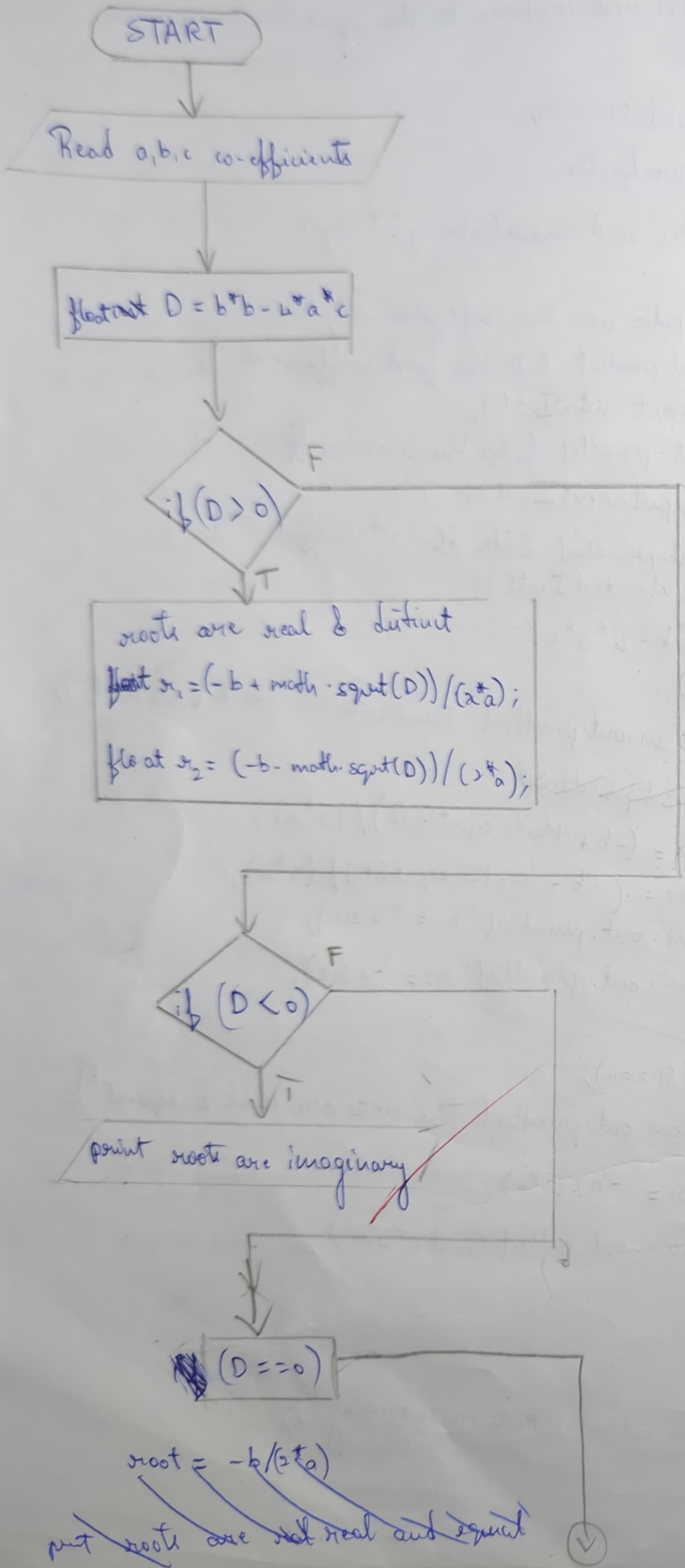
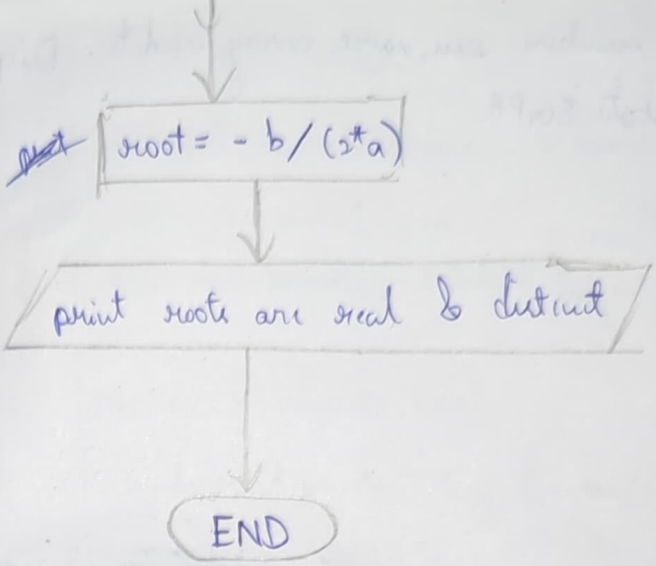
```
"C:\Program Files\Eclipse Adoptium\jdk-21.0.1.12-hotspot\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.3.2\lib\idea_rt.jar=51953:C:\Program F
enter a,b,c
1
2
1
the solutions are equal
X: -1
1BM22CS004 ABHINAV INAMDAR
```

7. print all the real solutions to the quadratic equation $ax^2 + bx + c = 0$

```
import java.util.Scanner;
public class quadratic
{ public static void main(String[] args)
{
Scanner input = new Scanner(System.in);
System.out.println("Enter the first coefficient");
int a = input.nextInt();
System.out.println("Enter the second coefficient");
int b = input.nextInt();
System.out.println("Enter the 3rd co-efficient");
int c = input.nextInt();
int D = b*b - 4*a*c;
if (D>0)
{ System.out.println("The roots are real & distinct");
int r1 = (-b + Math.sqrt(D)) / (2*a);
int r2 = (-b - Math.sqrt(D)) / (2*a);
System.out.println("r1 = " + r1);
System.out.println("r2 = " + r2);
}
else if (D==0);
{ System.out.println("The roots are real & equal");
int r = -b / (2*a);
System.out.println("root = " + r);
}
else
{ System.out.println("Roots are imaginary");
}}
}
```


START
Read a,b,c co-efficients
float D = b*b - 4*a*c
if (D > 0)
F
T
roots are real & distinct
float r1 = (-b + math.sqrt(D))/(2*a);
float r2 = (-b - math.sqrt(D))/(2*a);
if (D < 0)
F
T
print roots are imaginary
(D == 0)
root = -b/(2*a)
print roots are real and equal



Output:

Enter first co-efficient

2

Enter second co-efficient

4

Enter third co-efficient

2

The roots are real & equal

The root is -1.0