

19/12/23

Qn: Develop a Java program to create a class Student with members usn, name, an array credits & an array marks. Include methods to accept & display details and a method to calculate SGPA of a student.

$$\rightarrow \text{SGPA} = \frac{\sum [\text{course credits} (\text{Grade points})]}{\sum [\text{course credits}]}$$

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2} Main.java

→ import java.util.*;

class Subject {

int submarks;

int credits;

int grade;

}

class Student {

Subject subject[];

String name;



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```
String USN;  
double SGPA;  
Scanner s;
```

```
Student() {  
    int i;  
    subject = new Subject[9];  
    for (i=0; i<9; i++)  
        subject[i] = new Subject();  
    s = new Scanner(System.in);  
}
```

```
void getStudentDetails()
```

```
{  
    System.out.println("Enter name & USN");  
    this.name = s.nextLine();  
    this.USN = s.nextLine();  
}
```

```
void getMarks()
```

```
{  
    int i;  
    for (i=0; i<8; i++)  
    {
```

```
        System.out.println("Enter the marks of " +  
                             (i+1) + " subject");
```

```
        subject[i].submarks = s.nextInt();
```

```
        System.out.println("Enter the credits of " + (i+1)  
                             + " subject");  
    }
```



```

        subject[i].credits = s.nextInt();
        subject[i].grade = (subject[i].submarks / 10) + 1;
        if (subject[i].grade > 10) {
            subject[i].grade = 10;
        }
        if (subject[i].grade < 4) {
            subject[i].grade = 0;
        }
    }
}

```

```

void compute SGPA () {
    int totalCredits = 0;
    int sum = 0;
    for (int i = 0; i < 8; i++) {
        sum = sum + subject[i].grade * subject[i].credits;
        totalCredits = totalCredits + subject[i].credits;
    }
    this.SGPA = (double) sum / totalCredits;
}
}

```

```

public class Main {
    public static void main (String args[]) {
        Student s1 = new Student ("");
        s1.getStudentDetails ();
        s1.getMarks ();
        s1.compute SGPA ();
        System.out.println ("Name : " + s1.name);
        System.out.println ("USN : " + s1.USN);
    }
}

```



```
} system.out.println ("SGPA : " + SGPA);  
}
```

→ Output :

Enter name and usn

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Enter marks of 1 subject : 88

Enter credits of 1 subject : 4

Enter marks of 2 subject : 94

Enter credits of 2 subject : 4

Enter marks of 3 subject : 90

Enter credits of 3 subject : 3

Enter marks of 4 subject : 93

Enter credits of 4 subject : 3

Enter marks of 5 subject : 92

Enter credits of 5 subject : 3

Enter marks of 6 subject : 99

Enter credits of 6 subject : 1

Enter marks of 7 subject : 87

Enter credits of 7 subject : 1

Enter ~~marks~~ of 8 subject : 91

Enter credits of 8 subject : 1

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SGPA : 9.75

19/12/2023