Problem Statement : *Write a Java program that takes an integer input from the user and calculates its square root using the* ***`Math.sqrt()`*** *method. The program should handle the possibility of an ArithmeticException by using a try-catch block. Implement the program and demonstrate its functionality with an example input.*

Source Code :

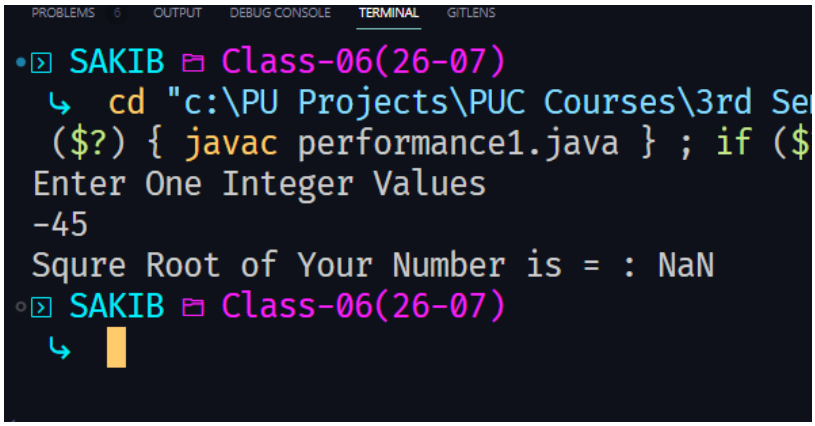
```java
import java.util.Scanner;
import java.lang.Math;

public class performance1 {
    public static void main(String[] args)
    {
        int a;
        double d = 0;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter One Integer Values");
        a = sc.nextInt();
        try
        {
            d = Math.sqrt(a);
            System.out.println("Squre Root of Your Number is = : " + d);
        }
        catch (ArithmeticException error)
        {
            System.out.println(error);
        }
        sc.close();

    }
}

```

Output :



Problem Statement : *Write a Java program that takes input from a user and show output based on that number,if number is less equal 20 then user must take recourse otherwise he can take retake on that course,use custom exception handling for the program.*

Source Code :

```java
import java.util.Scanner;
public class performance2 {
    void checkCourse(int number) throws myException
    {
        if (number <= 20)
        {
            throw new myException();
        }
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Final Number : ");
        performance2 check = new performance2();
        int n = sc.nextInt();
        try
        {
            check.checkCourse(n);
            System.out.println("You Can take retake this course !!");
        }
        catch (myException err)
        {
            System.err.println("Sorry ! You must take recourse !!");
        }
        sc.close();
    }
}
```

Output :