EX.NO:2

DATE:

CONSTRUCTOR

Aim:

To write a program using constructor.

Algorithm:

Step 1: Start the process.

Step 2: Create a class constructor and object

Step 3: Get the user input for marks and name using a constructor

Step 4: The Constructor has the following parameters default constructor, parameterised Constructor.

Step 5: Using this () function to store the value and using all constructors

Step 6: In default constructor it does not passing any argument it will automatically take Argument and store it.

Step 7: In parameterized constructor it take mark argument given by the user to calculate The total mark of the student.

Step 8: stop the process.

CODING:

```
package experiment_1;
import java.util.*;
public class constructor {
  int m1,m2,m3,total;
  String name;
  char grade;
  public constructor(int m1, int m2, int m3, int total, String name, char grade)
{
        this.m1 = m1;
        this.m2 = m2;
        this.m3 = m3;
        this.total = total;
        this.name = name;
        this.grade = grade;
  }
  public constructor() {
        System.out.println("Default constructor is invoked\n");
  }
   public constructor(int m1, int m2, int m3, String name) {
        System.out.println("Paramaterised constructor is invoked");
        this.m1 = m1;
```

```
                this.m2 = m2;
                this.m3 = m3;
                this.name = name;
        }
        public void calcTotal()
        {
                this.total=this.m1+this.m2+this.m3;
        }
        private void calcGrade()
        {
                if(this.total>90)
                        this.grade='O';
                else if(this.total>80 && this.total<90)
                        this.grade='A';
                else if(this.grade>70 && this.total<80)
                        this.grade='B';
                else if(this.total<70)
                        this.grade='C';
        }
        protected void show()
        {
                System.out.println("Student name :"+this.name+"\n m1: "+this.m1+"
m2:"+this.m2+" m3:"+this.m3+" total"+this.total+" Grade :"+this.grade+"\n");
        }
      public static void main(String[] args)
        {
                constructor def=new constructor();
                Scanner scan=new Scanner(System.in);
                int m1=scan.nextInt();
                int m2=scan.nextInt();
                int m3=scan.nextInt();
                scan.nextLine();
                String name = scan.nextLine();
                constructor s1=new constructor(m1, m2, m3, name);
                s1.calcTotal();
                s1.calcGrade();
                s1.show();
                constructor s4=new constructor(m1, m2, m3,s1.total,
s1.name,s1.grade);
                s4.show();
        }
        }
```

OUTPUT:

```
Default constructor is invoked
34
45
68
DURGA
Paramaterised constructor is invoked
Student name :DURGA
 m1: 34 m2:45 m3:68 total147 Grade :O

Student name :DURGA
 m1: 34 m2:45 m3:68 total147 Grade :O
```

RESULT:

Thus the constructor program is executed successfully.