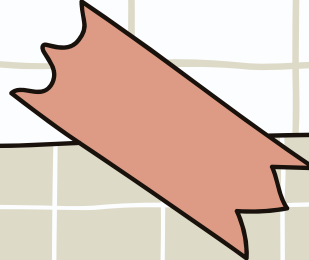


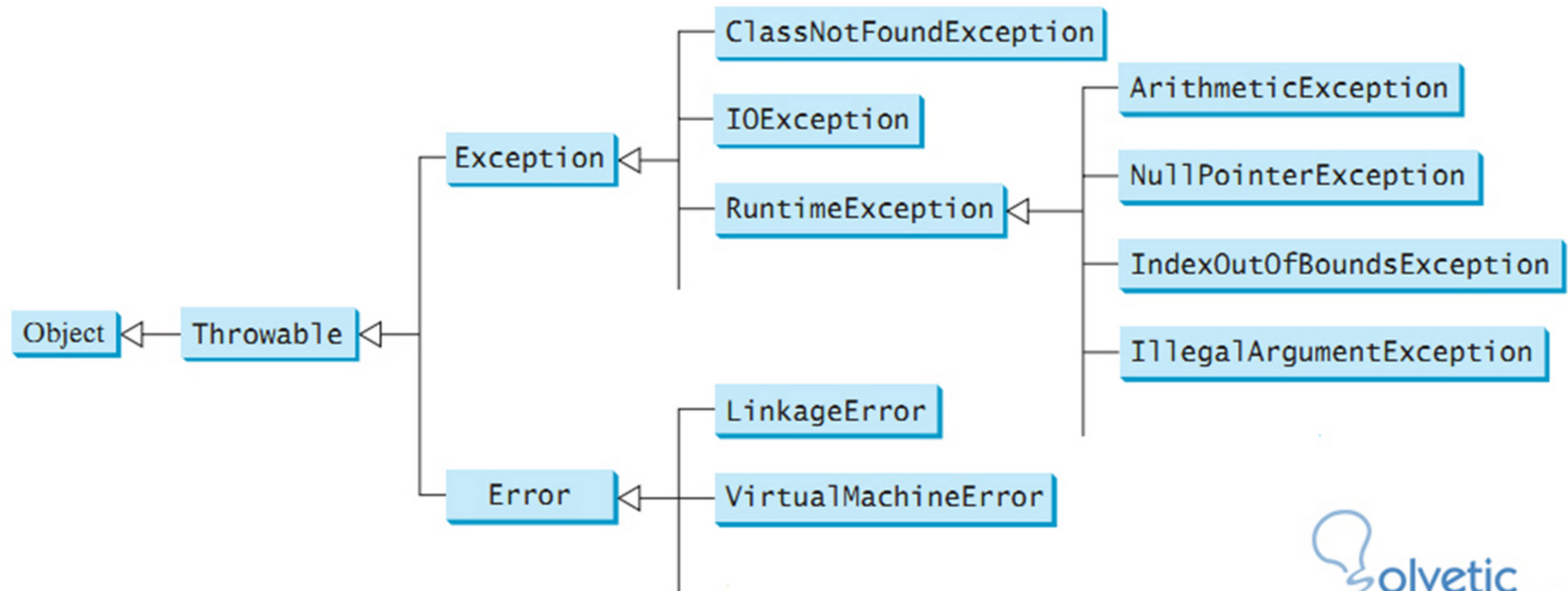


# Types of Exceptions



Group 1:  
Ruben Benavides  
Pamela Chipe  
Leonel Tipan  
Jeffrey Manobanda  
Anthony Morales  
Caetano Flores

# Exceptions Structure



# Main Types

1

## RuntimeException

These exceptions occur because of developers failures, so that managing these ones is not something user has to do.

2

## IOException

These exceptions occur due to factors beyond the developer's control, so these must be handled

3

## ClassNotFoundException

Occurs when the ClassLoader tries to read the description of a class, and the definition of that class is not found.

# **RuntimeException (Implicit)**

## **SubClasses**



- **ArithmeticException**
- **NullPointerException**
- **IndexOutOfBoundsException**
- **NumberFormatException**

# IndexOutOfBoundsException

```
public class Draft {  
  
    /**  
     * @param args the command line arguments  
     */  
    public static void main(String[] args) {  
        // TODO code application logic here  
        int studentsIds[] = new int[2];  
        for(int i = 0; i <= 3; i++){  
            studentsIds[i] = i;  
        }  
    }  
}
```

run:

Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 2 out of bounds for length 2  
at draft.Draft.main(Draft.java:17)

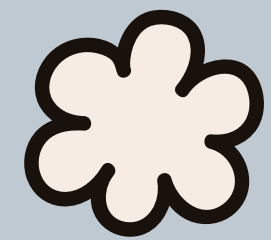
C:\Users\DARÍO BENAVIDES\AppData\Local\NetBeans\Cache\17\executor-snippets\run.xml:111: The following error occurred whi

C:\Users\DARÍO BENAVIDES\AppData\Local\NetBeans\Cache\17\executor-snippets\run.xml:68: Java returned: 1

BUILD FAILED (total time: 0 seconds)

# **IOException**

- **Generally, it is produced in the input and output data.**



- **As was mentioned, it is needed to be handled obligatory.**
  - **Then we use a catch.**
  - **Let's take a look**

# IndexOutOfBoundsException

```
19 public static void main(String[] args) {  
20     // TODO code application logic here  
21     BufferedReader bufferedReader;  
22     bufferedReader = new BufferedReader(new InputStreamReader(in: System.in));  
23     bufferedReader.readLine();  
24 }  
25  
26 }
```

run:

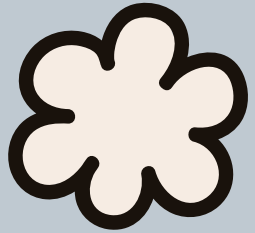
```
Exception in thread "main" java.lang.RuntimeException: Uncompilable code - unreported exception java.io.IOException; must  
    at draft.Draft.main(Draft.java:1)  
C:\Users\DARÍO BENAVIDES\AppData\Local\NetBeans\Cache\17\executor-snippets\run.xml:111: The following error occurred while  
C:\Users\DARÍO BENAVIDES\AppData\Local\NetBeans\Cache\17\executor-snippets\run.xml:68: Java returned: 1  
BUILD FAILED (total time: 39 seconds)
```

# IndexOutOfBoundsException

```
public static void main(String[] args) {  
    // TODO code application logic here  
    BufferedReader bufferedReader;  
    bufferedReader = new BufferedReader(new InputStreamReader(in: System.in));  
  
    try{  
        bufferedReader.readLine();  
    } catch (IOException ioe){  
        System.out.println(x: "error");  
    }  
  
}
```



## **ClassNotFoundException**

-  **Should not be handled, because in this case, it would be a failure from the developer.**

# ClassNotFoundException

```
package com.journaldev.exceptions;

public class DataTest {

    public static void main(String[] args) {
        try {
            Class.forName("com.journaldev.MyInvisibleClass");

            ClassLoader.getSystemClassLoader().loadClass("com.journaldev.MyInvisibleClass");

            ClassLoader.getPlatformClassLoader().loadClass("com.journaldev.MyInvisibleClass");
        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        }
    }
}
```

```
java.lang.ClassNotFoundException: com.journaldev.MyInvisibleClass
    at java.base/jdk.internal.loader.BuiltinClassLoader.loadClass(BuiltinClassLoader.java:581)
    at java.base/jdk.internal.loader.ClassLoaders$AppClassLoader.loadClass(ClassLoaders.java:178)
    at java.base/java.lang.ClassLoader.loadClass(ClassLoader.java:496)
    at java.base/java.lang.Class.forName0(Native Method)
    at java.base/java.lang.Class.forName(Class.java:292)
    at com.journaldev.exceptions.DataTest.main(DataTest.java:7)
```

**<https://selenium-by-arun.blogspot.com/2014/08/223-handling-arrayindexoutofboundsexcep.html>**

**<https://www.studocu.com/es-mx/document/instituto-tecnologico-de-toluca/programacion-orientada-a-objetos/tema-5-poo-excepciones/25403848>**