

19/12/23

2) 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 details and a method to calculate SGPA of a student display

Formula for calculate SGPA \rightarrow for all sem
$$\text{SGPA} = \frac{\sum (\text{Credits} * \text{Grade points})}{\text{course credits}}$$

CGPA = " for all sem

grade = $(\text{marks}/10) + 1$

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```
import java.util.*;  
  
class Subject {  
    int SubjectMarks;  
    int credits;  
}  
  
class Student {  
    Subject subject[];  
    String name;  
    String USN;  
    double SGPA;  
    Scanner sc = new Scanner(System.in);  
}
```

```
Student() {
```

```
    int i;
```

```
    Subject = new Subject[1];
```

```
    for (i=0; i<1; i++) {
```

```
        Subject[i] = new Subject();
```

```
    }
```

```
void getStudentDetails() {
```

```
    System.out.println("Enter your name");
```

```
    name = sc.nextLine();
```

```
    System.out.println("USN");
```

```
    USN = sc.nextLine();
```

```
}
```



```

public void getmarks() {
    for (int i = 0; i < 8; i++) {
        System.out.println("Enter the marks for " + (i+1));
        Subject[i].SubjectMarks = Sc.nextInt();
        System.out.println("Enter the credits of " + (i+1) + " Subject:");
        Subject[i].Credits = Sc.nextInt();
        Subject[i].grade = (Subject[i].SubjectMarks/10) + 1;
        if (Subject[i].grade == 11) {
            Subject[i].grade = 10;
        }
        if (Subject[i].grade < 4) {
            Subject[i].grade = 0;
        }
    }
}

```

```

public void computeSGPA() {
    int effectiveScore = 0;
    int total = 0;
    float SGPA = 0;
    for (int i = 0; i < 8; i++) {
        effectiveScore += (Subject[i].Credits * Subject[i].grade);
        total += Subject[i].Credits;
    }
    System.out.println("effective score: " + effectiveScore);
    SGPA = effectiveScore / total;
    System.out.println("SGPA" + SGPA);
}

```


class javaMain {

public static void main(String args[]) {

Student s = new Student();

s.setStudentDetails();

s.getMarks();

s.computeSGPA();

System.out.println("name: " + s.name);

System.out.println("USN: " + s.USN);

}

Output:-

Enter the marks of 1 subject 80

Enter the credits of 1 subject 4

Enter the marks of 2 subject 88

Enter the credits of 2 subject 4

Enter the marks of 3 subject

Enter the credits of 3 subject

Enter the marks of 4 subject

Enter the credits of 4 subject

Enter the marks of 5 subject

Enter the credits of 5 subject

Enter the marks of 6 subject

Enter the credits of 6 subject

Enter the marks of 7 subject

Enter the credits of 7 subject

Enter the marks of 8 subject

Enter the credits of 8 subject

Effective SGR: 194

total credits: 23

SGPA: 80

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