

Name: Badal Wanjari

Branch: Computer Technology

Section: B

Roll No. 140

Registration No. 20011045

Subject: Object Oriented Programming Lab

## Practical-8

- **Problem Definition:**

Write a program in Java to calculate the result of equation  $a/(b-c)$ . Handle the exception if  $(b-c)$  results in zero. Also write a default exception for any other exception.

- **Program:**

```
import java.util.*;
class Practical8 {
    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        try {
            System.out.print("Enter value of a: ");
            int a = sc.nextInt();
            System.out.print("Enter value of b: ");
            int b = sc.nextInt();
            System.out.print("Enter value of c: ");
            int c = sc.nextInt();
            System.out.println("a /(b - c) = " + a / (b - c));
        }

        //Arithmetic exception handler
        catch (ArithmeticException e) {
            System.out.println("Arithmetic Exception Handler");
            System.out.println(e);
        }

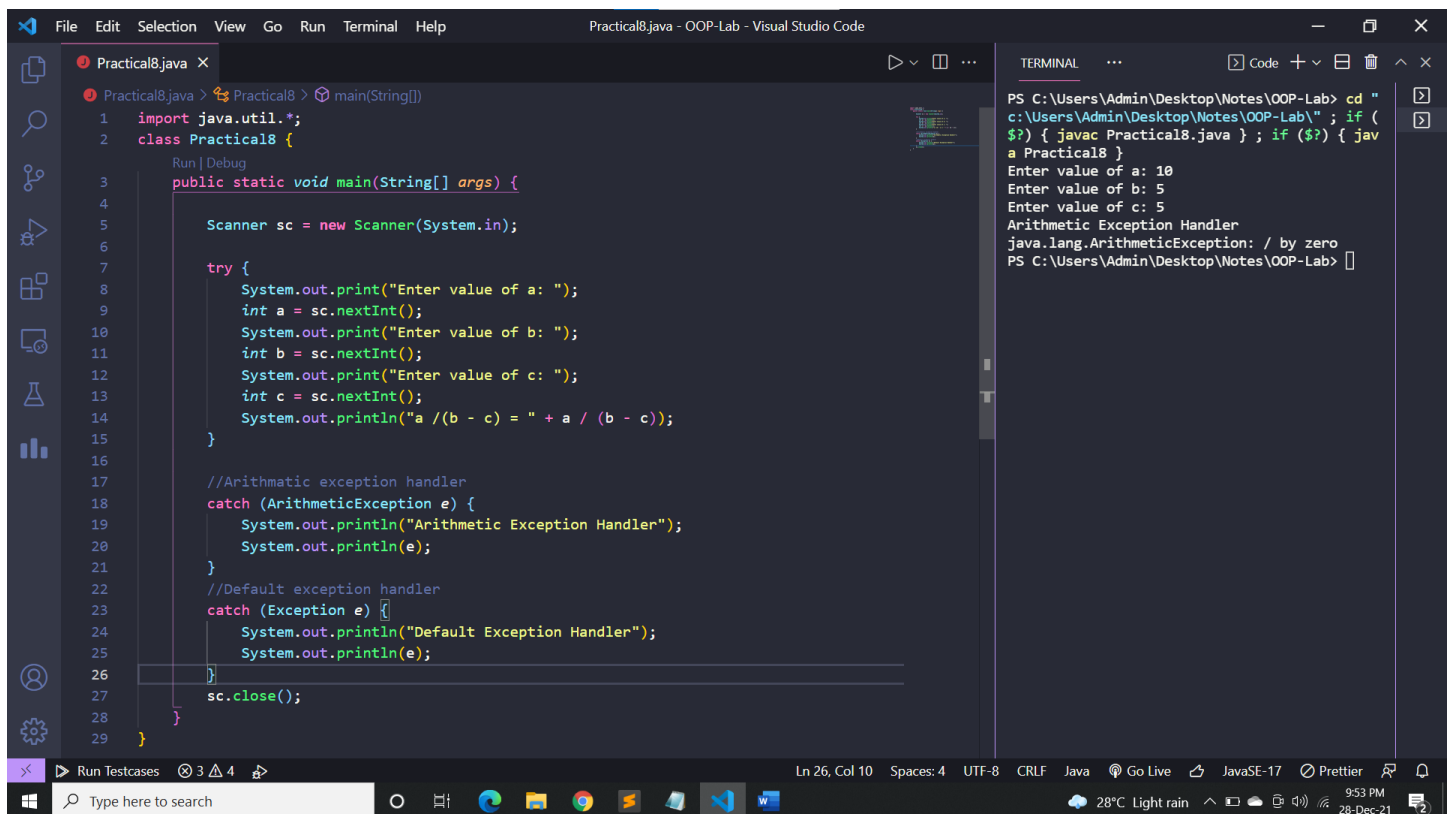
        //Default exception handler
        catch (Exception e) {
            System.out.println("Default Exception Handler");
            System.out.println(e);
        }
    }
}
```

```
        sc.close();
    }
}
```

- **Output:**

```
Enter value of a: 10
Enter value of b: 5
Enter value of c: 5
Arithmetic Exception Handler
java.lang.ArithmeticException: / by zero
```

- **Screenshot:**



The screenshot displays the Visual Studio Code editor with a file named `Practical8.java` open. The code implements a program that prompts the user for three integers (a, b, and c), calculates  $a / (b - c)$ , and handles any `ArithmeticException` that occurs. The code is as follows:

```
1 import java.util.*;
2 class Practical8 {
3     public static void main(String[] args) {
4
5         Scanner sc = new Scanner(System.in);
6
7         try {
8             System.out.print("Enter value of a: ");
9             int a = sc.nextInt();
10            System.out.print("Enter value of b: ");
11            int b = sc.nextInt();
12            System.out.print("Enter value of c: ");
13            int c = sc.nextInt();
14            System.out.println("a / (b - c) = " + a / (b - c));
15        }
16
17        //Arithmetic exception handler
18        catch (ArithmeticException e) {
19            System.out.println("Arithmetic Exception Handler");
20            System.out.println(e);
21        }
22        //Default exception handler
23        catch (Exception e) {
24            System.out.println("Default Exception Handler");
25            System.out.println(e);
26        }
27        sc.close();
28    }
29 }
```

The terminal window on the right shows the execution of the program. It displays the prompts and user input, followed by the output of the calculation and the exception handler message:

```
PS C:\Users\Admin\Desktop\Notes\OOP-Lab> cd "
c:\Users\Admin\Desktop\Notes\OOP-Lab\" ; if (
$?) { javac Practical8.java } ; if ($?) { jav
a Practical8 }
Enter value of a: 10
Enter value of b: 5
Enter value of c: 5
Arithmetic Exception Handler
java.lang.ArithmeticException: / by zero
PS C:\Users\Admin\Desktop\Notes\OOP-Lab>
```

- **Result:**

By studying implementation of concept of exception in Java, I have successfully completed Practical-8.