

## Lab-2

### Algorithm :-

- 1) Class student with members +usn, name, an array of credits, array of marks, total credits, and sgpa is calculated. It has methods input, calculate, Display.
- 2) usn, name, credit and marks are input
- 3)  $egpa = sgpa + \text{grade points} * \text{credits}$  for each subject
- 4) Do  $epa = epa / \text{total-credit}$  to find egpa of student
- 5) Display marks and egpa of student.

Program :

```
import java.util.*;
```

```
class Student {
```

```
    String usn, name;
```

```
    static int credits[];
```

```
    static double marks[];
```

```
    void input (int n)
```

```
{
```

```
    Scanner sc = new Scanner (System.in);
```

```
    System.out.println ("Enter usn and name");
```

```
    usn = sc.nextLine();
```

```
    name = sc.nextLine();
```

```
    for (int i=0; i<n; i++) {
```

```
        System.out.println ("Enter the marks along with the  
                                credits");
```

```
        marks[i] = sc.nextDouble();
```

```
        credits[i] = sc.nextInt();
```

```
        System.out.println ();
```

```
    }
```

```
}
```

```
double calculate (int n)
```

```
{
```

```
    int c, cred=0;
```

```
    double tot, total = 0.0;
```

```
    for (int i=0; i<n; i++) {
```

```
        tot = marks[i];
```

```
        if (tot >= 90) c=10;
```

```
        else if (tot >= 80) c=9;
```

```
        else if (tot >= 70) c=8;
```

```
        else if (tot >= 60) c=7;
```

```
else if (tot >= 50) c = 6;
```

```
else if (tot >= 40) c = 5;
```

```
else c = 0;
```

```
total = total + (c * credits[i]);
```

```
cred = cred + credits[i];
```

```
}
```

```
total = total / cred;
```

```
return (total);
```

```
}
```

```
void display (int n, double total)
```

```
{  
    System.out.println("name of student : " + name);  
    System.out.println("usrn of student : " + usn);  
    System.out.println("marks of student along with  
        the credits of course");
```

```
for (int i = 0; i < n; i++)
```

```
{  
    System.out.println (marks[i] + " " + credits[i]);
```

```
}  
    System.out.println ("sgpa of student : " + total);
```

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

```
    Scanner sc = new Scanner (System.in);
```

```
    Student obj = new student();
```

```
    System.out.println ("enter no. of course");
```

```
    int n = sc.nextInt();
```

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

```
    marks = new double [n];
```

```
    obj.input (n);
```

```
    double total = obj.calculate (n);
```

```
    obj.display (n, total);
```

```
}
```

output :

enter no. of course

5

enter usn and name

110

Pankaj

enter markse along with credits

87

5

enter markse along with credits

87

4

enter markse along with credits

86

4

enter markse along with credits

85

4

enter markse along with credits

84

3

name of student : Pankaj

usn of student : 110

markse of student along with credits of course

87.0 5

87.0 4

86.0 4

85.0 4

84.0 3

sgpa of student : 9.0