

Program 2

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.

```
else if (d < 0) {
    System.out.println("roots are rational");
} else {
    System.out.println("INVALID INPUT !!!");
}
}
o/p:
Enter a coefficient a:
1
Enter a coefficient b:
-2
Enter a coefficient c:
3
No real solutions
② 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 Student {
    String usn;
    String name;
    int[] credits;
    int[] marks;
    Student(int numberOfSubjects);
    Student(int numberOfSubjects) {
        this.numberOfSubjects = numberOfSubjects;
        credits = new int[numberOfSubjects];
        marks = new int[numberOfSubjects];
    }
    void acceptDetails() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter usn:");
        usn = sc.nextLine();
        System.out.println("Enter name:");
        name = sc.nextLine();
        for (int i = 0; i < numberOfSubjects; i++) {
            System.out.print("Enter credits " + (i+1) + ": ");
```

```

Credits[i] = sc.nextInt();
System.out.print("Enter marks for subject " + (i+1) + ":");
marks[i] = sc.nextInt();
}
}

void displayDetails(){
    System.out.println("\nStudent Details:");
    System.out.println("USN: " + usn);
    System.out.println("NAME: " + name);
    for(int i=0; i < numberofSubjects; i++){
        S.o.pln("Subject " + (i+1) + " - Credits: " + credits[i] + " Marks: " +
            mark[i]);
    }
    S.o.pln("SGPA: " + calculateSGPA());
}

double calculateSGPA(){
    double totalWeightedMarks = 0;
    int totalCredits = 0;
    for(int i=0; i < numberofSubjects; i++){
        totalWeightedMarks += marks[i] * credits[i];
        totalCredits += credits[i];
    }
    if(totalCredits == 0) return 0;
    return totalWeightedMarks / totalCredits;
}

class StudentApp{
    public static void main(String[] ss){
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the number of subjects");
        int numSubjects = sc.nextInt();
        Student student = new Student(numSubjects);
        student.acceptDetails();
        student.displayDetails();
    }
}

```

Multiple Student

o/p: enter the number of subjects: 2

Enter USN: ab12

Enter NAME: anitha

Enter credits: 1

Enter marks: 1

Enter credits: 2

Enter marks: 2

STUDENT DETAILS:

USN: ab12

NAME: anitha

Subject 1 credits: 21 Marks: 89

Subject 2 credits: 22 Marks: 90

SGPA: 89.51162790697674

```
import java.util.Scanner;

class Student{

String usn;

String name;

int[] credits;

int[] marks;

int numberOfSubjects;

Student(int numberOfSubjects){

this.numberOfSubjects=numberOfSubjects;

credits=new int[numberOfSubjects];

marks=new int[numberOfSubjects];

}

void acceptDetails(){

Scanner sc=new Scanner(System.in);

System.out.println("ENTER USN:");

usn=sc.nextLine();

System.out.println("ENTER NAME:");

name=sc.nextLine();

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

System.out.println("ENTER CREDITS:"+(i+1));

credits[i]=sc.nextInt();

System.out.println("ENTER MARKS:"+(i+1));

marks[i]=sc.nextInt();

}}

void displayDetails(){

System.out.println("\n STUDENT DETAILS:");

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

System.out.println("NAME:"+name);

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

System.out.println("SUBJECT"+(i+1)+" "+"CREDITS:"+credits[i]+"

"+"MARKS:"+marks[i]);}
```

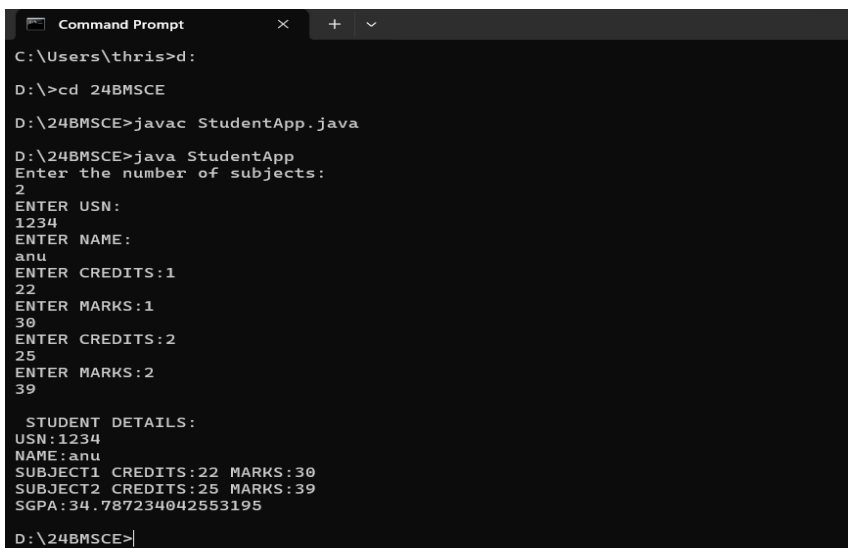
```

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

double calculateSGPA(){
double totalWeightedMarks=0;
int totalCredits=0;
for(int i=0;i<numberOfSubjects;i++){
totalWeightedMarks+=marks[i]*credits[i];
totalCredits+=credits[i];}
if(totalCredits==0)
return 0;
return totalWeightedMarks/totalCredits;}
}

class StudentApp{
public static void main(String ss[]){
Scanner sc=new Scanner(System.in);
System.out.println("Enter the number of subjects:");
int numSubjects=sc.nextInt();
Student student=new Student(numSubjects);
student.acceptDetails();
student.displayDetails();
}
}

```



```

Command Prompt
C:\Users\thris>d:
D:\>cd 24BMSCE
D:\24BMSCE>javac StudentApp.java
D:\24BMSCE>java StudentApp
Enter the number of subjects:
2
ENTER USN:
1234
ENTER NAME:
anu
ENTER CREDITS:1
22
ENTER MARKS:1
30
ENTER CREDITS:2
25
ENTER MARKS:2
39

STUDENT DETAILS:
USN:1234
NAME:anu
SUBJECT1 CREDITS:22 MARKS:30
SUBJECT2 CREDITS:25 MARKS:39
SGPA:34.787234042553195
D:\24BMSCE>

```