

A-12-23

classmate

Date

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19-12-23

1. Develop a Java program to create class Student with members USN, Name, an array credits & an array marks. Include methods to accept & display details & a method to calculate SGPA of a student.

$$SGPA = \frac{\sum [(Course Credits)(Grade Points)]}{\sum [Course Credits]}$$

considering all courses registered in that semester (including those with F Grade).

$$CGPA = \frac{\sum [(Course Credits)(Grade Points)]}{\sum [Course Credits]}$$

```

-> public class Subject
{
    int subjectmarks;
    int credits;
    int grade;
}

import java.util.Scanner;
public class Student
{
    Subject sub[];
    String name;
    String usn;
    double sgpa;
    Scanner scan = new Scanner(System.in);
    Student()
    {
        sub = new Subject[8];
        for(i=0; i<8; i++)
            sub[i] = new Subject();
        scan = new Scanner(System.in);
    }
}
    
```



```
}  
public void getStudentDetails()  
{  
    System.out.println("Enter name:");  
    name = scan.nextLine();  
    System.out.println("Enter USN:");  
    usn = scan.nextLine();  
}  
public void getMarks;  
{  
    for(int i=0; i<8; i++)  
    {  
        System.out.println("Enter Subject " + (i+1) + " marks:");  
        sub[i].subjectmarks = scan.nextInt();  
        System.out.println("Enter Subject " + (i+1) + " credits:");  
        sub[i].subjectcredits = scan.nextInt();  
        if (sub[i].subjectmarks == 100)  
            sub[i].grade = 10;  
        else if (sub[i].subjectmarks < 40)  
            sub[i].grade = 0;  
        else  
            sub[i].grade = (sub[i].subjectmarks / 10) + 1;  
    }  
}  
  
public void computeSGPA()  
{  
    int sumc = 0;  
    double prodc = 0;  
    for(int i=0; i<8; i++)  
    {  
        sumc = sumc + sub[i].credits;  
        prodc = prodc + (sub[i].grade * sub[i].credits);  
    }  
}
```



```
sgpa = prod/sum;
}
}

public class SGPA
{
    public static void main(String args[])
    {
        Student s1 = new Student();
        s1.getStudentDetails();
        s1.getMarks();
        s1.computeSGPA();
        System.out.println("Name:" + s1.name);
        System.out.println("USN:" + s1.usn);
        System.out.println("S. no \t Subject \t Marks \t Credits \t Grade");
        for(int i = 0; i < 8; i++)
        {
            System.out.println((i+1) + "\t" + s1.sub[i].subjectmarks +
                "\t" + s1.sub[i].credits + "\t" + s1.sub[i].grade);
        }
        System.out.println("SGPA=" + s1.sgpa);
        System.out.println("*****");
        System.out.println("Srinidhi.R - 1BM22CS2R");
    }
}
```

OUTPUT:

Enter name:

Simhana R - TBH22

Enter USN:

IBM22CS278

Enter Subject 1 marks:

98

Enter Subject 1 credits:

4

Enter Subject 2 marks:

93

Enter Subject 2 credits:

4

Enter Subject 3 marks:

89

Enter Subject 3 credits:

3

Enter Subject 4 marks:

91

Enter Subject 4 credits:

3

Enter Subject 5 marks:

93

Enter Subject 5 credits:

3

Enter Subject 6 marks:

96

Enter Subject 6 credits:

3

Enter Subject 7 marks:

93

Enter Subject 7 credits:

1

Enter Subject 8 marks:

94



Enter Subject & credits:

1.

Name: Srinchara . R .

USN : 1BM22CS278

S.No	Subject	<del>Credits</del>	Credits	Grade
1	98	4		10
2	93	4		10
3	89	3		9
4	91	3		10
5	93	3		10
6	96	3		10
7	93	1		10
8	94	1		10

SGPA = 9.8636363

\*\*\*\*\*

Srinchara . R - 1BM22CS278 .