

Lab 2

- 1) Develop a Java program to create a class Student with members USN, name, an array credits and an array marks. Include methods to accept & display details & a method to calculate SGPA of a student.

```
Soln:- import java.util.Scanner;
class Student {
    private int a_cred[], total_cred = 0;
    private double a_mark[], a_cal, sum = 0,
        sgpa, num[];
    private String name, usn;

    void acceptDetails()
    {
        System.out.println("Enter student details:");
        Scanner s1 = new Scanner(System.in);
        System.out.println("Enter name:");
        name = s1.nextLine();
        System.out.println("Enter USN:");
        usn = s1.nextLine();
        a_mark = new double[5];
        a_cred = new int[5];
        a_cal = new double[5];
        for (int i = 0; i < 5; i++) {
            System.out.println("Enter a_mark[" + i + "]");
            a_mark[i] = s1.nextDouble();
        }
        for (int i = 0; i < 5; i++) {
            System.out.println("Enter a_cred[" + i + "]");
```

```

        a = (red[i] - 51. nextInt());
    }
}

```

```

void displayDetails()
{

```

```

    System.out.println("name:" + name);
    System.out.println("usr:" + usr);
    System.out.println("Marks of students are:");
    for (int i = 0; i < 5; i++) {
        System.out.println("a - mark[" + i + "] + "
            + a - mark[i]);
    }
}

```

```

}

```

```

void calculate() {

```

```

    num = new double[5];
    for (int i = 0; i < 5; i++) {
        if (a - mark[i] > 100) {
            System.out.println("invalid marks");
        }
        else if (a - mark[i] >= 90) {
            num[i] = 10;
        }
        else if (a - mark[i] >= 80 && a - mark[i] < 90) {
            num[i] = 9;
        }
        else if (a - mark[i] >= 70 && a - mark[i] < 80) {
            num[i] = 8;
        }
        else if (a - mark[i] >= 60 && a - mark[i] < 70) {
            num[i] = 7;
        }
    }
}

```



```
else if (a-mark[i] >= 50 && a-mark[i] < 60) {  
    num[i] = 5;
```

```
}
```

```
else if (a-mark[i] >= 40 && a-mark[i] < 50) {  
    num[i] = 4;
```

```
}
```

```
else {
```

```
    num[i] = 0;
```

```
}
```

```
a-cal[i] = num[i] * a-cred[i];
```

```
sum = sum + a-cal[i];
```

```
total-cred = total-cred + a-cred[i];
```

```
}
```

```
sgpa = sum / total-cred;
```

```
System.out.println("sgpa:" + sgpa);
```

```
}
```

```
}
```