

QUADRATIC EQUATION

```
import java.util.*;

public class quadraticEq {

    public static void main(String[] args) {

        Scanner sc=new Scanner(System.in);

        double a=sc.nextInt();

        double b=sc.nextInt();

        double c=sc.nextInt();

        double dis=Math.pow(b,2)-(4*a*c);

        double r1,r2;

        if(dis>0){

            r1=(-b+Math.sqrt(dis))/2*a;

            r2=(-b-Math.sqrt(dis))/2*a;

            System.out.println(r1+" "+r2);

        }

        if(dis==0){

            r1=-b/2*a;

            r2=r1;

            System.out.println(r1+" "+r2);

        }

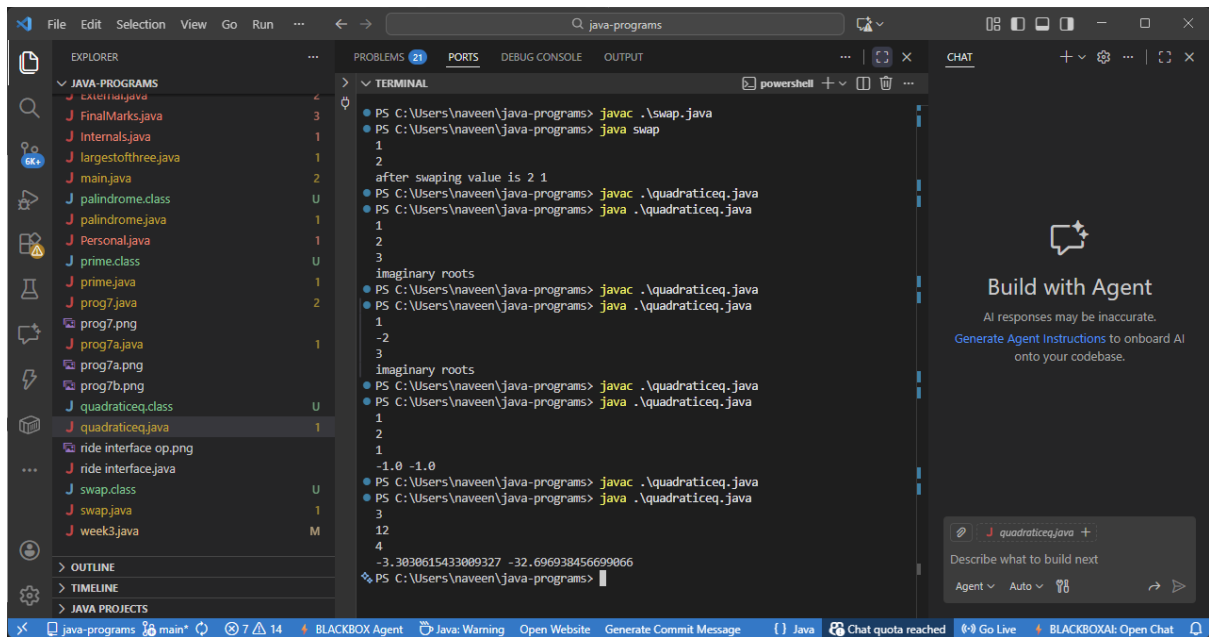
        if(dis<0){

            System.out.println("imaginary roots");

        }

    }

}
```



1.Calculator

```
import java.util.*;
```

```
public class calculator {
```

```
    public static void main(String[] args) {
```

```
        Scanner s=new Scanner(System.in);
```

```
        System.out.println("enter two values of a numbers ");
```

```
        int a=s.nextInt();
```

```
        int b=s.nextInt();
```

```
        System.out.println("enter the option 1-add 2-sub 3-mul 4-div");
```

```
        int opt=s.nextInt();
```

```
        switch(opt){
```

```
            case 1:
```

```
                System.out.println(a+b);
```

```
break;
case 2:
    System.out.println(a-b);
break;case 3:
    System.out.println(a*b);
break;case 4:
    System.out.println(a/b);
break;
default:
    System.out.println("invalid input");
}
}
}
```

```
J calculator.java 1 X
J calculator.java
2 public class calculator {
3     public static void main(String[] args) {
5         System.out.println(x: "enter two values of a numbers ");
6         int a=s.nextInt();
7         int b=s.nextInt();
8         System.out.println(x: "enter the option 1-add 2-sub 3-mul 4-d
9         int opt=s.nextInt();
10        switch(opt){
11            case 1:
12                System.out.println(a+b);
13                break;
14            case 2:
15                System.out.println(a-b);
16                break;case 3:
17                System.out.println(a*b);
18                break;case 4:
19                System.out.println(a/b);
20                break;
        }
    }
}

PROBLEMS 21 TERMINAL DEBUG CONSOLE PORTS OUTPUT
PS C:\Users\naveen\java-programs> javac calculator.java
PS C:\Users\naveen\java-programs> java calculator
enter two values of a numbers
10
20
enter the option 1-add 2-sub 3-mul 4-div
3
200
```

2.EVEN OR ODD

```
import java.util.*;

public class evenorodd {

    public static void main(String[] args) {

        Scanner s=new Scanner(System.in);

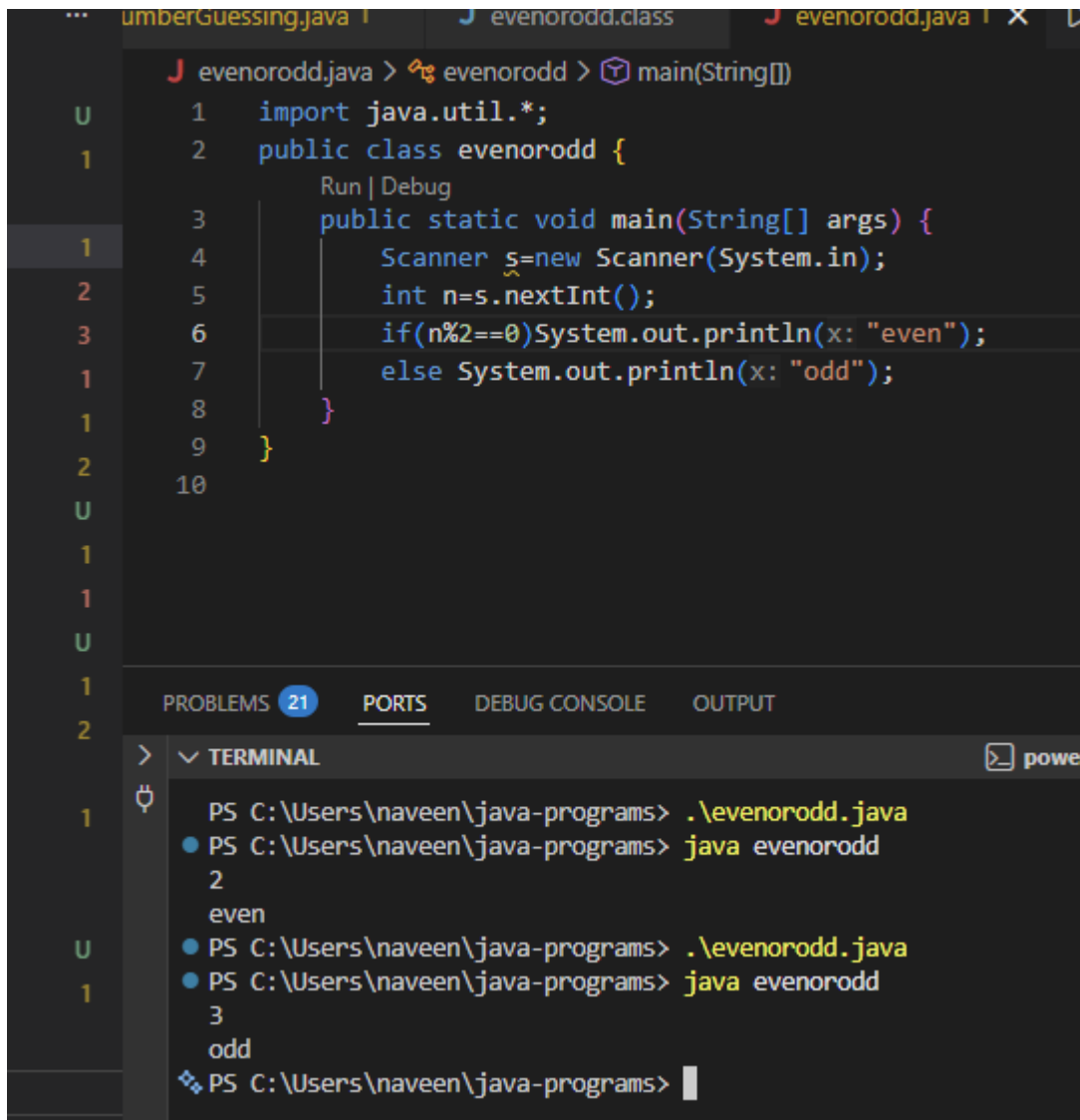
        int n=s.nextInt();

        if(n%2==0)System.out.println("even");

        else System.out.println("odd");

    }

}
```



The screenshot shows an IDE with a file named `evenorodd.java` open. The code is as follows:

```
1 import java.util.*;
2 public class evenorodd {
3     public static void main(String[] args) {
4         Scanner s=new Scanner(System.in);
5         int n=s.nextInt();
6         if(n%2==0)System.out.println(x: "even");
7         else System.out.println(x: "odd");
8     }
9 }
10
```

Below the code editor, the **TERMINAL** tab is active, showing the execution of the program:

```
PS C:\Users\naveen\java-programs> .\evenorodd.java
PS C:\Users\naveen\java-programs> java evenorodd
2
even
PS C:\Users\naveen\java-programs> .\evenorodd.java
PS C:\Users\naveen\java-programs> java evenorodd
3
odd
PS C:\Users\naveen\java-programs>
```

3.PALINDROME

```
import java.util.*;

public class palindrome {

    public static void main(String[] args) {

        Scanner sc=new Scanner(System.in);

        String s=sc.nextLine();

        s=s.toLowerCase();

        int l=0;

        int r=s.length()-1;

        boolean found=true;

        while(l<=r){
```

```

        if(s.charAt(l)!=s.charAt(r)) found=false;

        l++;

        r--;

    }

    if(found){

        System.out.println("palindrome");

    }else

        System.out.println("not an palindrome");

    }

}

```

The screenshot shows an IDE with a dark theme. The top pane displays the code for `palindrome.java`. The code is as follows:

```

1  public class palindrome {
2      public static void main(String[] args) {
3          // ... (code omitted for brevity) ...
12         l++;
13         r--;
14     }
15     if(found){
16         System.out.println(x: "palindrome");
17     }else
18         System.out.println(x: "not an palindrome");
19     }
20 }
21
22

```

The bottom pane shows the **TERMINAL** output. It displays the commands used to compile and run the program, along with the output:

```

PS C:\Users\naveen\java-programs> javac .\palindrome.java
PS C:\Users\naveen\java-programs> java palindrome
radar
palindrome
PS C:\Users\naveen\java-programs> javac .\palindrome.java
PS C:\Users\naveen\java-programs> java palindrome
rain
not an palindrome

```

4.PRIME NUMBER

```
import java.util.*;

public class prime {

    public static boolean isprime(int n){

        if(n<=1) return false;

        for(int i=2;i*i<=n;i++){

            if(n%i==0) return false;

        }return true;

    }

    public static void main(String[] args) {

        Scanner s=new Scanner(System.in);

        int a=s.nextInt();

        boolean found=false;

        for(int i=2;i<=a/2;i++){

            if(isprime(i) && isprime(a-i)){

                System.out.println(a+"can be expressed a sum of two prime"+i+" "+(a-i));

                found=true;

            }

        }

        if(!found){

            System.out.println("cant be expressed");

        }

    }

}
```



```
b=t;
```

```
System.out.println("after swaping value is"+" "+a+" "+b);
```

```
}
```

```
}
```

The screenshot shows an IDE with a Java file named `swap.java`. The code defines a `swap` class with a `main` method that uses a `Scanner` to take two integers as input, swaps them, and prints the result. The output window shows the program was run successfully, taking inputs 1 and 2, and printing "after swaping value is 2 1".

```
1 import java.util.Scanner;
2
3 public class swap {
4     public static void main(String[] args) {
5         Scanner s=new Scanner(System.in);
6         int a=s.nextInt();
7         int b=s.nextInt();
8         int t=a;
9         a=b;
10        b=t;
11        System.out.println("after swaping value is"+" "+a+" "+b);
12    }
13 }
14
```

Run | Debug

PROBLEMS 21 PORTS DEBUG CONSOLE OUTPUT

TERMINAL powershell + v [] ...

- PS Focus folder in explorer (ctrl + click) javac .\swap.java
- PS C:\Users\naveen\java-programs> java swap

1
2
after swaping value is 2 1
❖ PS C:\Users\naveen\java-programs>

BLACKBOX Agent Java: Warning Open Website Generate Commit Message [] Java Chat quota reached