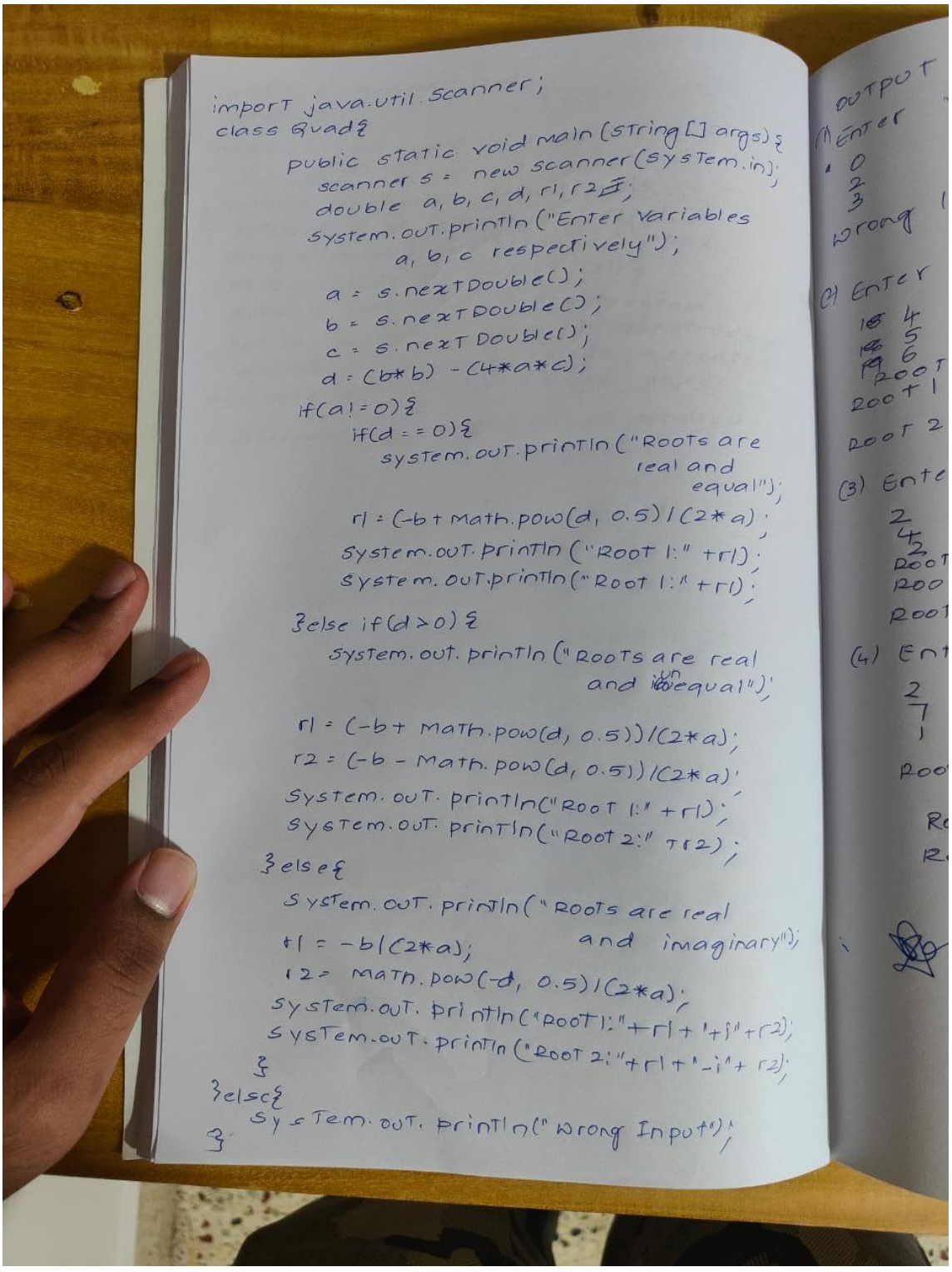

```
import java.util.Scanner;
class Quad{
    public static void main(String[] args){
      Scanner s = new Scanner(System.in);
      double a, b, c, d, r1, r2;
      System.out.println("Enter variables
            a, b, c respectively");
      a = s.nextDouble();
      b = s.nextDouble();
      c = s.nextDouble();
      d = (b*b) - (4*a*c);
    if(a!=0){
        if(d==0){
          system.out.println("Roots are
                              real and
                              equal");
        r1 = (-b + Math.pow(d, 0.5))/(2*a);
        System.out.println("Root 1:" +r1);
        System.out.println("Root 1:" +r1);
    }else if(d>0){
       System.out.println("Roots are real
                           and unequal");
      r1 = (-b + Math.pow(d, 0.5))/(2*a);
      r2 = (-b - Math.pow(d, 0.5))/(2*a);
      System.out.println("Root 1:" +r1);
      System.out.println("Root 2:" +r2);
    }else{
      System.out.println("Roots are real
      r1 = -b/(2*a);          and imaginary");
      r2 = Math.pow(-d, 0.5)/(2*a);
      System.out.println("Root1:"+r1+"+i"+r2);
      System.out.println("Root 2:"+r1+"-i"+r2);
    }
}else{
    System.out.println("Wrong Input");
}
```

OUTPUT

(1) Enter
0
2
3
Wrong

(2) Enter
4
5
6
Root
Root 1
Root 2

(3) Ente
2
4
2
Root
Roo
Root

(4) Ent
2
7
1
Roo
R
R

OUTPUT

(1) Enter variables a, b, c respectively
0
2
3
Wrong Input

(2) Enter variables a, b, c respectively
4
5
6
Roots are real & imaginary
Root 1: -0.625 + i1.0532687216470449
Root 2: -0.625 - i1.0532687216470449

(3) Enter variables a, b, c respectively
2
4
2
Roots are real and equal
Root 1 = -1.0
Root 2 = -1.0

(4) Enter variables a, b, c respectively
2
7
1
Roots are real and unequal
Root 1: -5.39921
Root 2: -8.600781

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```
Enter Variables a, b, c respectively
2
4
2
Roots are real and equal
Root 1:-1.0
Root 1:-1.0

C:\Users\s16dh\Desktop\Huberman Lab>java Quad
Enter Variables a, b, c respectively
2
7
1
Roots are real and inequal
Root 1:-0.14921894064178787
Root 2:-3.350781059358212
```

```
Enter Variables a, b, c respectively
0
2
3
Wrong Input

C:\Users\s16dh\Desktop\Huberman Lab>java Quad
Enter Variables a, b, c respectively
4
5
6
Roots are real and imaginary
Root 1:-0.625+ i1.0532687216470449
Root 2:-0.625- i1.0532687216470449
```