Week-3
Lab-2

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1BM19CS155

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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.

Algorithm ⇒

1. Input usn, name, no. of subjects, credits and marks of subjects.
2. If marks > 100 or marks < 0 or credits < 0 or credits > 5
   then enter that subject marks and credits again.
3. Display details of student and marks & credits of subjects
4. Calc sgpa as per no. of subjects.
5. Display sgpa
6. End of algorithm

Sol

```
import java.util.*;
class Student {
    String name;
    String usn;
    int ac[];
    int am[];
```

```
int n;
double sgpa;
void getdetails (){
    Scanner in = new Scanner(System.in);
    System.out.println("Enter name & USN:");
    name = in.next();
    usn = in.next();
    System.out.println("Enter no. of subjects:");
    n = in.nextInt();
    System.out.println("Enter subject credits
    and subject marks :");
    ac = new int[n];
    am = new int[n];
    for(int i = 0; i<n; i++){
        System.out.println("Enter credits of
            subject "+(i+1)+":");
        ac[i] = in.nextInt();
        System.out.println("Enter marks of
            subject "+(i+1)+":");
        am[i] = in.nextInt();
        if(ac[i]>5 || ac[i]<0 || am[i]>100
            || am[i]<0){
            System.out.println("Enter valid:");
            System.out.println("Enter credits
```

```
of subject " + (i+1) + " : " );
ac[i] = in.nextInt();
System.out.println("Enter marks
of subject " + (i+1) + " : " );
am[i] = in.nextInt();
}
}
}
void printdetails (int n) {
System.out.println("\n USN : " + usn);
System.out.println("\n Name : " + name);
System.out.println(" Subject No. : Marks \t
Credits ");
for (int i = 0; i < n; i++) {
System.out.println("subject " + (i+1) +
" : " + am[i] + " \t " + ac[i]);
}
}
void calsgpa() {
printdetails (n);
double sum = 0, sumc = 0;
for (int i = 0; i < n; i++) {
sum = (am[i]/10 + 1) * ac[i] + sum;
sumc = ac[i] + sumc;
}
```

```
        sgpa = sum / sum c;
        System.out.println("SGPA : " + sgpa);
    }
}
class Series {
    public static void main(String args[]){
        Student s = new Student();
        s.getdetails();
        s.calsgpa();
    }
}
```

Expected O/P ⇒

Enter name and USN :

Ram

1BM19CS109

Enter no. of subjects :

2

Enter subject credits and subject marks :

Enter credits of subject 1 :

2

Enter marks of subject 1 :

23

Enter credits of subject 2 :

3

Enter marks of subject 2 :
89

USN : 1BM19CS108
Name : Ram

Subject No.	Marks	Credits
Subject 1	23	2
Subject 2	89	3

SGPA : 6.6