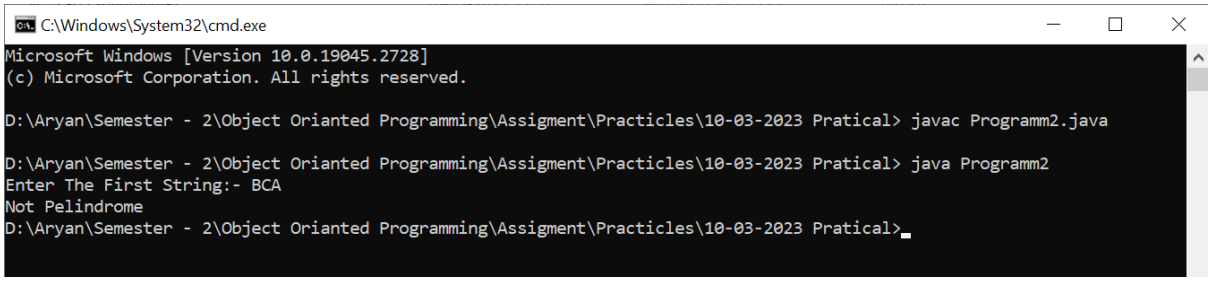
Experiment – 5

Objective :- Write a java program that checks whether a given string is palindrome or not.

Code:-

```
import java.util.*;
public class Programm2
{public static void main(String args[]){
        Scanner sc = new Scanner (System.in);
        String A,B;
        System.out.print("Enter The First String:-");
        A = sc.nextLine();
        B=new StringBuilder(A).reverse().toString();
        if(A.equals(B))
        System.out.print("Palindrome");
        else
        System.out.print("Not Pelindrome"); }}
```

Output:-



Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Subject:- OOP (01CT0105)	**Aim:-** Write a Java Program to implement all types of Inheritance.	
Experiment No:- 6	**Date:-** 07-04-2023	**Enrolment No:- 92200133030**

Experiment – 6

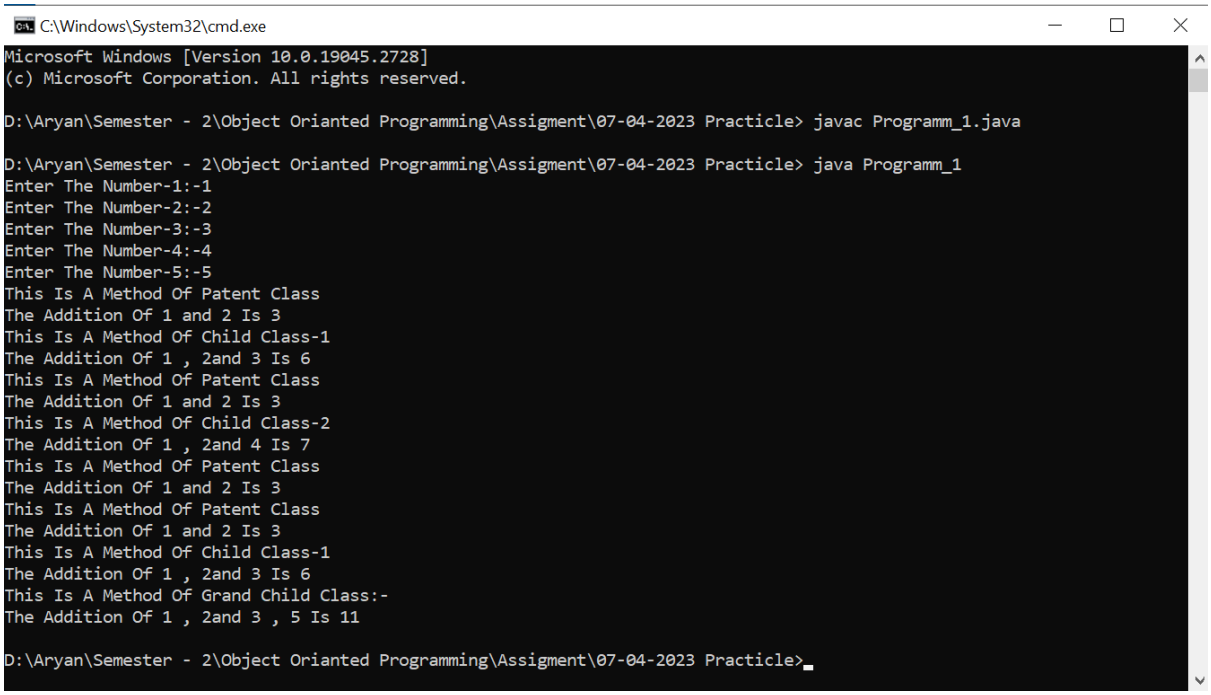
Objective :- Write a Java Program to implement all types of Inheritance.

Code:-

```
import java.util.*;
class Parent_Class {
   int num1;
   int num2;
   public void Add(int num1,int num2) {
      this.num1 = num1 ;
      this.num2 = num2 ;
      System.out.println("This Is A Method Of Patent Class");
      System.out.println("The Addition Of " + this.num1 + " and " + this.num2 + " Is " +
(this.num1 + this.num2)); }}
class Child_Class_1 extends  Parent_Class {
   int num3;
   public void Add(int num1,int num2,int num3) {
      this.num1 = num1;
      this.num2 = num2 ;
      this.num3 = num3 ;
      System.out.println("This Is A Method Of Child Class-1");
      System.out.println("The Addition Of " + this.num1 + " , " + this.num2 + "and " +
this.num3 + " Is " + (this.num1 + this.num2 + this.num3)); }}
class Child_Class_2 extends  Parent_Class {
   int num4;
   public void Add(int num1,int num2,int num4) {
      this.num1 = num1 ;
      this.num2 = num2 ;
      this.num4 = num4 ;
      System.out.println("This Is A Method Of Child Class-2");
      System.out.println("The Addition Of " + this.num1 + " , " + this.num2 + "and " +
this.num4 + " Is " + (this.num1 + this.num2 + this.num4)); }}
class Grand_Child extends Child_Class_1 {
   int num5;
   public void Add (int num1 , int num2 , int num3 , int num5) {
```

```
        System.out.println("This Is A Method Of Grand Child Class:-");
        System.out.println("The Addition Of " + this.num1 + " , " + this.num2 + "and " +
this.num3 + " , "+ this.num5 + "" + " Is " + (this.num1 + this.num2 + this.num3 +
this.num5)); }}
public class Programm_1
{ public static void main(String[] args) {
  Scanner sc = new Scanner(System.in) ;
        Parent_Class P = new Parent_Class();
        Child_Class_1 C1 = new Child_Class_1();
        Child_Class_2 C2 = new Child_Class_2() ;
        Grand_Child G = new Grand_Child();
        System.out.print("Enter The Number-1:-");
        P.num1 = sc.nextInt();
        System.out.print("Enter The Number-2:-");
        P.num2 = sc.nextInt() ;
        System.out.print("Enter The Number-3:-");
        C1.num3 = sc.nextInt() ;
        C1.num1 =  P.num1 ;
        C1.num2 =  P.num2 ;
        System.out.print("Enter The Number-4:-");
        C2.num4 = sc.nextInt() ;
        C2.num1 =  P.num1 ;
        C2.num2 =  P.num2 ;
        System.out.print("Enter The Number-5:-");
        G.num5 = sc.nextInt() ;
        G.num3 = C1.num3 ;
        G.num1 = P.num1 ;
        G.num2 = P.num2 ;
        P.Add(P.num1, P.num2);
        C1.Add(C1.num1, C1.num2, C1.num3);
        C1.Add(C1.num1, C1.num2);
        C2.Add(C2.num1, C2.num2, C2.num4);
        C2.Add(C2.num1, C2.num2);
        G.Add(G.num1, G.num2);
        G.Add(G.num1, G.num2, G.num3);
        G.Add(G.num1, G.num2, G.num3, G.num5);
        sc.close(); }}
```

Output:-


C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2728]
(c) Microsoft Corporation. All rights reserved.
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle> javac Programm_1.java
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle> java Programm_1
Enter The Number-1:-1
Enter The Number-2:-2
Enter The Number-3:-3
Enter The Number-4:-4
Enter The Number-5:-5
This Is A Method Of Patent Class
The Addition Of 1 and 2 Is 3
This Is A Method Of Child Class-1
The Addition Of 1 , 2and 3 Is 6
This Is A Method Of Patent Class
The Addition Of 1 and 2 Is 3
This Is A Method Of Child Class-2
The Addition Of 1 , 2and 4 Is 7
This Is A Method Of Patent Class
The Addition Of 1 and 2 Is 3
This Is A Method Of Patent Class
The Addition Of 1 and 2 Is 3
This Is A Method Of Child Class-1
The Addition Of 1 , 2and 3 Is 6
This Is A Method Of Grand Child Class:-
The Addition Of 1 , 2and 3 , 5 Is 11
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle>

Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Subject:- OOP (01CT0105)	**Aim:-** Write a Java Program to Implement Static method.	
Experiment No:- 7	**Date:-** 07-04-2023	**Enrolment No:- 92200133030**

Experiment – 7

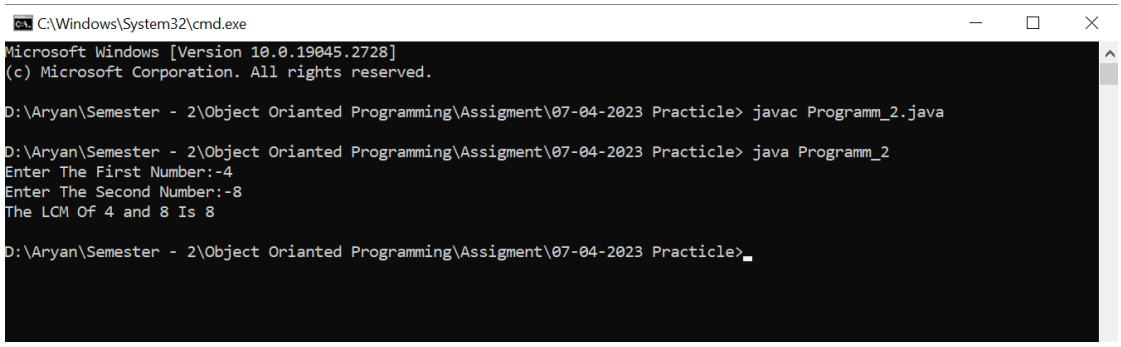
Objective :- Write a Java Program to Implement Static method.

Code:-

```
import java.util.*;

class LCM {
   public static int cal(int num1,int num2) {
      if(num2 == 0) { return num1 ; }
      else
      { return cal(num2,num1%num2) ; } }}
public class Programm_2
{    public static void main(String[] args) {
      Scanner sc = new Scanner(System.in) ;
     int num1 ,num2 ;
      System.out.print("Enter The First Number:-");
      num1 = sc.nextInt();
      System.out.print("Enter The Second Number:-");
      num2 = sc.nextInt() ;
      int Add = (num1 * num2) / (LCM.cal(num1,num2) ) ;
      System.out.println("The LCM Of " + num1 + " and " + num2 + " Is " + Add);
      sc.close();
   }
}
```

Output:-



Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Subject:- OOP (01CT0105)	**Aim:-** Write a Java Program to Implement Static method.	
Experiment No:- 8	**Date:-** 24-03-2023	**Enrolment No:- 92200133030**

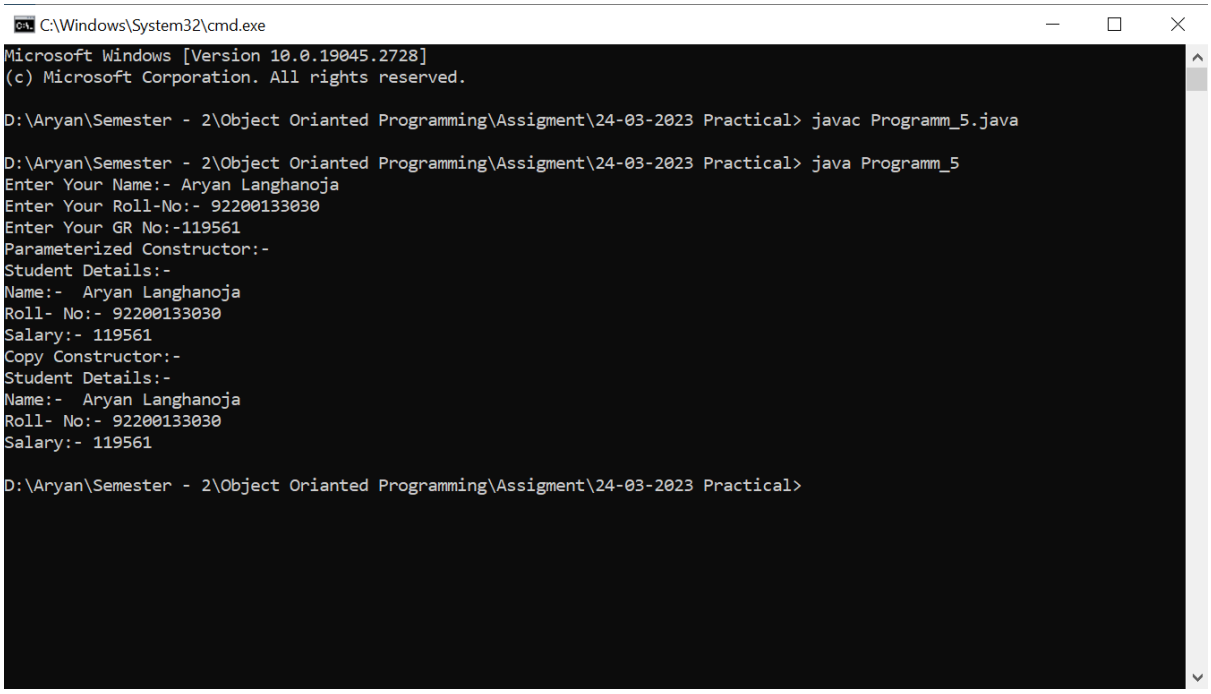
Experiment – 8

Objective :- Write a java program for Constructor overloading

Code:-

```
import java.util.*;
class Class {
   String Name;
   long Roll_No ;
   int GR_No;
   Class() { }
   Class(String Name, long Roll_No,int GR_No) {
      this.Name = Name;
      this.Roll_No = Roll_No ;
      this.GR_No = GR_No ;
      System.out.println("Parameterized Constructor:-");
      System.out.println("Student Details:-\n" + "Name:- " + this.Name + "\nRoll- No:-
"+this.Roll_No + "\nSalary:- " + this.GR_No); }
   Class(Class c1) {
      System.out.println("Copy Constructor:-");
      System.out.println("Student Details:-\n" + "Name:- " + c1.Name + "\nRoll- No:-
"+c1.Roll_No + "\nSalary:- " + c1.GR_No); } }
public class Programm_5 {
   public static void main(String args[]) {
      Scanner sc  =  new Scanner (System.in) ;
      Class c1 = new Class() ;
      System.out.print("Enter Your Name:-");
      c1.Name = sc.nextLine() ;
      System.out.print("Enter Your Roll-No:-");
      c1.Roll_No = sc.nextLong();
      System.out.print("Enter Your GR No:-");
      c1.GR_No = sc.nextInt();
      Class c2 = new Class(c1.Name,c1.Roll_No,c1.GR_No) ;
      Class c3 = new Class(c2); } }
```

Output:-


C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2728]
(c) Microsoft Corporation. All rights reserved.
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\24-03-2023 Practical> javac Programm_5.java
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\24-03-2023 Practical> java Programm_5
Enter Your Name:- Aryan Langhanoja
Enter Your Roll-No:- 92200133030
Enter Your GR No:-119561
Parameterized Constructor:-
Student Details:-
Name:- Aryan Langhanoja
Roll- No:- 92200133030
Salary:- 119561
Copy Constructor:-
Student Details:-
Name:- Aryan Langhanoja
Roll- No:- 92200133030
Salary:- 119561
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\24-03-2023 Practical>