```java
import java.util.*;
class Roots{
public static void main(String args[]){
double a,b,c,d,x1,x2;
Scanner in = new Scanner(System.in);
System.out.println("Enter the coefficients of x^2, x, and constant term");
a=in.nextDouble();
b=in.nextDouble();
c=in.nextDouble();
d=b*b-4*a*c;
if(d>0){
x1=(-b+Math.sqrt(d))/2*a;
x2=(-b-Math.sqrt(d))/2*a;
System.out.println("Roots are real and distinct");
System.out.println("Roots are "+x1+" and "+x2);
}
else if(d==0){
x1=x2=-b/2*a;
System.out.println("Roots are real and equal");
System.out.println("Roots are "+x1+" and "+x2);
}
Eelse if(d<0){

System.out.println("There are no real solutions");

}
}
```

```
C:\Users\Lenovo\Desktop\ja>javac Roots.java

C:\Users\Lenovo\Desktop\ja>java Roots
Enter the coefficients of x^2, x, and constant term
1 2 1
Roots are real and equal
Roots are -1.0 and -1.0

C:\Users\Lenovo\Desktop\ja>java Roots
Enter the coefficients of x^2, x, and constant term
1 -2 1
Roots are real and equal
Roots are 1.0 and 1.0

C:\Users\Lenovo\Desktop\ja>
```

```java
class student
{
String usn,name;
static int credits[];
static double marks[];
void input(int n)
{
Scanner sc=new Scanner(System.in);
System.out.println("enter usn and name ");
usn=sc.nextLine();
name=sc.nextLine();
System.out.println("enter marks along with credits");
for(int i=0;i<n;i++)
{
marks[i]=sc.nextDouble();
credits[i]=sc.nextInt();
System.out.println();
}
}
double calculate(int n)
{
int c,cred=0;
double tot,total=0.0;
for(int i=0;i<n;i++)
{
tot=marks[i];
if(tot>=90)
            c=10;
            else if(tot>=80)
            c=9;
```
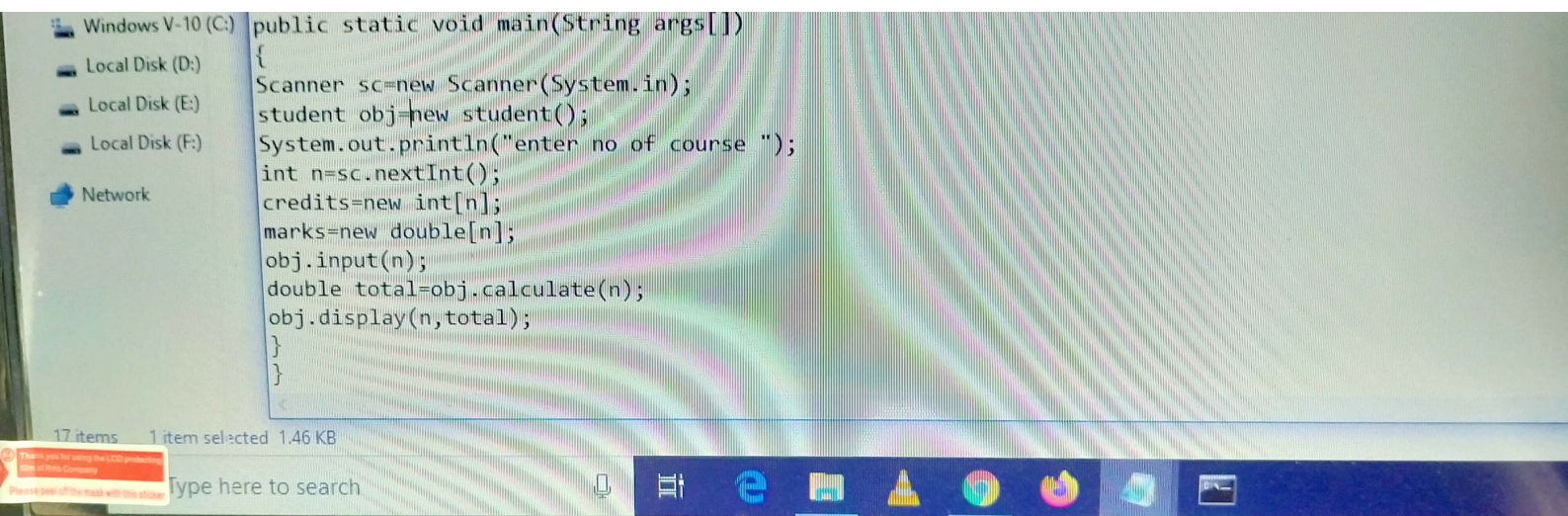
ck Copy Paste
Clipboard
↑ 🗀 › ja

Quick access
OneDrive
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Windows V-10 (C:)
Local Disk (D:)
Local Disk (E:)
Local Disk (F:)
Network

earch ja 🔍

student - Notepad

File   Edit   Format   View   Help

```java
            c=9;
        else if(tot>=70)
            c=8;
        else if(tot>=60)
            c=7;
        else if(tot>=50)
            c=6;
        else if(tot>=40)
c=4;
        else
c=0;
    total=total+(c*credits[i]);
cred=cred+credits[i];
}
total=total/cred;
return(total);
}
void display(int n,double total)
{
System.out.println("name of student : "+name);
System.out.println("usn of student : "+usn);
System.out.println("marks of student along with credits of course");
for(int i=0;i<n;i++)
{
System.out.println(marks[i]+"    "+credits[i]);
}
System.out.println("sgpa of student : "+total);
}
    static void main(String args[])
{
Scanner sc=new Scanner(System.in);
```

```java
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
student obj=new student();
System.out.println("enter no of course ");
int n=sc.nextInt();
credits=new int[n];
marks=new double[n];
obj.input(n);
double total=obj.calculate(n);
obj.display(n,total);
}
}
```

Type here to search

```
C:\Windows\system32\cmd.exe                                    —    □    ×

C:\Users\Lenovo\Desktop\ja>javac student.java

C:\Users\Lenovo\Desktop\ja>java student
enter no of course
5
enter usn and name
123 a
a
enter marks along with credits
90 4

90 4

90 3

97 5

93 4

name of student : a
usn of student : 123 a
marks of student along with credits of course
90.0    4
90.0    4
90.0    3
97.0    5
93.0    4
sgpa of student : 10.0

C:\Users\Lenovo\Desktop\ja>
```