

### PROGRAM Q :

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 display details and a method to calculate SGPA of a student.

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

```
class Subject
```

```
{ int subjectMarks;
```

```
int credits;
```

```
char grade;
```

```
Subject()
```

```
{
```

```
    this.subjectMarks = 0;
```

```
    this.credits = 0;
```

```
    this.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 get Student Details ()
{
    System.out.print ("Roshni P IBM22CS223");
    System.out.print ("Enter student Name: ");
    name = s.nextLine ();
    System.out.print ("Enter student USN: ");
    usn = s.nextLine ();
}
void get Marks ()
{
    for (int i = 0; i < 8; i++)
    {
        System.out.println ("Enter marks and credits for subject " + (i+1) + ":" );
        System.out.print ("Marks: ");
        int marks = s.nextInt ();
        System.out.print ("Credits: ");
        int credit = s.nextInt ();
        Subject [i].subjectMarks = marks;
        Subject [i].credits = credit;
    }
}
if (marks > 90)
{
    subject [i].grade = 'S';
}
```

else if (marks >= 80)

{

    subject[i].grade = 'A';

}

else if (marks >= 70)

{

    subject[i].grade = 'B';

}

else if (marks >= 60)

{

    subject[i].grade = 'C';

}

else if (marks >= 50)

{

    subject[i].grade = 'D';

}

else if (marks >= 40)

{

    subject[i].grade = 'E';

}

else

{

    subject[i].grade = 'F';

}

}

void computeSGPA()

{

    double totalCredits = 0;

    double totalGradePoints = 0;

    for (int i = 0; i < 8; i++)

{

total Credits += subject[i].credits;

switch (subject[i].grade)

{

case 'S':

    totalGradePoints += 10 \* subject[i].credits;  
    break;

case 'A':

    totalGradePoints += 9 \* subject[i].credits;  
    break;

case 'B':

    totalGradePoints += 8 \* subject[i].credits;  
    break;

case 'C':

    totalGradePoints += 7 \* subject[i].credits;  
    break;

case 'D':

    totalGradePoints += 6 \* subject[i].credits;  
    break;

case 'E':

    totalGradePoints += 5 \* subject[i].credits;  
    break;

default:

    totalGradePoints += 0;  
    break;

}

}

SOPA = totalGradePoints / totalCredits;

}

void displayResult()

{

System.out.println ("In Student Name : " + name);

System.out.println ("Student USN : " + usn);

System.out.println ("SGPA : " + SGPA);

3  
5  
9

10. Method

8. Classes

public class Sgpa {

public static void main (String [] args)

2

5 : files

Student s1 = new Student ();

s1.getStudentDetails();

s1.getMarks();

s1.computeSGPA();

s1.displayResult();

3

2

Output :-

Enter your name :

Roshni

Enter your usn :

1BME22CS223

Enter the marks and credits for course 0:

Marks : 90

Credits : 4

Enter the marks and credits for course 1:

Marks :

91

Credits :

4

Enter the marks and credits for course 2

Marks :

99

credits : 3

8

Enter the marks & credits for course 3:

Marks: 91

credits: 3

Enter the marks & credits for course 4:

Marks: 93

Credit : 2

The SGPA is : 10.00000

## PROGRAM 1

Class Modulus S

```

public static void main (String args [])
{
    int x = 42;
    double y = 42.25;
    byte a = 64, b, b1;
    int i;
    i = a << 2;
    b1 = (a << 2);
    b = (byte) (a << 2);
    i = a << 2;
    System.out.println ("Roshni P IBM22CS223");
    System.out.println ("Original value of a " + a);
    System.out.println ("i and b: " + i + " " + b);
    int a1 = -1;
    a1 = a1 >> 24;
    System.out.println ("value of a1: " + a1);

    a1 = -1
    a1 = a1 >>> 24;
    System.out.println ("value of a1: " + a1);
}

```

Output..

Roshni P , IBM22CS223

Original value of a: 64

i and b: 2560

value of a1: -1

value of a1 : 255

J.C.S  
19.12.12