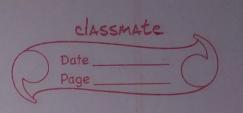# Java Program-1

⟹ Develop a Java program that prints all real solutions to the quadratic equation $ax^2 + bx + c = 0$. Read in a, b, c and use the quadratic formula. If the discriminate $b^2 - 4ac$ is negative, display a message stating that there are no real solutions.

→
```java
import static java.lang.Math.sqrt;
import java.util.Scanner;
class Quadratic {
public static void main(String args[]){
Scanner s1 = new Scanner(System.in);
System.out.println("Enter a, b, c in
            ax^2 + bx + c = 0");
int a = s1.nextInt();
int b = s1.nextInt();
int c = s1.nextInt();
int d = b*b - 4*a*c;
if (d <> 0)
  {
                            sqrt(d)
  float x1 = (-b + √d)/(2*a);
                        sqrt(d)
  float x2 = (-b - √d)/(2*a);
  System.out.println("The solutions are real");
  System.out.println("x1 = "+x1 "x2 = "+x2);
  }
else if (d < 0)
  System.out.println("There exists no
                real solutions");
else
  { double x = 2*a;
  x1 = -b/(2*a) - b/x;
  x2 = x1;
  System.out.println("The solutions are
                real and equal");
```

```
System.out.println("x1 = x2 = " +x1);
    }
  }
}
```