

Java lab-2023.07.13

- Exception handling

Q1)

Write a java program that takes two integers as input and performs division on them. Implement exception handling to catch and handle the `ArithmeticException` that occurs when dividing by zero.

Print an appropriate error message if the denominator is zero.

```
package com.mycompany.maininput;

import java.util.Scanner;

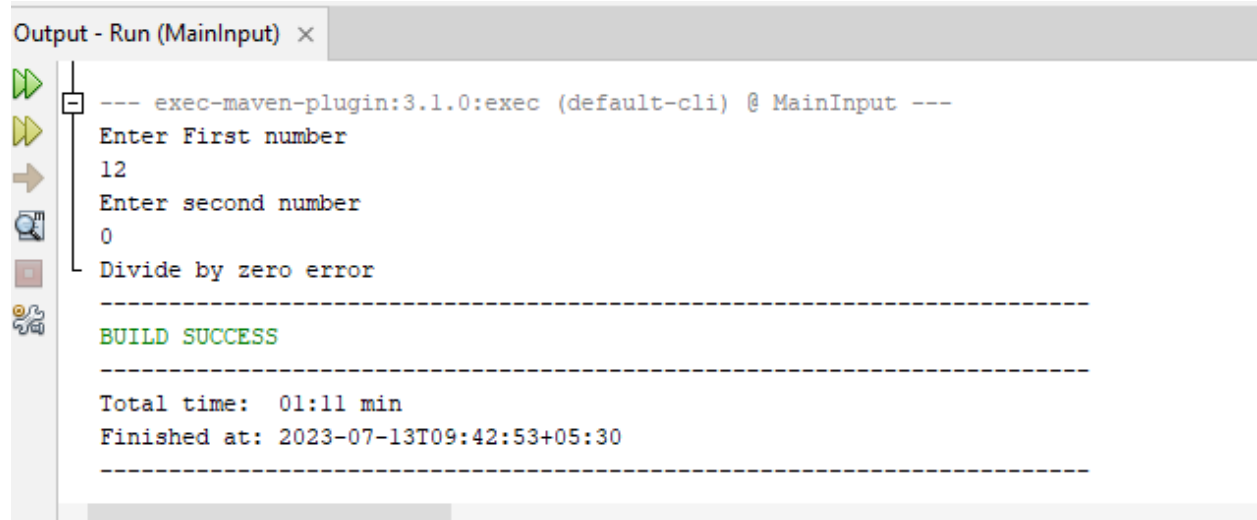
public class MainInput {

    public static void main(String[] args)
    {
        int no1,no2,ans;
        Scanner sc=new Scanner(System.in);
        try
        {
            System.out.println("Enter First number");
            no1=Integer.parseInt(sc.nextLine());
            System.out.println("Enter second number");
            no2=Integer.parseInt(sc.nextLine());
            ans=no1/no2;
            System.out.println("Answer is"+ans);
        }
        catch(ArithmeticException e)
        {
```

```

        System.out.println("Divide by zero error");
    }
}
}

```



```

Output - Run (MainInput) x
--- exec-maven-plugin:3.1.0:exec (default-cli) @ MainInput ---
Enter First number
12
Enter second number
0
Divide by zero error
-----
BUILD SUCCESS
-----
Total time: 01:11 min
Finished at: 2023-07-13T09:42:53+05:30
-----

```

Q2)

Write a java program that creates an array of integers and attempts to access an index that is out of bounds. Implement exception handling to catch and handle the `ArrayIndexOutOfBoundsException`.

Print an appropriate error message if an invalid index is accessed.

```
package com.mycompany.arrayindexoutofboundsexceptiondemo;
```

```
public class ArrayIndexOutOfBoundsExceptionDemo {
```

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

```
    {
```

```
        int[] numbers={1,2,3,4,5};
```

```
        try{
```

```
        int value=numbers[10];  
        //int result=value/0  
        System.out.println("Value:"+value);  
    }  
    catch(ArrayIndexOutOfBoundsException e)  
    {  
        System.out.println("Error:Array index is out of bounds.");  
    }  
    catch(Exception e)  
    {  
        System.out.println("e.getMessage()");  
    }  
    finally{  
        for(int i=0;i<numbers.length;i++)  
        {  
            System.out.println(numbers[i]+"");  
        }  
    }  
}  
}
```

```
com.mycompany.arrayindexoutofboundsexceptiondemo.ArrayIndexOutOfBoundsExceptionDemo > main > try > finally > for (
Output - Run (ArrayIndexOutOfBoundsExceptionDemo) x
Changes detected - recompiling the module!
Compiling 1 source file to C:\Users\HP\Documents\NetBeansProjects\ArrayIndexOutOfBoundsExceptionDemo\ta
--- exec-maven-plugin:3.1.0:exec (default-cli) @ ArrayIndexOutOfBoundsExceptionDemo ---
Error:Array index is out of bounds.
1
2
3
4
5
-----
BUILD SUCCESS
-----
Total time: 5.663 s
Finished at: 2023-07-13T10:36:22+05:30
-----
```

Q3)

Write a Java program that attempts to read a file that does not exist. Implement exception handling to catch and handle the `FileNotFoundException`.

Print an appropriate error message if the file is not found.

```
package com.mycompany.file;

import java.util.Scanner;

public class File {

    public static void main(String[] args)
    {
        try{
            String filepath="nonexistent.txt";
            File file=new File(filepath);
            Scanner scanner=new Scanner(source:file);
            while(scanner.hasNextLine())
```

```
    {  
        String line=scanner.nextLine();  
        System.out.println(line);  
    }  
    scanner.close();  
} catch(FileNotFoundException e)  
{  
    System.out.println("Error:File not Found");  
}  
}  
}
```