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ex2.java ex3.java javapgl.java new 1.txt AbstractExample.java sgpa.java bookdetails.java new 1 sgpa.java area.java

```
1 import java.util.*;
2 class Student
3 {
4     String name;
5     String USN;
6     int[] credits;
7     int[] marks;
8
9     Student(String yourName, String yourUSN, int[] yourCredits, int[] yourMarks)
10    {
11        this.name = yourName;
12        this.USN = yourUSN;
13        this.credits = yourCredits;
14        this.marks = yourMarks;
15    }
16    public int[] getGradePoints(int[] marksArray){
17        int[] gradePoints = new int[marksArray.length];
18        for(int i=0;i<marksArray.length;i++){
19            if (marksArray[i]>=90){
20                gradePoints[i] = 10;
21            }
22            else if (marksArray[i]>=80){
23                gradePoints[i] = 9;
24            }
25            else if (marksArray[i]>=70){
26                gradePoints[i] = 8;
27            }
28            else if (marksArray[i]>=60){
29                gradePoints[i] = 7;
30            }
31            else if (marksArray[i]>=50){
32                gradePoints[i] = 6;
33            }
34            else if (marksArray[i]>=40){
35                gradePoints[i] = 5;
36            }
37            else{
38                gradePoints[i] = 0;
39            }
40        }
41        return gradePoints;
42    }
43 }
```

Java source file

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```
36     }
37     else{
38         gradePoints[i] = 0;
39     }
40 }
41 return gradePoints;
42 }
43
44 public float calcArraySum(int[] anyArray){
45     float sum = 0;
46     for(int j=0;j<anyArray.length;j++){
47         sum += anyArray[j];
48     }
49     return sum;
50 }
51
52 public float calcCGPA(int[] creditsArray, int[] marksArray){
53     int[] totalGradePoints = new int[marksArray.length];
54     int[] gradePointsArray = getGradePoints(marksArray);
55     for(int k=0;k<marksArray.length;k++){
56         totalGradePoints[k] = creditsArray[k] * gradePointsArray[k];
57     }
58     float sumGradePoints = calcArraySum(totalGradePoints);
59     float totalCredits = calcArraySum(creditsArray);
60     float CGPA = sumGradePoints/totalCredits;
61     return CGPA;
62 }
63
64 public void dispDetails(){
65     System.out.println("Name: " + this.name);
66     System.out.println("USN: " + this.USN);
67     System.out.println("Credits: " + Arrays.toString(this.credits));
68     System.out.println("Marks: " + Arrays.toString(this.marks));
69     System.out.println("CGPA: " + calcCGPA(this.credits, this.marks));
70 }
71
72 }
73
```

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```
63
64 public void dispDetails(){
65     System.out.println("Name: " + this.name);
66     System.out.println("USN: " + this.USN);
67     System.out.println("Credits: " + Arrays.toString(this.credits));
68     System.out.println("Marks: " + Arrays.toString(this.marks));
69     System.out.println("CGPA: " + calcCGPA(this.credits, this.marks));
70 }
71
72 }
73
74 class SGPA{
75     public static int[] getArrayFromString(String stringedArray){
76         String[] stringValues = stringedArray.split(",");
77         int[] arrayFromString = new int[stringValues.length];
78         for(int i=0;i<stringValues.length;i++){
79             arrayFromString[i] = Integer.parseInt(stringValues[i]);
80         }
81         return arrayFromString;
82     }
83     public static void main(String[] args){
84         Scanner getData = new Scanner(System.in);
85         System.out.println("Enter the number of Students and number of Subjects: ");
86         int numStudents = getData.nextInt();
87         int numSubjects = getData.nextInt();
88         Student studentList[] = new Student[numStudents];
89         Scanner getDetails = new Scanner(System.in);
90         for(int k=0;k<numStudents;k++){
91             System.out.println("Enter the details of student " + k + ": ");
92             studentList[k] = new Student(getDetails.next(),getDetails.next(),getArrayFromString(getDetails.next()),getArrayFromString(getDetails.next()));
93         }
94         System.out.println("\n***** STUDENT DETAILS with CGPA *****\n");
95         for(int h=0;h<studentList.length;h++){
96             studentList[h].dispDetails();
97             System.out.println("\n");
98         }
99     }
100 }
```

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Command Prompt

```
2
Enter the details of student 0:
xyz
1bm19cs040
4
84
Enter the details of student 1:
abc
1bm19cs105
4
91

***** STUDENT DETAILS with CGPA *****

Name: xyz
USN: 1bm19cs040
Credits: [4]
Marks: [84]
CGPA: 9.0

Name: abc
USN: 1bm19cs105
Credits: [4]
Marks: [91]
CGPA: 10.0

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```



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