

A19-12-23

Date 19/12/23
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- 7) 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 & a method to calculate SGPA of students.

SGPA

CGPA

$$SGPA = \frac{\sum [(Course\ Credits) (grade\ points)]}{\sum [(Course\ Credits)]}$$

considering all courses registered in the semester

$$CGPA = \frac{\sum [(Course\ Credits) (grade\ points)]}{\sum [(Course\ Credits)]}$$

```

- import java.util.Scanner;
class Subject {
    int SubjectMarks;
    int Credits;
    int grade;
}
class Student
{
    String name;
    String usn;
    double SGPA;
    Scanner s;
    Subject[] Subjects;

```

Student()

{

int i;

Subject = new Subject[8];

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

Subject[i] = new Subject();

}

s = new Scanner(System.in);

}

}

void getStudentDetails()

{

System.out.print("Enter the Name:");

name = s.next();

System.out.print("Enter the USN:");

usn = s.next();

}

void getMarks()

{

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

System.out.print("Enter the marks for students " + (i+1) + " :");

Subject[i].SubjectMarks = s.nextInt();

System.out.print("Enter the credits for students " + (i+1) + " :");

Subject[i].Credits = s.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;

}

}


```
void computeSGPA()
```

```
{
```

```
    int effectiveScore = 0;
```

```
    int totalCredits = 0;
```

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

```
        effectiveScore += (subject[i].grade * subject[i].credits);
```

```
    }
```

```
}
```

```
class Main {
```

```
    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("SGPA: " + s1.SGPA);
```

```
    }
```

```
}
```

Enter your name : Shilpa K.M

Enter your usn : 2023BM302617

Enter marks for subject 1 : 98

Enter your credits for subject 1 : 4

(Enter your credits for subject 97)

Enter marks for subject 2 : 97

Enter your credits for subject 2 : 4

Enter marks for subject 3 : 90

Enter your credits for subject 3 : 2

Enter marks for subject 4 : 9

Enter your credits for subject 4 : 3

Enter marks for subject 5 : 9

Enter your credits for subject 5 : 3

Enter marks for subject 6 : 81

Enter your credits for subject 6 : 2

Enter your marks for subject 7 : 99

Enter your credits for ~~slate~~ subject 7 : 1

Enter marks for subject 8 : 90

Enter your credits for subject 8 : 1

Name : Shilpa

~~EN~~ USN : 2023BM302617