

Lab program 2 [Week 2]

Student :- 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;  
import Java.io.*;
```

```
class Student {  
    private String USN;  
    private String name;  
    private int[] credits;  
    private int[] marks;
```

// constructor

```
public Student (String USN, String name,  
                int numSubject) {  
    this.USN = USN;  
    this.name = name;  
    this.credits = new int [numSubjects];
```


// Method to accept details

```
public void acceptDetails () {  
    Scanner scanner = new Scanner(System.in);
```

```
    System.out.println("Enter details for student  
    + name + "(USN: " + USN + ")");  
    for (int i = 0; i < credits.length; i++)  
    {
```

```
        System.out.print("Enter credits for  
        subject " + (i + 1) + ":");  
        credit[i] = scanner.nextInt();
```

```
        System.out.println("Enter marks for  
        subject " + (i + 1) + ":");  
        marks[i] = scanner.nextInt();  
    }
```

```
}
```

// Method to display details

```
public void displayDetails () {  
    System.out.print("Details for students"  
    + name + "(USN: " + USN + ")");  
    for (int i = 0; i < credits.length; i++)  
    {
```

```
        System.out.println("subject " + (i + 1) + "
```



```
"-credits:" + credits[i] + ". Marks:" + marks[i];  
}
```

```
}
```

```
// Method to calculate CGPA  
public double calculateSGPA() {  
    double totalcredits = 0;  
    double totalgrade = 0;
```

```
    for (int i = 0; i < credits.length; i++) {  
        totalcredits += credits[i];  
        totalgrade += calculategrade(marks[i] *  
            credits[i]);  
    }
```

```
    return totalgrade / totalcredits;
```

```
public double calculategrade (int marks)  
{
```

```
    if (marks >= 90) {  
        return 10.0;
```

```
}
```

```
    } else if (marks >= 80) {  
        return 9.0;
```

```
    } else if (marks >= 70) {  
        return 8.0;
```



```
    } else if (marks >= 60) {  
        return 7.0;  
    } else if (marks >= 50) {  
        return 6.0;  
    } else {  
        return 0.0;  
    }  
}  
}  
}
```

```
public class Main {  
    public static void main (String [] args) {  
        Scanner scanner = new Scanner(System.in)  
  
        System.out.print("Enter the no of subjects");  
        int noSubjects = scanner.nextInt();  
  
        System.out.print("Enter the USN:");  
        String USN = scanner.next();  
  
        System.out.print("Enter the name");  
        String name = scanner.next();  
  
        Student student = new Student(USN, name,  
            noSubjects);  
    }  
}
```


student.acceptdetails (1);

// Display details & SGPA

student.displaydetails (1);

System.out.println ("SGPA" + student.
calculateSGPA(1);

}

}

Output :-

Enter the No of subjects : 8

Enter the USN : 2023bms02599

Enter the name : Rohit Gandhi

Enter details of student :-

Enter credits for subject 1 : 3

Enter marks for subject 1 : 68

Enter credits for subject 2 : 3

Enter marks for subject 2 : 99

Enter credits for subject 3 : 2

Enter marks for subject 3 : 18

Enter credits for subject 4: 3
Enter marks for subject 4: 58

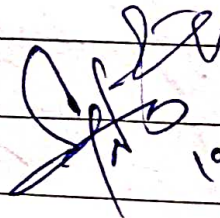
Enter credits for subject 5: 3
Enter marks for subject 5: 58

Enter credits for subject 6: 1
Enter marks for subject 6: 68

Enter credits for subject 7: 3
Enter marks for subject 7: 68

Enter credits for subject 8: 1
Enter marks for subject 8: 88

SGPA = 7.368421052631579


19.12.22