

## 1.STUDENT SGPA CALCULATION

```
import java.util.*;

class Student {
    String name;
    String usn;
    int[] credits;
    int[] marks;
    int n; // number of subjects

    void acceptdetails() {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter name: ");
        name = sc.nextLine();

        System.out.print("Enter USN: ");
        usn = sc.nextLine();

        System.out.print("Enter number of subjects: ");
        n = sc.nextInt();

        credits = new int[n];
        marks = new int[n];

        for (int i = 0; i < n; i++) {
            System.out.print("Credits of subject " + (i + 1) + ": ");
            credits[i] = sc.nextInt();

            System.out.print("Marks of subject " + (i + 1) + ": ");
```

```
        marks[i] = sc.nextInt();
    }
}
```

```
int getCreditPoints(int marks) {
    if (marks >= 90) return 10;
    else if (marks >= 80) return 9;
    else if (marks >= 70) return 8;
    else if (marks >= 60) return 7;
    else if (marks >= 50) return 6;
    else if (marks >= 40) return 5;
    else if (marks >= 30) return 4;
    else return 0;
}
```

```
double calculateSGPA() {
    int totalCredits = 0;
    int obtainedSum = 0;

    for (int i = 0; i < n; i++) {
        int gradePoints = getCreditPoints(marks[i]);
        totalCredits += credits[i];
        obtainedSum += credits[i] * gradePoints;
    }

    return (double) obtainedSum / totalCredits;
}
}
```

```
public class Main {
    public static void main(String[] args) {
```

```

Student s = new Student();

s.acceptdetails();

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

}

}

```

The screenshot shows an IDE with the following components:

- Explorer:** A list of files including `arrays.c`, `arrays.exe`, `basic.c`, `BMSCE.txt`, `circ_quer.c`, `Demo.class`, `dinsert.c`, `dow.c`, `formatspcf.c`, `formatspcf.exe`, `four.c`, `four.exe`, `functions.c`, `GenericMethodDemo...`, `lab2.c`, `main.c`, `Main.class`, `main.exe`, `Main.java` (selected), `one.c`, and `one.exe`.
- Editor:** Displays the `Main.java` file with the following code:
 

```

3 class Student {
4     String name;
5     String usn;
6     int[] credits;
7     int[] marks;
8     int n; // number of subjects
9
10    void acceptdetails() {
11        Scanner sc = new Scanner(System.in);
12
13        System.out.print(s: "Enter name: ");
14        name = sc.nextLine();
15
16        System.out.print(s: "Enter USN: ");
17        usn = sc.nextLine();
18    }

```
- Terminal:** Shows the execution of `java Main` with the following output:
 

```

PS C:\Users\naveen\Desktop\coding> java Main
Enter name: CHAITHANYA
Enter USN: 1W24CS067
Enter number of subjects: 3
Credits of subject 1: 10
Marks of subject 1: 70
Credits of subject 2: 10
Marks of subject 2: 90
Credits of subject 3: 10
Marks of subject 3: 95
Your SGPA: 9.333333333333334
PS C:\Users\naveen\Desktop\coding>

```