***WEEK-2***

*Develop a Java program to create a class Student with members usn, name,*

*an array credits and an array marks. Include methods to accept and display*

*details and a method to calculate SGPA of a student.*

import java.util.Scanner;

class Student

{

String USN;

String name;

int[] credits = new int[20];

int[] marks = new int[20];

public void input(int n)

{

Scanner s = new Scanner(System.in);

System.out.print("Enter Student USN: ");

USN = s.nextLine();

System.out.print("Enter Student Name: ");

name = s.nextLine();

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

{

System.out.print("Enter the Subject "+(i+1)+" marks and credits respectively: ");

marks[i] = s.nextInt();

credits[i] = s.nextInt();

}

}

public float calculate(int n)

{

int sum\_of\_credits = 0;

float result=0.0f;

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

{

sum\_of\_credits+=credits[i];

if(calculate\_grade\_point(marks[i])==-1)

return -1.0f;

else

{

result = result +(float) (calculate\_grade\_point(marks[i])\*credits[i]);

}

}

return (result/sum\_of\_credits);

}

public int calculate\_grade\_point(int marks)

{

if(marks>=90)

return 10;

else if ((marks>=80)&&(marks<90))

return 9;

else if ((marks>=70)&&(marks<80))

return 8;

else if ((marks>=60)&&(marks<70))

return 7;

else if ((marks>=50)&&(marks<60))

return 6;

else if ((marks>=40)&&(marks<50))

return 5;

return -1;

}

public void display(int n,float result)

{

System.out.println("\n");

System.out.println("Student Details");

System.out.println();

System.out.println("Student USN: "+USN);

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

System.out.println("Student Marks and Credits");

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

{

System.out.println("Subject 1 -->\tMarks: "+marks[i]+" Credits: "+credits[i]);

}

System.out.println("SGPA: "+result);

}

}

public class SGPA

{

public static void main(String[] args)

{

Scanner s = new Scanner(System.in);

Student s1 = new Student();

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

int n = s.nextInt();

s1.input(n);

float result = s1.calculate(n);

if(result == -1.0f)

{

System.out.println();

System.out.println("The Student has failed in a subject. SGPA cannot be calculated!");

System.exit(0);

}

s1.display(n,result);

}

}

