

# Rajalakshmi Engineering College

Name: Chairam R  
Email: 241501036@rajalakshmi.edu.in  
Roll no: 241501036  
Phone: 9445121308  
Branch: REC  
Department: AI & ML - Section 4  
Batch: 2028  
Degree: B.E - AI & ML

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## 2024\_28\_III\_OOPS Using Java Lab

## 2028\_REC\_OOPS using Java\_Week 5\_Q5

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

### **Section 1 : Coding**

#### **1. Problem Statement**

Ram is working as a developer for BrightEdu Coaching Center, which wants to build a student fee management system.

Each student's enrollment has:

An Enrollment ID (integer) A Student Name (string) The Number of Subjects (integer)

The fee calculation rules are:

Registration Fee = 1000 units (flat for every student). Per Subject Fee = 800 units. If the student enrolls in more than 5 subjects, a 20% scholarship (discount) is applied on the total fee.

Ram has been asked to implement this system using:

A class with attributes for student details. A constructor to initialize student details. Setter methods to update details if needed. Getter methods to retrieve details. Objects of the class to represent student enrollments.

Finally, display each student's details and final fee.

#### ***Input Format***

The first line of input contains an integer N, representing the number of students.

For each student:

- The next line contains the Enrollment ID (integer).
- The following line contains the student's name (string).
- The next line contains the Number of subjects (integer).

#### ***Output Format***

For each student, print the details in the following format:

- Enrollment ID: <enrollment\_id>
- Student Name: <student\_name>
- Final Fee: <final\_fee> (rounded to one decimal place)

Refer to the sample output for formatting specifications.

#### ***Sample Test Case***

Input: 1

1234

Ravi Kumar

3

Output: Enrollment ID: 1234

Student Name: Ravi Kumar

Final Fee: 3400.0

#### ***Answer***

```
import java.util.*;
```

```
// Class to represent each student's enrollment and fee details
class Student {
```

```
private int enrollmentId;
private String studentName;
private int numSubjects;

// Constructor to initialize student details
public Student(int enrollmentId, String studentName, int numSubjects) {
    this.enrollmentId = enrollmentId;
    this.studentName = studentName;
    this.numSubjects = numSubjects;
}

// Setter methods (if updates are needed later)
public void setEnrollmentId(int enrollmentId) {
    this.enrollmentId = enrollmentId;
}

public void setStudentName(String studentName) {
    this.studentName = studentName;
}

public void setNumSubjects(int numSubjects) {
    this.numSubjects = numSubjects;
}

// Getter methods
public int getEnrollmentId() {
    return enrollmentId;
}

public String getStudentName() {
    return studentName;
}

public int getNumSubjects() {
    return numSubjects;
}

// Method to calculate the final fee
public double calculateFinalFee() {
    double registrationFee = 1000;
    double perSubjectFee = 800;
    double totalFee = registrationFee + (perSubjectFee * numSubjects);
}
```

```

        // Apply 20% scholarship if subjects > 5
        if (numSubjects > 5) {
            totalFee = totalFee * 0.8; // 20% discount
        }
        return totalFee;
    }
}

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = Integer.parseInt(sc.nextLine().trim());
        Student[] students = new Student[n];

        // Read details for each student
        for (int i = 0; i < n; i++) {
            int enrollmentId = Integer.parseInt(sc.nextLine().trim());
            String studentName = sc.nextLine().trim();
            int numSubjects = Integer.parseInt(sc.nextLine().trim());

            students[i] = new Student(enrollmentId, studentName, numSubjects);
        }

        // Display each student's details and final fee
        for (Student s : students) {
            System.out.println("Enrollment ID: " + s.getEnrollmentId());
            System.out.println("Student Name: " + s.getStudentName());
            System.out.println("Final Fee: " + String.format("%.1f",
                s.calculateFinalFee()));
        }
    }
}

```

**Status :** Correct

**Marks :** 10/10