1) Develop a Java Program to create a class student with numbers USN, name, an array credits and an array ~~marks~~ marks. Include methods to accept and display details and a method to calculate SGPA of a student.

→
```
import java.util.Scanner;
public class sgpaproblem {
    string USN;
    string name;
    private static int credit[] = {4,4,2,3,3,1,1,1};
int marks[] = new int[8];
 Scanner s = new Scanner(System.in)
public void get_details()
{ System.out.println("Enter your USN");
   name = s.next();
}
public void set_marks() {
  System.out.println("Enter your marks");
for(int i=0; i<8; i++) {
        marks[i] = s.nextInt();
    if(marks[i] < 40) {
        marks[i] = 0;
    }
  }
}
public double sgpa() {
    double sgpa = 0, temp = 0;
for(int i=0; i<8; i++) {
    if(marks[i] != 0) {
```

```
        temp += credit[i] * (int)(marks[i]/10)+1;
    }
}
sgpa = temp/20
    if(sgpa == 11){
    return sgpa = -1;
      return sgpa;
}
public void display()
  {
    system.out.println("Name : "+name);
  system.out.println("USN "+USN);
  System.out.println("SGPA :"+sgpa(1);
}
public static void main(String[] args)
{ sgpa problem s1 = new sgpa problem[];
    s1.get-details(1)
    s2.get-marks2();
      s1.display(s);
  }
}
```

Algorithm:

step 1: start

step 2: initialising variables usn, name, marks

step 3: enterdet() ; function call

step 4: print input usn, name, marks, credits.

step 5: display det() func^{n} call

step 6: print (USN)
print (name)
print (marks)
print (credits)

step 7: sgpa() ; function call

step 8: initialising variables g, n, i.

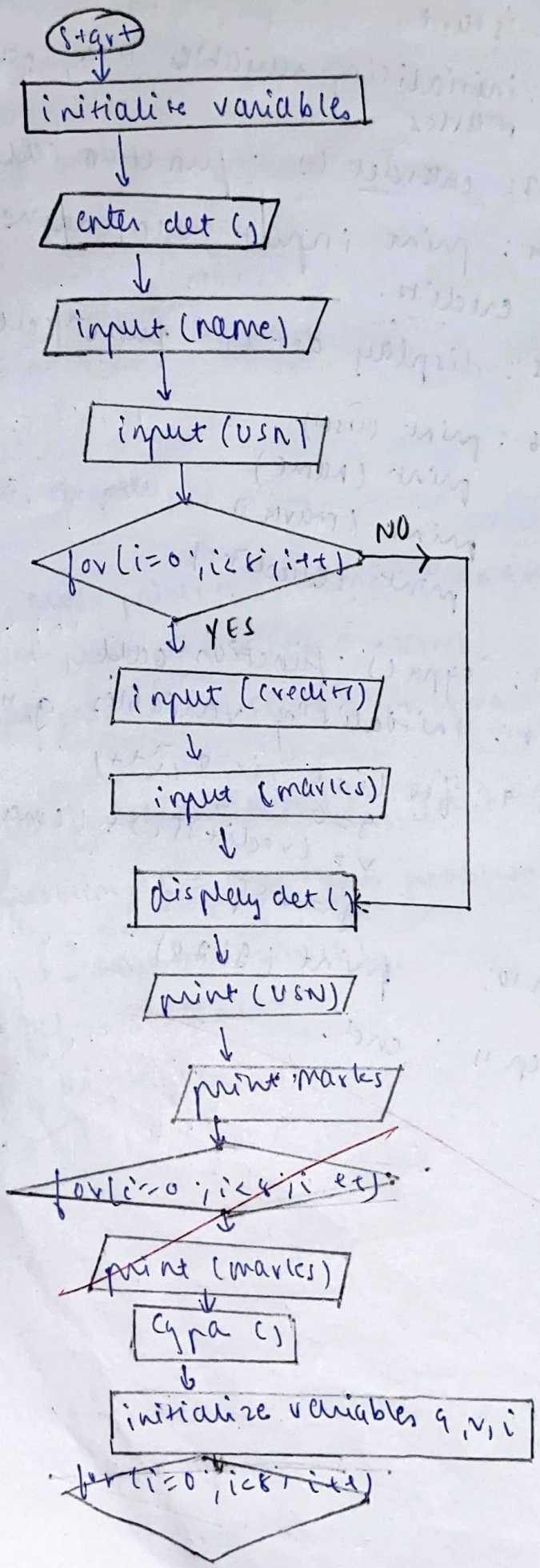
step 9: for (i=0 ; i<8 ; i++)
g=0
v = (credits[i] * ((marks[i]/10)+1))
g = v+g

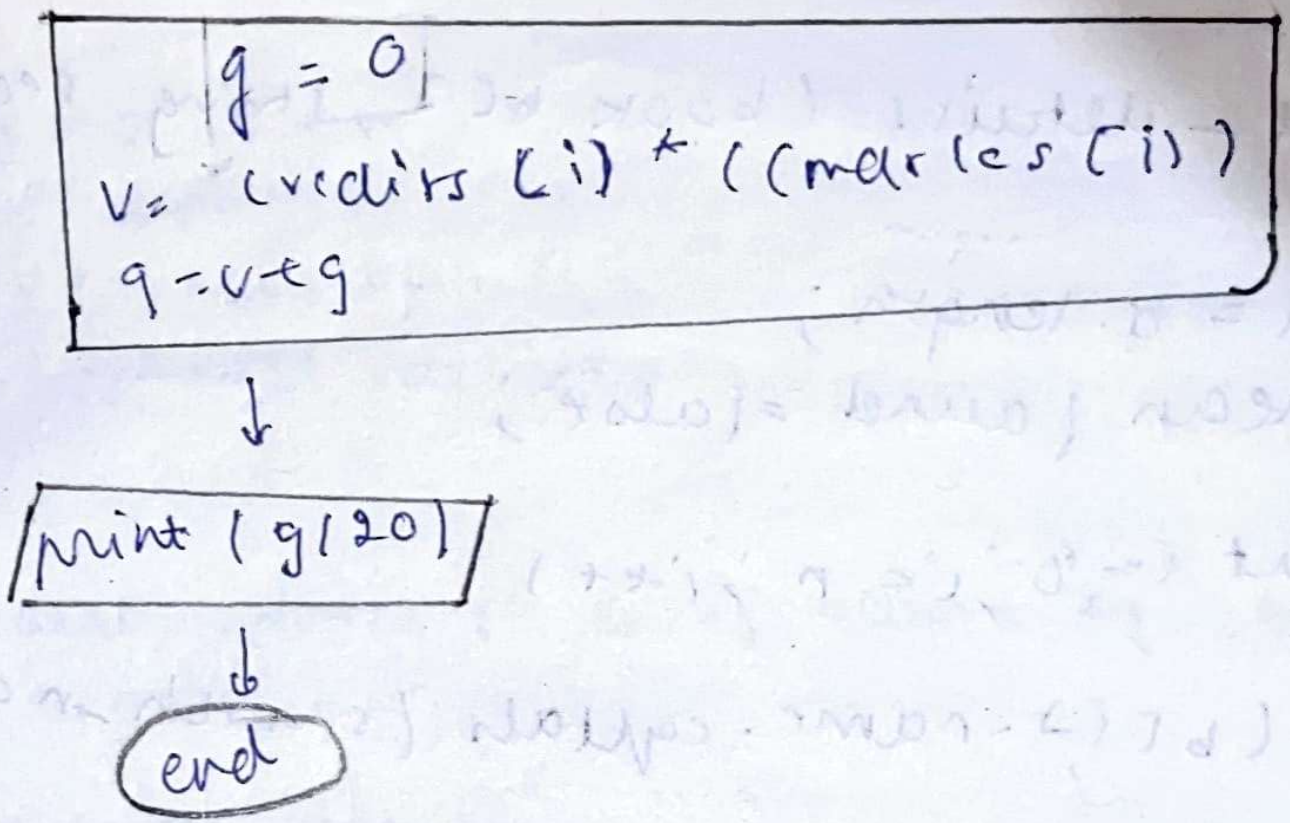
step 10: print (g/20) ;

step 11: end.

OUTPUT:

1 lowchart.


start
initialize variables
enter det ()
input (name)
input (USN)
for(i=0;i<3;i++)
NO
YES
input (credits)
input (marks)
display det ()
print (USN)
print marks
for(i=0;i<4;i++)
print (marks)
cgpa ()
initialize variables g, v, i
for(i=0;i<8;i++)


g = 0
v = credits [i] * (marks [i])
g = v + g
print (g/20)
end