**\*\* Exception \*\***

1. **Exception**  :- Exception is an abnormal condition.
2. An exception is an unwanted and unexpected event which occurs during the execution of a program.
3. At the run time that disrupts the normal flow of the program is known as Exception.

## What is Exception Handling?

1. Exception Handling is a mechanism to handle runtime errors such as ClassNotFoundException, IOException, SQLException, RemoteException, etc.



### Types of Exceptions

There are mainly two types of exceptions.

1. Checked Exception
2. Unchecked Exception

An error is considered as the unchecked exception. However, according to Oracle, there are three types of exceptions namely:

1. Error



### Checked Exception :-

1. Checked exceptions are checked at compile-time.
2. The classes that directly inherit the Throwable class except RuntimeException and Error are known as checked exceptions. For example, IOException, SQLException, etc.

### Unchecked Exception

### Unchecked exceptions are not checked at compile-time, but they are checked at runtime.

### The classes that inherit the RuntimeException are known as unchecked exceptions. For examples , ArithmeticException, NullPointerException, ArrayIndexOutOfBoundsException, etc.

### Error :- Error is irrecoverable. Some examples of errors are OutOfMemoryError, VirtualMachineError, AssertionError etc.

class Q01\_Exception\_Handling\_try

**{**

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

**{**

        int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

        int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

**try**

**{**

            System**.**out**.**println**(** x**/**y **);**

**}**

**}**

**}**

error: 'try' without 'catch', 'finally' or resource declarations

class Q02\_Exception\_Handling\_Catch

**{**

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

**{**

        int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

        int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

**catch(** Exception we**)**

**{**

            System**.**out**.**println**(** x**/**y **);**

**}**

**}**

**}**

error: 'catch' without 'try'

**import** java**.**util**.**Scanner**;**

class Q03\_Exception\_Handlingclass\_try\_Catch

**{**

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

**{**

        Scanner sc **=** **new** Scanner**(**System**.**in**);**

        System**.**out**.**print**(**"Enter X : "**);**

        int x **=** sc**.**nextInt**();**

        System**.**out**.**print**(**"Enter Y: "**);**

        int y **=** sc**.**nextInt**();**

**try**

**{**

            System**.**out**.**println**(**"\nOutput : " **+** x**/**y **);**

**}**

**catch(** ArithmeticException e**)**

**{**

            System**.**out**.**println**(** e **);**

**}**

**}**

**}**

Case - 1

input :

Enter X : 10

Enter Y: 20

Output : 0

Case - 2

input :

Enter X : 100

Enter Y: 20

Output : 5

Case - 3

input :

Enter X : 0

Enter Y: 20

Output : 0

.................................................

Case - 4

input :

Enter X : 100

Enter Y: 0

Output :-

java.lang.ArithmeticException: / by zero

---------------------------------------------------------------------------------------------

class Q04\_Exception\_Handling\_try\_Catch

**{**

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

**{**

        int x **=** Integer**.**parseInt**(**args**[**0**]);**

        int y **=** Integer**.**parseInt**(**args**[**1**]);**

**try**

**{**

            System**.**out**.**println**(**"Output : " **+** x**/**y **);**

**}**

**catch(** ArithmeticException e**)**

**{**

            System**.**out**.**println**(** "ArithmeticException Catch Block" **);**

**}**

**catch(** NumberFormatException e**)**

**{**

            System**.**out**.**println**(** "NumberFormatException Catch Block" **);**

**}**

**catch(** ArrayIndexOutOfBoundsException e**)**

**{**

            System**.**out**.**println**(** "ArrayIndexOutOfBoundsException Catch Block" **);**

**}**

**}**

**}**

Case - 1

Input : 100  20

Output : 5

Case - 2

Input : 100  0

ArithmeticException Catch Block

Case - 3

Input : 100  abc

Exception in thread "main" java.lang.NumberFormatException: For input string: "ab"

Case - 4

Input : 100

Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: 1

class Q05\_Exception\_Handling\_Finally\_Block

**{**

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

**{**

        System**.**out**.**println**(**"Open"**);**

**try**

**{**

            int x **=** Integer**.**parseInt**(**args**[**0**]);**

            int y **=** Integer**.**parseInt**(**args**[**1**]);**

            System**.**out**.**println**(**x **+** "  " **+** y**);**

            System**.**out**.**println**(**"Ans : " **+** x**/**y **);**

**}**

**finally**

**{**

            System**.**out**.**println**(**"Finally Block"**);**

**}**

        System**.**out**.**println**(**"Close"**);**

**}**

**}**

Case - 1

Input  : 100  20

Output :

Open

Ans : 5

Finally Block

Close

.........

Case - 2

Input  : 100 0

Output :

Open

Finally Block

Exception in thread "main" java.lang.ArithmeticException: / by zero

Case - 3

Input  : 100 ab

Output :

Open

Finally Block

Exception in thread "main" java.lang.NumberFormatException: For input string: "ab"

class Q06\_Exception\_Handling\_Try\_Catch\_Finally

**{**

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

**{**

        System**.**out**.**println**(**"Open"**);**

**try**

**{**

            int x **=** Integer**.**parseInt**(**args**[**0**]);**

            int y **=** Integer**.**parseInt**(**args**[**1**]);**

            System**.**out**.**println**(**"Ans : " **+** x**/**y **);**

**}**

**catch(**Exception e**)**

**{**

            System**.**out**.**println**(**"Catch Block"**);**

**}**

**finally**

**{**

            System**.**out**.**println**(**"Finally Block"**);**

**}**

        System**.**out**.**println**(**"Close"**);**

**}**

**}**

Case - 1

Input  : 100  20

Output :

Open

Ans : 5

Finally Block

Close

.........

Case - 2

Input  : 100 0

Output :

Open

Catch Block

Finally Block

Close

Case - 3

Input  : 100 ab

Output :

Open

Catch Block

Finally Block

Close

class Q07\_Exception\_Handling\_Try\_Finally\_Catch

**{**

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

**{**

        System**.**out**.**println**(**"Open"**);**

**try**

**{**

            int x **=** Integer**.**parseInt**(**args**[**0**]);**

            int y **=** Integer**.**parseInt**(**args**[**1**]);**

            System**.**out**.**println**(**"Ans : " **+** x**/**y **);**

**}**

**finally**

**{**

            System**.**out**.**println**(**"Finally Block"**);**

**}**

**catch(**Exception e**)**

**{**

            System**.**out**.**println**(**"Catch Block"**);**

**}**

        System**.**out**.**println**(**"Close"**);**

**}**

**}**

error: 'catch' without 'try'

    catch(Exception e)

    ^

class Q08\_Exception\_Handling\_Try\_Catch

**{**

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

**{**

        System**.**out**.**println**(**"Open"**);**

**try**

**{**

            int x **=** Integer**.**parseInt**(**args**[**0**]);**

            int y **=** Integer**.**parseInt**(**args**[**1**]);**

            System**.**out**.**println**(**"Ans : " **+** x**/**y **);**

**}**

        System**.**out**.**println**(**"Hello"**);**

**catch(**Exception e**)**

**{**

            System**.**out**.**println**(**"Catch Block"**);**

**}**

        System**.**out**.**println**(**"Close"**);**

**}**

**}**

error: 'try' without 'catch', 'finally' or resource declarations

                try

                ^

error: 'catch' without 'try'

                catch(Exception e)

**import** java**.**util**.**Scanner**;**

class Q09\_Exception\_Handling\_Throw\_Keyword

**{**

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

**{**

        System**.**out**.**print**(**"Enter Age : "**);**

        Scanner sc **=** **new** Scanner**(**System**.**in**);**

        byte age **=** sc**.**nextByte**();**

**if(** age **<** 18**)**

**{**

            System**.**out**.**print**(**"Invalid Age, you Can't Drive "**);**

**}**

**else**

**{**

            System**.**out**.**print**(**"Welcome you Can Drive "**);**

**}**

        System**.**out**.**println**(**"Vishal"**);**

**}**

**}**

input :

Enter Age : 10

Output :

Invalid Age, you Can't Drive Vishal

----------------------------

input :

Enter Age : 50

Output :

Welcome you Can Drive Vishal

**import** java**.**util**.**Scanner**;**

class Q10\_Exception\_Handling\_Throw\_Keyword

**{**

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

**{**

        System**.**out**.**print**(**"Enter Age : "**);**

        Scanner sc **=** **new** Scanner**(**System**.**in**);**

        byte age **=** sc**.**nextByte**();**

**if(** age **<** 18**)**

**{**

            ArithmeticException are **=** **new** ArithmeticException**();**

**throw** are**;**

**}**

**else**

**{**

            System**.**out**.**print**(**"Welcome you Can Drive "**);**

**}**

        System**.**out**.**println**(**"Vishal"**);**

**}**

**}**

input :

Enter Age : 50

Output :

Welcome you Can Drive Vishal

input :

Enter Age : 10

Output :

Exception in thread "main" java.lang.ArithmeticException at 10\_Exception \_Handling\_hrow\_Keyword.main(Q10\_Exception\_Handling\_Throw\_Keyword

**import** java**.**util**.**Scanner**;**

class Q11\_Exception\_Handling\_Throw\_Keyword

**{**

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

**{**

        System**.**out**.**print**(**"Enter Age : "**);**

        Scanner sc **=** **new** Scanner**(**System**.**in**);**

        byte age **=** sc**.**nextByte**();**

**if(** age **<** 18**)**

**{**

            ArithmeticException are **=** **new** ArithmeticException**(**"Invalid Age"**);**

**throw** are**;**

**}**

**else**

**{**

            System**.**out**.**print**(**"Welcome you Can Drive "**);**

**}**

        System**.**out**.**println**(**"Vishal"**);**

**}**

**}**

input :

Enter Age : 50

Output :

Welcome you Can Drive Vishal

input :

Enter Age : 10

Output :

Exception in thread "main" java.lang.ArithmeticException: Invalid Age

**import** java**.**util**.**Scanner**;**

class Invalid\_Age **extends** RuntimeException

**{**

    Invalid\_Age**()**

**{}**

    Invalid\_Age**(**String s1**)**

**{**

**super(**s1**);**

**}**

**}**

class Q12\_Exception\_Handling\_User\_Define\_Exception

**{**

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

**{**

        System**.**out**.**print**(**"Enter Age : "**);**

        Scanner sc **=** **new** Scanner**(**System**.**in**);**

        byte age **=** sc**.**nextByte**();**

**if(** age **<** 18**)**

**{**

            Invalid\_Age ige **=** **new** Invalid\_Age**();**

**throw** ige**;**

**}**

**else**

**{**

            System**.**out**.**print**(**"Welcome you Can Drive "**);**

**}**

        System**.**out**.**println**(**"Vishal"**);**

**}**

**}**

input : Enter Age : 50

Output : Welcome you Can Drive Vishal

input : Enter Age : 10

Output : Exception in thread "main" Invalid\_Age

**import** java**.**util**.**Scanner**;**

class Invalid\_Age **extends** RuntimeException

**{**

    Invalid\_Age**()**

**{}**

    Invalid\_Age**(**String s1**)**

**{**

**super(**s1**);**

**}**

**}**

class Q13\_Exception\_Handling\_User\_Define\_Exception

**{**

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

**{**

        System**.**out**.**print**(**"Enter Age : "**);**

        Scanner sc **=** **new** Scanner**(**System**.**in**);**

        byte age **=** sc**.**nextByte**();**

**if(** age **<** 18**)**

**{**

            Invalid\_Age ige **=** **new** Invalid\_Age**(**"Age : " **+** age**);**

**throw** ige**;**

**}**

**else**

**{**

            System**.**out**.**print**(**"Welcome you Can Drive "**);**

**}**

        System**.**out**.**println**(**"Vishal"**);**

**}**

**}**

input :

Enter Age : 50

Output :

Welcome you Can Drive Vishal

----------------------------

input :

Enter Age : 10

Output :

Exception in thread "main" Invalid\_Age: Age : 10

**import** java**.**io**.\*;**

class Q14\_Exception\_Handling\_Throws\_Keyword

**{**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        PrintWriter pw **=** **new** PrintWriter**(**"A.txt"**);**

        pw**.**print**(**"Vishal Soner"**);**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

error:  unreported exception FileNotFoundException; must be caught or declared to be thrown

        PrintWriter pw = new PrintWriter("A.txt");

                         ^

**import** java**.**io**.\*;**

class Q15\_Exception\_Handling\_Throws\_Keyword

**{**

    public static void main**(**String args**[])** throws FileNotFoundException

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        PrintWriter pw **=** **new** PrintWriter**(**"A.txt"**);**

        pw**.**print**(**"Vishal Soner"**);**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

Vishal Soner - 1

Vishal Soner - 2

**import** java**.**io**.\*;**

class Q16\_Exception\_Handling\_Throws\_Keyword

**{**

    public static void main**(**String args**[])** throws ArithmeticException

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        System**.**out**.**println**(**"Ans : " **+** 10**/**0**);**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

Vishal Soner - 1

Exception in thread "main" java.lang.ArithmeticException: / by zero

**import** java**.**io**.\*;**

class Q17\_Exception\_Handling\_Dropdown\_Exception

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        System**.**out**.**println**(**10**/**0**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

    public static void main**(**String args**[])** throws ArithmeticException

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        Q17\_Exception\_Handling\_Dropdown\_Exception q17 **=** **new**

Q17\_Exception\_Handling\_Dropdown\_Exception**();**

        q17**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

Vishal Soner - 1

Show - 1.1

Show - 2.1

Exception in thread "main" java.lang.ArithmeticException: / by zero

**import** java**.**io**.\*;**

class Q18\_Exception\_Handling\_Dropdown\_Exception

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

**try**

**{**

            System**.**out**.**println**(**10**/**0**);**

**}**

**catch(** Exception e**)**

**{**

            System**.**out**.**println**(**"Show2 Exception"**);**

**}**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        Q18\_Exception\_Handling\_Dropdown\_Exception q18 **=** **new** Q18\_Exception\_Handling\_Dropdown\_Exception**();**

        q18**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input :

Vishal Soner - 1

Show - 1.1

Show - 2.1

Show2 Exception

Show - 2.2

Show - 1.2

Vishal Soner – 2

**import** java**.**io**.\*;**

class Q19\_Exception\_Handling\_Dropdown\_Exception

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        System**.**out**.**println**(**10**/**0**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

**try**

**{**

            show2**();**

**}**

**catch(** Exception e**)**

**{**

            System**.**out**.**println**(**"Show2 Exception"**);**

**}**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        Q19\_Exception\_Handling\_Dropdown\_Exception q19 **=** **new** Q19\_Exception\_Handling\_Dropdown\_Exception**();**

        q19**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input :

Vishal Soner - 1

Show - 1.1

Show - 2.1

Show2 Exception

Show - 1.2

Vishal Soner - 2

---------------------------------------------------------------------------------------------

class A

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        System**.**out**.**println**(**10**/**0**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

**}**

class B **extends** A

**{**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        A**.**show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

**}**

class Q20\_Exception\_Handling\_Dropdown\_Exception

**{**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        B**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

Vishal Soner - 1

Show - 1.1

Show - 2.1

Exception in thread "main" java.lang.ArithmeticException: / by zero

**import** java**.**io**.\*;**

class A

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

**try**

**{**

            System**.**out**.**println**(**10**/**0**);**

**}**

**catch(** Exception e **)**

**{**

            System**.**out**.**println**(**"show2 Catch Block"**);**

**}**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

**}**

class B **extends** A

**{**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        A**.**show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

**}**

class Q21\_Exception\_Handling\_Dropdown\_Exception

**{**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        B**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input :

Vishal Soner - 1

Show - 1.1

Show - 2.1

show2 Catch Block

Show - 2.2

Show - 1.2

Vishal Soner - 2

---------------------------------------------------------------------------------------------

**import** java**.**io**.\*;**

class A

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        System**.**out**.**println**(**10**/**0**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

**}**

class B **extends** A

**{**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

**try**

**{**

            A**.**show2**();**

**}**

**catch(** Exception e **)**

**{**

            System**.**out**.**println**(**"show1 Catch Block"**);**

**}**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

**}**

class Q22\_Exception\_Handling\_Dropdown\_Exception

**{**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        B**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input :

Vishal Soner - 1

Show - 1.1

Show - 2.1

show1 Catch Block

Show - 1.2

Vishal Soner - 2

---------------------------------------------------------------------------------------------

**import** java**.**io**.\*;**

class A

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        System**.**out**.**println**(**10**/**0**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

**}**

class B **extends** A

**{**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        A**.**show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

**}**

class Q23\_Exception\_Handling\_Dropdown\_Exception

**{**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

**try**

**{**

            B**.**show1**();**

**}**

**catch(** Exception e **)**

**{**

            System**.**out**.**println**(**"Main Catch Block"**);**

**}**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input :

Vishal Soner - 1

Show - 1.1

Show - 2.1

Main Catch Block

Vishal Soner - 2

---------------------------------------------------------------------------------------------

**import** java**.**io**.\*;**

class Q24\_Exception\_Handling\_Propogation

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        System**.**out**.**println**(**10**/**0**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        A**.**show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        B**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input :

Vishal Soner - 1

Show - 1.1

Show - 2.1

Exception in thread "main" java.lang.ArithmeticException: / by zero

---------------------------------------------------------------------------------------------

**import** java**.**io**.\*;**

class Q25\_Exception\_Handling\_Propogation

**{**

    static void show2**()**

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        PrintWriter pw **=** **new** PrintWriter**(**"A.txt"**);**

        pw**.**print**(**"Vishal Soner"**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        A**.**show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        B**.**show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input : (At a Compile Time)

error: unreported exception FileNotFoundException; must be caught or declared to be thrown

               PrintWriter pw = new PrintWriter("A.txt");

                                ^

---------------------------------------------------------------------------------------------

**import** java**.**io**.\*;**

class Q26\_Exception\_Handling\_Propogation

**{**

    static void show2**()** throws FileNotFoundException

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        PrintWriter pw **=** **new** PrintWriter**(**"A.txt"**);**

        pw**.**print**(**"Vishal Soner"**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()**

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input : (At a Run Time)

error: unreported exception FileNotFoundException; must be caught or declared to be thrown

                show2();

---------------------------------------------------------------------------------------------

**import** java**.**io**.\*;**

class Q27\_Exception\_Handling\_Propogation

**{**

    static void show2**()** throws FileNotFoundException

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

        PrintWriter pw **=** **new** PrintWriter**(**"A.txt"**);**

        pw**.**print**(**"Vishal Soner"**);**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()** throws FileNotFoundException

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

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

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

input : (At a Compile Time)

error: unreported exception FileNotFoundException; must be caught or declared to be thrown

                show1();

                     ^

class Q29\_Exception\_Handling\_Propogation

**{**

    static void show2**()** throws FileNotFoundException

**{**

        System**.**out**.**println**(**"Show - 2.1"**);**

**try**

**{**

            PrintWriter pw **=** **new** PrintWriter**(**"A.txt"**);**

            pw**.**print**(**"Vishal Soner"**);**

**}**

**catch(**Exception e**)**

**{**

            System**.**out**.**println**(**"Catch Block"**);**

**}**

        System**.**out**.**println**(**"Show - 2.2"**);**

**}**

    static void show1**()** throws FileNotFoundException

**{**

        System**.**out**.**println**(**"Show - 1.1"**);**

        show2**();**

        System**.**out**.**println**(**"Show - 1.2"**);**

**}**

    public static void main**(**String args**[])** throws FileNotFoundException

**{**

        System**.**out**.**println**(**"Vishal Soner - 1"**);**

        show1**();**

        System**.**out**.**println**(**"Vishal Soner - 2"**);**

**}**

**}**

Vishal Soner - 1

Show - 1.1

Show - 2.1

Show - 2.2

Show - 1.2

Vishal Soner - 2

class Q30\_Exception\_Handling\_Catch\_Multiple\_Parameter

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** ArithmeticException | NumberFormatException e**)**

**{**

            System**.**out**.**println**(**"Exception Occur"**);**

**}**

**}**

**}**

Case - 1

input  : 100 20

Output : 0

Case - 2

input  : 100 0

Output : Exception Occur

Case - 3

input  : 100 abcd

Output : Exception Occur

---------------------------------------------------------------------------------------------

class Q31\_Exception\_Handling\_Catch\_Multiple\_Parameter

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** ArithmeticException e**)**

**{**

            System**.**out**.**println**(**"ArithmeticException Exception Occur - 1"**);**

**}**

**catch(** ArithmeticException e**)**

**{**

            System**.**out**.**println**(**"ArithmeticException Exception Occur - 2"**);**

**}**

**}**

**}**

 error: exception ArithmeticException has already been caught

                catch( ArithmeticException e)

                ^

---------------------------------------------------------------------------------------------

class Q32\_Exception\_Handling\_Catch\_Multiple\_Parameter

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** ArithmeticException e**)**

**{**

            System**.**out**.**println**(**"ArithmeticException Exception Occur - 1"**);**

**}**

**catch(** Exception e**)**

**{**

            System**.**out**.**println**(**"Exception Occur"**);**

**}**

**}**

**}**

Case - 1

Input  :  100 20

Output :  5

Case - 2

Input  :  100 abcd

Output :  Exception Occur

Case - 3

Input  :  100 0

Output :  Exception Occur

class Q33\_Exception\_Handling\_Catch\_Multiple\_Parameter

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** Exception e**)**

**{**

            System**.**out**.**println**(**"Exception Occur"**);**

**}**

**catch(** ArithmeticException e**)**

**{**

            System**.**out**.**println**(**"ArithmeticException Exception Occur - 1"**);**

**}**

**}**

**}**

error: exception ArithmeticException has already been caught

                catch( ArithmeticException e)

                ^

class Q34\_Exception\_Handling\_Catch\_Multiple\_Parameter

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** ArithmeticException | Exception e**)**

**{**

            System**.**out**.**println**(**"ArithmeticException Exception Occur - 1"**);**

**}**

**}**

**}**

error: Alternatives in a multi-catch statement cannot be related by subclassing

                catch( ArithmeticException | Exception e)

                                             ^

---------------------------------------------------------------------------------------------

class Q35\_Exception\_Handling\_toString

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** Exception e**)**

**{**

            System**.**out**.**println**(**e**.**toString**()** **);**

**}**

**}**

**}**

Case - 1

Input  :  100 20

Output :  5

Case - 2

Input  :  100 abcd

Output :  java.lang.NumberFormatException: For input string: "adcd"

Case - 3

Input  :  100 0

Output :  java.lang.ArithmeticException: / by zero

Case - 4

Input  :  100

Output :  java.lang.ArrayIndexOutOfBoundsException: 0

class Q36\_Exception\_Handling\_getMessage

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** Exception e**)**

**{**

            System**.**out**.**println**(**e**.**getMessage**()** **);**

**}**

**}**

**}**

Case - 1

Input  :  100 20

Output :  5

Case - 2

Input  :  100 abcd

Output :  For input string: "abcd"

Case - 3

Input  :  100 0

Output :  / by zero

Case - 4

Input  :  100

Output :  1

class Q37\_Exception\_Handling\_printStackTrace

**{**

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

**{**

**try**

**{**

            int x **=** Integer**.**parseInt**(** args**[**0**]** **);**

            int y **=** Integer**.**parseInt**(** args**[**1**]** **);**

            System**.**out**.**println**(**"X/Y : " **+** **(**x**/**y**));**

**}**

**catch(** Exception e**)**

**{**

            e**.**printStackTrace**();**

**}**

**}**

**}**

Case - 1

Input  :  100 20

Output :  5

Case - 2

Input  :  100 abcd

Output :

java.lang.NumberFormatException: For input string: "abcd"

        at java.lang.NumberFormatException.forInputString(Unknown Source)

        at java.lang.Integer.parseInt(Unknown Source)

        at java.lang.Integer.parseInt(Unknown Source)

        at Q37\_Exception\_Handling\_printStackTrace.main(Q37\_Exception\_Handling\_printStackTrace.java:8)

Case - 3

Input  :  100 0

Output :

java.lang.ArithmeticException: / by zero

        at Q37\_Exception\_Handling\_printStackTrace.main(Q37\_Exception\_Handling\_printStackTrace.java:11)

Case - 4

Input  :  100

Output :  java.lang.ArrayIndexOutOfBoundsException: 1

---------------------------------------------------------------------------------------------