Lab - 2
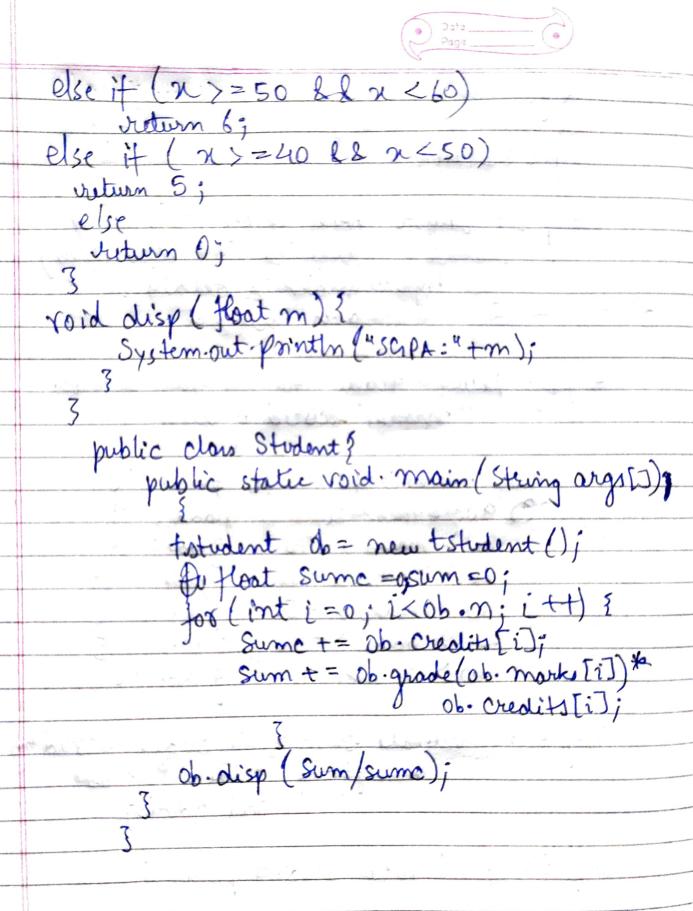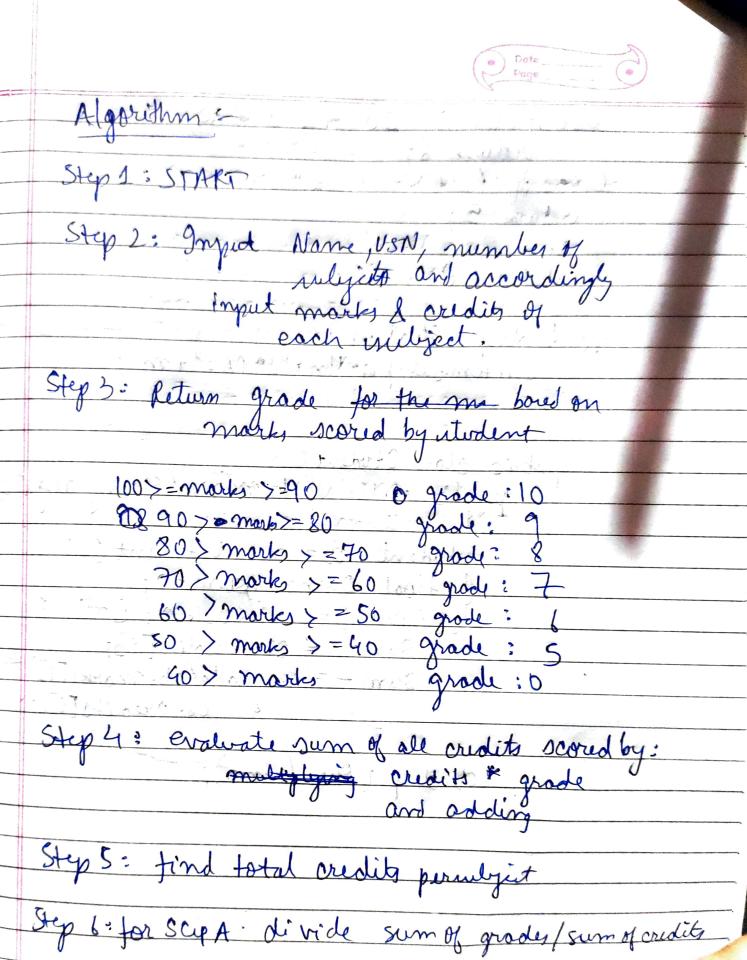
```
import java.util.*;
class tstudent {
    String name, USN;
    int n, credits[], marks[];
    void inputs() {
        System.out.println("enter name, USN and subjects no.");
        name = in.nextLine();
        USN = in.nextLine();
        n = in.nextInt();
        credits = new int[n];
        marks = new int[n];
        for (int i=0; i<n; i++) {
            System.out.println("enter marks & credits
                             of subject "+ (i+1));
            marks[i] = in.nextInt();
            credits[i] = in.nextInt();
        }
    }
    int grade(int x) {
        if (x>=90 && x<=100)
            return 10;
        else if (x>=80 && x<90)
            return 9;
        else if (x>=70 && x<80)
            return 8;
        else if (x>=60 && x<70)
            return 7;
```

```java
else if (x >= 50 && x < 60)
        return 6;
else if ( x >= 40 && x < 50)
    return 5;
    else
    return 0;
}
void disp ( float m){
    System.out.println("SGPA:" + m);
    }
}

public class Student {
    public static void main(String args[])
    {
        tstudent ob = new tstudent();
        float sumc = gsum = 0;
        for (int i = 0; i < ob.n; i++) {
            sumc += ob.credits[i];
            sum += ob.grade(ob.marks[i]) *
                            ob.credits[i];
        }
        ob.disp(sum/sumc);
    }
}
```

Algorithm :-

Step 1 : START

Step 2: Input Name, USN, number of subjects and accordingly input marks & credits of each subject.

Step 3: Return grade for the based on marks scored by student

$100 >= marks >= 90$	grade : 10
$90 > marks >= 80$	grade : 9
$80 > marks >= 70$	grade : 8
$70 > marks >= 60$	grade : 7
$60 > marks >= 50$	grade : 6
$50 > marks >= 40$	grade : 5
$40 > marks$	grade : 0

Step 4: evaluate sum of all credits scored by: ~~multiplying~~ credits * grade and adding

Step 5: find total credits persubject

Step 6: for SCpA · divide sum of grades / sum of credits

Step 7: END