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PROGRAM-2

Q) Develop a java program to create a class student with members usn, name, an array credits and an array marks. Include methods to accept and display details and a method to calculate sgpa of a student

→ import java.util.Scanner;

class student {

int subjectMarks;

int credits;

int grade;

void calculateGrade() {

if (subjectMarks >= 90) {

grade = 10;

else if (subjectMarks >= 80) {

grade = 9;

else if (subjectMarks >= 70) {

grade = 8;

else if (subjectMarks >= 60) {

grade = 7;

else if (subjectMarks >= 50) {

grade = 6;

else if (subjectMarks >= 40) {

grade = 5;

else {

grade = 0;

}

}

}

```

class student {
    String usn;
    String name;
    double sgpa;
    subject[] subjects = new subject[8];

    Scanner scanner = new Scanner(System.in);

    student() {
        for (int i = 0; i < 8; i++) {
            subjects[i] = new subject();
        }
    }

    void getStudentDetails() {
        System.out.print("Enter the usn:");
        usn = scanner.next();

        System.out.print("Enter the name:");
        name = scanner.next();

        void getMarks() {
            for (int i = 0; i < 8; i++) {
                System.out.print("Enter marks for subject " + (i+1) + ": ");
                subjects[i].subjectMarks[i] = scanner.nextInt();

                System.out.print("Enter credits for subject " + (i+1) + ": ");
                subjects[i].credits = scanner.nextInt();
            }
        }
    }
}
    
```



```

        subjects[i].calculateGrade();
    }
}

void computeSGPA() {
    double effectiveScore = 0;
    int totalCredits = 0;

    for (int i = 0; i < 8; i++) {
        effectiveScore += (subjects[i].
            grade * subjects[i].credits);
        totalCredits += subjects[i].credits;
    }

    SGPA = (totalCredits > 0) ? (effectiveScore /
        totalCredits) : 0;
}

void display() {
    System.out.println("USN: " + usn);
    System.out.println("Name: " + name);
    System.out.println("SGPA: " + SGPA);
}

// Driver code
public class StudDetails {
    public static void main (String[] args) {
        Student[] students = new Student[5];

        for (int j = 0; j < 3; j++) {
            System.out.println("Enter the
                details for student " + (j+1));
        }
    }
}

```

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        students[i][j] = new student();
        students[i][j].getStudentDetails();
        students[i][j].getMarks();
        students[i][j].computeSGPA();
    }
    for (int i=0; i<3; i++) {
        students[i].display();
    }
}
}

```

>> Output:

Enter the details for student 1:
 Enter the USN: CS001
 Enter the name: Aditya
 Enter marks for subject 1: 89
 Enter credits for subject 1: 4
 Enter marks for subject 2: 90
 Enter credits for subject 2: 4
 Enter marks for subject 3: 88
 Enter credits for subject 3: 5
 Enter marks for subject 4: 90
 Enter credits for subject 4: 3
 Enter marks for subject 5: 96
 Enter credits for subject 5: 3
 Enter marks for subject 6: 90
 Enter credits for subject 6: 1
 Enter marks for subject 7: 92
 Enter credits for subject 7: 1
 Enter marks for subject 8: 89
 Enter credits for subject 8: 1

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