

## JAVA Lab Assignment 8

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Github- [Abhinav-kr-2807/JAVA: College Assignments \(github.com\)](https://github.com/Abhinav-kr-2807/JAVA: College Assignments)

**Part 1 :** Write a Java Program to find the factorial of 'n' integers (as command line arguments CLA). Write your own exception "MyExcep" to validate integer values to be in certain range.

**Part 2:**

Define an exception class called "NOMATCHEXCP" that is thrown when the string from keyboard is not equal to "India". Write a Demo program using try-catch block that shows the use of this user-defined exception. Class NOMATCHEXCP should have a parameterized constructor and the exception message generated should show the line number and the erroneous String that was inputted by the user.

**PART1:**

```
class MyExcep extends Exception {
    public MyExcep(String message) {
        super(message);
    }
}

public class Factorial {
    public static void main(String[] args) {
        int n;
        for(int i=0;i<args.length;i++){
            try {
                int fact = 1;
                n = Integer.parseInt(args[i]);

                if (n < 0 || n > 15) {
                    throw new MyExcep("Invalid input! Integer must be
between 0 and 15.");
                }

                for (int j = 1; j <= n; j++) {
                    fact *= j;
                }

                System.out.println("Factorial of " + n + " is: " + fact);
            } catch (MyExcep e) {
                System.out.println(e.getMessage());
            } catch (NumberFormatException e) {
                System.out.println("Invalid input! Please enter an integer
value.");
            }
        }
    }
}
```

```
}  
}
```

#### OUTPUT:

```
Factorial of 8 is: 40320  
Invalid input! Integer must be between 0 and 15.  
Invalid input! Please enter an integer value.  
Factorial of 5 is: 120  
Invalid input! Integer must be between 0 and 15.
```

#### PART2

```
import java.util.Scanner;  
  
class NOMATCHEXCP extends Exception {  
    public NOMATCHEXCP(int line, String input) {  
        super("Error: Line " + line + ": \"" + input + "\"" is not equal to  
        \"India\"");  
    }  
}  
  
public class Demo {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
        String input;  
        int line = 0;  
  
        try {  
            System.out.print("Enter a string: ");  
            input = scanner.nextLine();  
            line++;  
  
            if (!input.equals("India")) {  
                throw new NOMATCHEXCP(line, input);  
            }  
  
            System.out.println("Input string is equal to \"India\"");  
        } catch (NOMATCHEXCP e) {  
            System.err.println(e.getMessage());  
        }  
    }  
}
```

#### OUTPUT:

```
Enter a string: Abhinav  
Error: Line 1: "Abhinav" is not equal to "India"
```

```
Process finished with exit code 0
```

```
Enter a string: India  
Input string is equal to "India"
```

```
Process finished with exit code 0
```