Experiment Number: 3 (Polymorphism)

Name	**Shreya Shetty**
UID	**2019140059**
Class	**TE IT**
Batch	**D**
Subject	**OOP Lab**

Aim: Write a menu-driven program to recruit an employee (depending on his performance in various rounds) in some software company using constructor overloading.

Selection Criteria for each post is given below:

1. Programmer (Minimum total of 80 marks):-

Rounds:-

1. Course Work
2. Aptitude Test
3. Technical Test
4. Interview

2. Team Leader (Minimum total of 85 marks):-

Rounds:-

1. Technical Test
2. Interview

3. Project Manager (Minimum score 90 marks)

Rounds:-

1. Interview

Create a class Posting and write 3 constructors to initialize the object and set the parameters and display the employee post according to selection criteria.

Data members:

- private int courseWork;
- private int AptTest;
- private int TechTest;
- private int interview;

Methods:

- public Posting(int courseWork, int AptTest, int TechTest,int interview)
- public Posting(int TechTest,int interview)
- public Posting(int interview)

Make use of 'this' keyword.

Program:

```
// Shreya Shetty TE IT Batch D 2019140059
import java.util.*;

public class Posting
{
    private int courseWork;
```

```
    private int AptTest;
    private int TechTest;
    private int interview;

    public Posting(int courseWork, int AptTest, int TechTest, int interview)
    {
        this.courseWork = courseWork;
        this.AptTest = AptTest;
        this.TechTest = TechTest;
        this.interview = interview;
    }

    public Posting(int TechTest, int interview)
    {
        this.TechTest = TechTest;
        this.interview = interview;
    }

    public Posting(int interview)
    {
        this.interview = interview;
    }

    // To check if employee is eligible for becoming programmer
    void checkProgrammer()
    {
        int total_marks = (this.courseWork + this.AptTest + this.TechTest +
this.interview) / 4;
        System.out.println("Your total marks (out of 100) are : " + total_marks);
        if (total_marks >= 80)
        {
            System.out.println("You are Eligible for becoming a Programmer!!!");
        }
        else
        {
            System.out.println("Sorry you are not eligible for becoming a
Programmer!!!");
        }
    }

    // To check if employee is eligible for becoming team leader
    void checkTeamLeader()
    {
        int total_marks = (this.TechTest + this.interview) / 2;
        System.out.println("Your total marks (out of 100) are : " + total_marks);
        if (total_marks >= 85)
        {
            System.out.println("You are Eligible for becoming a Team Leader!!!");

        }
        else
        {
            System.out.println("Sorry you are not eligible for becoming a Team
Leader!!!");
        }
    }

    // To check if employee eligible for becoming project manager
```

```
    void checkManager()
    {
        int total_marks = this.interview;
        if (total_marks >= 90)
        {
            System.out.println("You are Eligible for becoming the Project Manager!!!");
        }
        else
        {
            System.out.println("Sorry you are not eligible becomig the Project
Manager!!!");
        }
    }

    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int courseWork, AptTest, techTest, interview, choice = 1;
        while (choice != 0) {
            System.out.print("\nPostions to apply : \n\t1. Programmer \n\t2. Team Leader
\n\t3. Project Manager\nEnter your choice(0 to Exit) : ");
            choice = sc.nextInt();
            switch (choice)
            {
                case 1:
                    System.out.println("There are 4 rounds for Programmer Postion");
                    System.out.print("Enter Marks for Course Work (out of 100) : ");
                    courseWork = sc.nextInt();
                    System.out.print("Enter Marks for Aptitde Test (out of 100) : ");
                    AptTest = sc.nextInt();
                    System.out.print("Enter Marks for Tech Test (out of 100) : ");
                    techTest = sc.nextInt();
                    System.out.print("Enter Marks for Interview (out of 100) : ");
                    interview = sc.nextInt();
                    if (courseWork > 100 || AptTest > 100 || techTest > 100 || interview >
100)
                    {
                        System.out.println("Please Enter marks out of 100");
                        break;
                    }
                    Posting emp = new Posting(courseWork, AptTest, techTest, interview);
                    emp.checkProgrammer();
                    break;

                case 2:
                    System.out.println("There are 2 rounds for Team Leader Postion");
                    System.out.print("Enter Marks for Tech Test (out of 100) : ");
                    techTest = sc.nextInt();
                    System.out.print("Enter Marks for Interview (out of 100) : ");
                    interview = sc.nextInt();
                    if (techTest > 100 || interview > 100)
                    {
                        System.out.println("Please Enter marks out of 100");
                        break;
                    }
                    Posting emp1 = new Posting(techTest, interview);
                    emp1.checkTeamLeader();
                    break;
```

```
                case 3:
                    System.out.println("There is 1 round for Project Manager Postion");
                    System.out.print("Enter Marks for Interview (out of 100) : ");
                    interview = sc.nextInt();
                    if (interview > 100)
                    {
                        System.out.println("Please Enter marks out of 100");
                        break;
                    }
                    Posting emp2 = new Posting(interview);
                    emp2.checkManager();
                    break;
                case 0:
                    System.out.println("Exit selected");
                    break;
                default:
                    System.out.println("Invalid Position selected");
            }
        }
        sc.close();
    }
}
```

Output:

```
PS D:\PROJECT_AND_CODES\Java> cd "d:\PROJECT_AND_CODES\Java\" ; if ($?) { javac Posting.java } ; if ($?) { java Posting }

Postions to apply :
        1. Programmer
        2. Team Leader
        3. Project Manager
Enter your choice(0 to Exit) : 1
There are 4 rounds for Programmer Postion
Enter Marks for Course Work (out of 100) : 120
Enter Marks for Aptitde Test (out of 100) : 12
Enter Marks for Tech Test (out of 100) : 25
Enter Marks for Interview (out of 100) : 24
Please Enter marks out of 100

Postions to apply :
        1. Programmer
        2. Team Leader
        3. Project Manager
Enter your choice(0 to Exit) : 1
There are 4 rounds for Programmer Postion
Enter Marks for Course Work (out of 100) : 80
Enter Marks for Aptitde Test (out of 100) : 75
Enter Marks for Tech Test (out of 100) : 90
Enter Marks for Interview (out of 100) : 100
Your total marks (out of 100) are : 86
You are Eligible for becoming a Programmer!!!

Postions to apply :
        1. Programmer
        2. Team Leader
        3. Project Manager
Enter your choice(0 to Exit) : 2
There are 2 rounds for Team Leader Postion
Enter Marks for Tech Test (out of 100) : 35
Enter Marks for Interview (out of 100) : 45
Your total marks (out of 100) are : 40
Sorry you are not eligible for becoming a Team Leader!!!

Postions to apply :
        1. Programmer
        2. Team Leader
```

```
        3. Project Manager
 Enter your choice(0 to Exit) : 7
 Invalid Position selected

 Postions to apply :
        1. Programmer
        2. Team Leader
        3. Project Manager
 Enter your choice(0 to Exit) : 2
 There are 2 rounds for Team Leader Postion
 Enter Marks for Tech Test (out of 100) : 90
 Enter Marks for Interview (out of 100) : 85
 Your total marks (out of 100) are : 87
 You are Eligible for becoming a Team Leader!!!

 Postions to apply :
        1. Programmer
        2. Team Leader
        3. Project Manager
 Enter your choice(0 to Exit) : 37
 Invalid Position selected

 Postions to apply :
        1. Programmer
        2. Team Leader
        3. Project Manager
 Enter your choice(0 to Exit) : 3
 There is 1 round for Project Manager Postion
 Enter Marks for Interview (out of 100) : 39
 Sorry you are not eligible becomig the Project Manager!!!

 Postions to apply :
        1. Programmer
        2. Team Leader
        3. Project Manager
 Enter your choice(0 to Exit) : 3
 There is 1 round for Project Manager Postion
 Enter Marks for Interview (out of 100) : 95
 You are Eligible for becoming the Project Manager!!!

 Postions to apply :
       1. Programmer
       2. Team Leader
       3. Project Manager
Enter your choice(0 to Exit) : 0
Exit selected
PS D:\PROJECT_AND_CODES\Java>
```