Rajalakshmi Engineering College

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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.Scanner;
class Student
{
    private int enrollmentId;
```

```java
    private String studentName;
    private int numberOfSubjects;
    public Student(int enrollmentId, String studentName, int numberOfSubjects) {
        this.enrollmentId = enrollmentId;
        this.studentName = studentName;
        this.numberOfSubjects = numberOfSubjects;
    }
    public void setEnrollmentId(int enrollmentId)
    {
        this.enrollmentId = enrollmentId;
    }
    public void setStudentName(String studentName)
    {
        this.studentName = studentName;
    }
    public void setNumberOfSubjects(int numberOfSubjects)
    {
        this.numberOfSubjects = numberOfSubjects;
    }
    public int getEnrollmentId()
    {
        return enrollmentId;
    }
    public String getStudentName()
    {
        return studentName;
    }
    public int getNumberOfSubjects()
    {
        return numberOfSubjects;
    }
    public double calculateFee()
    {
        double registrationFee = 1000;
        double perSubjectFee = 800;
        double totalFee = registrationFee + (numberOfSubjects * perSubjectFee);
        if (numberOfSubjects > 5)
        {
            totalFee *= 0.8;
        }
        return Math.round(totalFee * 10.0) / 10.0;
    }
```

```java
    public void displayDetails()
    {
        System.out.println("Enrollment ID: " + getEnrollmentId());
        System.out.println("Student Name: " + getStudentName());
        System.out.println("Final Fee: " + calculateFee());
    }
}
class BrightEduFeeManager
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int n = Integer.parseInt(sc.nextLine());
        Student[] students = new Student[n];
        for (int i = 0; i < n; i++)
        {
            int enrollmentId = Integer.parseInt(sc.nextLine());
            String studentName = sc.nextLine();
            int numberOfSubjects = Integer.parseInt(sc.nextLine());
            students[i] = new Student(enrollmentId, studentName,
numberOfSubjects);
        }
        for (Student student : students)
        {
            student.displayDetails();
        }
        sc.close();
    }
}
```

Status : Correct   **Marks : 10/10**