LAB-1

Develop a Java program that prints all real solutions to the quadratic equation ax2 +bx+c = 0. Read in a, b, c and use the quadratic formula. If the discriminate b2 -4ac is negative, display a message stating that there are no real solutions.

```
import java.util.*;
class Student
{
String USN;
String name;
int credits[];
int marks[];
int i,n,tot=0;
double SGPA;

Student()
{
SGPA=0;
}

void input()
{
Scanner sc=new Scanner(System.in);
System.out.println("Enter the USN and name of student");
USN=sc.nextLine();
name=sc.nextLine();
System.out.println("Enter the number of subjects");
n=sc.nextInt();
credits=new int[n];
marks=new int[n];
for(i=0;i<n;i++)
```

```
{
System.out.println("Enter the credits of subject "+(i+1));
credits[i]=sc.nextInt();
tot=tot+credits[i];
}
for(i=0;i<n;i++)
{
System.out.println("Enter the marks of subject "+(i+1));
marks[i]=sc.nextInt();
}
}


void grade_point()
{
for(i=0;i<n;i++)
{
if(marks[i]>=90 && marks[i]<=100)
marks[i]=10;
else if(marks[i]>=80 && marks[i]<90)
marks[i]=9;
else if(marks[i]>=70 && marks[i]<80)
marks[i]=8;
else if(marks[i]>=60 && marks[i]<70)
marks[i]=7;
else if(marks[i]>=50 && marks[i]<60)
marks[i]=5;
else if(marks[i]>=40 && marks[i]<50)
marks[i]=4;
else if(marks[i]<40)
marks[i]=0;
```

```
}
}

void cal_SGPA()
{
for(i=0;i<n;i++)
{
SGPA=SGPA+(credits[i]*marks[i]);
}
SGPA=SGPA/tot;
}

void display()
{
System.out.println("----------------------------------------------------------");
System.out.println("Student details are:");
System.out.println("USN:"+USN);
System.out.println("Name:"+name);
System.out.println("SGPA:"+SGPA);
System.out.println("----------------------------------------------------------");
}
}

class lab2
{
public static void main(String args[])
{
Student stu=new Student();
stu.input();
stu.grade_point();
stu.cal_SGPA();
```

```
stu.display();

}

}
```

OUTPUT