Date: 16/10/2024

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.

→

```java
import java.util.*;
class Stud_det {
    int m[] = new int[8];
    int c[] = new int[8];
    int p[] = new int[8];
    int g, sum;
    String name, usn;
    double sgpa;
    Scanner s = new Scanner(System.in);

    void getdetails() {
        System.out.println("Enter name:");
        name = s.next();
        System.out.println("Enter usn:");
        usn = s.next();
        for(int i=0; i<8; i++)
        {
            System.out.println("Enter marks of subject:"+ (i+1));
            m[i] = s.nextInt();
            System.out.println("Enter credits for subject: "+ (i+1));
            c[i] = s.nextInt();
        }
    }

    void gradepoint() {
        for(int i=0; i<8; i++)
        {   if(m[i]>=90 && m[i]<=100)
                p[i] = 10;
            else if(m[i]>=80 && m[i]<90)
                p[i] = 9;
            else if(m[i]>=70 && m[i]<80)
                p[i] = 8;
            else if(m[i]>=60 && m[i]<70)
                p[i] = 7;
```

```java
        else if ( m[i] >= 50    ff m[i] < 60)
            p[i] = 6;
        else if  (m[i] >= 40  ff m[i] < 50)
            p[i] = 5;
        else
            p[i] = 0;
    }
}
void calculate ()
{
    for ( int i = 0; i < 8; i++)
    {
        g += c[i] * p[i];
        sum += c[i];
    }
    sgpa = g / sum ;
}
void display()
{
    System.out.println ( "Name : " + name);
    System.out.println ( "USN " + usn);
    System.out.println ( "SGPA = " + sgpa);
}
}
class Student {
    public static void main (string a[]) {
        Stud_det s1[] = new Stud_det [3];
        for ( int i = 0 ; i < 3; i++)
        {
            s1[i] = new. Stud_det ();
        }
        for ( int i = 0; i < 3 ; i++)
        {
            s1[i]. getdetails ();
            s1[i]. gradepoint ();
            s1[i] . calculate ();
        }
        for ( int i = 0; i < 3; i++)
        {
            System.out.println ("Student - " + (i+1));
            s1[i]. display ();
        }
    }
}
```

Output

Enter details of student 1

Enter name:
aachay

Enter usn:
1BM23CS022

Enter marks of subject 1
95
Enter credits for subject 1
4
Enter marks of subject: 2
96
Enter credits for subject: 2
4
Enter marks of subject: 3
92
Enter credits for subject: 3
3
Enter marks of subject: 4
86
Enter credits for subject: 4
3
Enter marks of subject: 5
84
Enter credits for subject: 5
3
Enter marks of subject 6
84
Enter credits for subject: 6
1
Enter marks of subject: 7
96
Enter credits for subject: 7
1
Enter marks of subject: 8
96
Enter credits for subject: 8
1

Enter details of student: 2
Enter name:
Arpith
Enter usn
1BM23CS053
Enter marks of subject: 1
98
Enter credits for subject 1
4
Enter marks of subject 2
70
Enter credits for subject 2
4

Enter marks of subject 3
84
Enter credits for subject 3
3
Enter marks of subject 4
45
Enter credits for subject 4
3
Enter marks of subject 5
54
Enter credits for subject 5
3
Enter marks of subject 6
84
Enter credits for subject 6
1
Enter marks of subject 7
92
Enter credits for subject 7
1
Enter marks of subject 8
82
Enter credits for subject 8
1

Enter details of student 3
Enter name:
Sujan
Enter usn:
1BM23CS347
Enter marks of subject 1
84
Enter credits for subject 1
4
Enter marks of subject 2
88
Enter credits for subject 2
4
Enter marks of subject 3
74
Enter credits for subject 3
3
Enter marks of subject 4
68
Enter credits for subject 4
3
Enter marks of subject 5
81
Enter credits for subject 5
3

Enter marks of subject:6
80
Enter credits for subject:6
1
Enter marks of subject:7
97
Enter credits for subject:7
1
Enter marks of subject:8
96
Enter credits of subject:8
1

Student - 1
Name : Akshay
USN : 1BM23CS022
SGPA = 9.65
Student - 2
Name : Aspith
USN : 1BM23CS053
SGPA = 6.55
Student 3
Name : Sujan
USN - 1BM23CS317
SGPA = 8.65

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