

SGPA Lab-2

```
import java.util.Scanner;
```

```
class Subject
```

```
{  
    int subject Marks;  
    int credits;  
    String grade;  
}
```

```
class Student
```

```
{  
    String name;  
    String usn;  
    double SGPA;  
    Scanner S;  
    Subject Subject[];
```

```
    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 your name:");  
    name = S.nextLine();  
    System.out.println("enter your usn:");  
    usn = S.nextLine();
```

```
}
```

void getMarks ()

{

int i;

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

{

System.out.println ("enter the marks and credits for course "+i+": ");

System.out.println ("marks:");

int marks = S.nextInt();

System.out.println ("credits:");

int credit = S.nextInt();

Subject [i]. Subject Marks = marks;

Subject [i]. credits = credit;

if (marks >= 90 && marks <= 100)

{

subject [i]. grade = "O";

}

else if (marks >= 80 && marks < 90)

{

subject [i]. grade = "A+";

}

else if (marks >= 70 && marks < 80)

{

subject [i]. grade = "A";

}

else if (marks >= 60 && marks < 70)

{

subject [i]. grade = "B+";

}

else if (marks >= 50 && marks < 60)

{

```

        subject[i].grade = "B";
    }
    else if (marks >= 40 && marks < 50)
    {
        subject[i].grade = "C";
    }
    else if (marks >= 0 && marks < 40)
    {
        subject[i].grade = "F";
    }
}
}

```

void compute SGPA()

```

{
    int i;
    double sgpa;
    double totalCredits = 0;
    double totalGradePoints = 0;
    for (i = 0; i < 8; i++)
    {
        totalCredits += subject[i].Credits;
        switch (subject[i].grade)
        {
            case "O": totalGradePoints += 10 * subject[i].Credits;
                       break;
            case "A+": totalGradePoints += 9 * subject[i].Credits;
                       break;
            case "A": totalGradePoints += 8 * subject[i].Credits;
                      break;
            case "B+": totalGradePoints += 7 * subject[i].Credits;
                      break;

```


Case "B": total grade points += 6 * Subject [i]. Credits;
break;

Case "C": total grade points += 5 * Subject [i]. Credits;
break;

Case "F": total grade points += 0 * Subject [i]. Credits;
break;

}

}

sgpa = total . grade points / total Credits ;

System.out.println ("The sgpa is : " + sgpa);

}

}

class sgpa

{

public static void main (String args[])

{

Student S1 = new Student;

S1.get Student Details ();

S1.get Marks ();

S1.compute SGPA ();

}

}

Output :-

Enter your name:

Raventh K

Enter your USN

16M22CS220

Enter the marks and credit for course 0.

marks :

95

Credit :

4

Enter the marks and credit for course 1 :

marks :

92

Credit :

4

Enter the marks and credit for course 2 :

marks :

80

Credit :

1

Enter the marks and credit for course 3 :

marks :

95 ✓

Credit :

1

Enter the marks for course 4 :

marks :

91

Credits

3

Enter the marks and course 5 :

Mark : 91

Credits = 1

enter the marks and credits for course 7:

Mark: 90

Credits:

1

the sgpa is : 10.000

✓
19.12.22