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18M19C8111

### Algorithm - Lab program 2:

1. Take values of usn, name, credits and marks of 6 subjects. ~~etc~~
2. Assign grade points to each subject.
3. Do (grade point  $\times$  credits) for each subject.
4. Divide the obtained number with total number of credits to get sgpa.

### Program :-

```
import java.util.Scanner;  
class Student {  
    String usn;  
    String name;  
    int credits[];  
    int marks[];  
    int n;
```

```
    void accept()  
    {
```



```
System.out.println ("Name: ");
name = s.next();
System.out.println ("Enter the number of
subjects: ");
n = s.nextInt();
credits = new int [n];
marks = new int [n];
System.out.println ("Enter credits and
marks obtained by student in each
subject");
for (int i=0; i<n; i++)
{
    credits[i] = s.nextInt();
    marks[i] = s.nextInt();
}
}

void display()
{
    System.out.println ("Student details:");
    System.out.println ("USN: " + usn);
    System.out.println ("Marks in each subject:");
    for (int i=0; i<n; i++)
    {
        System.out.println ("Marks in each
subject:");
        for (int i=0; i<n; i++)
        {
            System.out.println ("Subject" + (i+1) + ": "
+ marks[i]);
        }
    }
}
```

```

double calculate()
{
    int tcp = 0, tc = 0;
    for (int i = 0; i < n; i++)
    {
        tc = tc + credits[i];
        if (marks[i] >= 50)
        {
            tcp = tcp + ((marks[i] / 10) + 1) * credits[i];
        }
        else if (marks[i] >= 40 & & marks[i] < 50)
        {
            tcp = tcp + (4 * credits[i]);
        }
    }
    return (double) tcp / tc;
}

```

```

class Studentsgpa
{
    public static void main(String args[])
    {
        Student s1 = new Student();
        s1.accept();
        s1.display();
        System.out.println("SGPA : " + s1.calculate());
    }
}

```



o/p

Enter student details

USN:

abc111

Name:

Pooja

Enter number of subjects:

6

Enter credits and marks attained by student in each subject

3

67

4

78

5

67

4

78

5

76

Student details

USN : abc111

Name : pooja

Marks in each subject:

Subject 1 : 67

Subject 2 : 78

Subject 3 : 67

Subject 4 : 78

Subject 5 : 78

Subject 6 : 76

SGPA : 7.69



```
import java.util.Scanner;
```

```
class Student {
```

```
    String usn;
```

```
    String name;
```

```
    int credits[];
```

```
    int marks[];
```

```
    int n;
```

```
    void accept()
```

```
    {
```

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

```
        System.out.println("Enter student details");
```

```
        System.out.println("USN:");
```

```
        usn=s.next();
```

```
        System.out.println("Name:");
```

```
        name=s.next();
```

```
        System.out.println("Enter the number of subjects:");
```

```
        n=s.nextInt();
```

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

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

```
        System.out.println("Enter credits and marks attained by the student in each subject");
```

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

```
        {
```

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

```
            marks[i]=s.nextInt();
```

```
        }
```

```
    }
```

```
    void display()
```

```
    {
```

```
        System.out.println("Student details:");
```

```
        System.out.println("USN:"+usn);
```

```
        System.out.println("Name:"+name);
```

```
        System.out.println("Marks in each subject:");
```

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

```
        {
```





```
        System.out.println("Marks in each subject:");
        for(int i=0;i<n;i++)
        {
            System.out.println("Subject "+(i+1)+":"+marks[i]);
        }
    }
    double calculate()
    {
        int tcp=0,tc=0;
        for(int i=0;i<n;i++)
        {
            tc=tc+credits[i];
            if(marks[i]>=50)
            {
                tcp=tcp+(((marks[i]/10)+1)*credits[i]);
            }
            else if(marks[i]>=40 && marks[i]<50)
            {
                tcp=tcp+(4*credits[i]);
            }
        }
        return (double)tcp/tc;
    }
}

class Studentsgpa
{
    public static void main(String args[]) {
        Student s1=new Student();
        s1.accept();
        s1.display();
        System.out.println("SGPA: "+s1.calculate());
    }
}
```

C:\Users\Pooja K\Desktop>javac Studentsgpa.java

C:\Users\Pooja K\Desktop>java Studentsgpa

Enter student details

USN:

abc111

Name:

pooja

Enter the number of subjects:

6

Enter credits and marks attained by the student in each subject

3

67

4

78

5

67

4

78

5

78

5

76

Student details:

USN:abc111

Name:pooja

Marks in each subject:

Subject 1:67

Subject 2:78

Subject 3:67

System.out



abc111

Name:

pooja

Enter the number of subjects:

6

Enter credits and marks attained by the student in each subject

3

67

4

78

5

67

4

78

5

78

5

76

Student details:

USN:abc111

Name:pooja

Marks in each subject:

Subject 1:67

Subject 2:78

Subject 3:67

Subject 4:78

Subject 5:78

Subject 6:76

SGPA: 7.6923076923076925