FACULTY OF Engineering & Technology

Exception Handling

1. Exception are the run time errors which interrupts the normal execution of the program and terminate it abnormally

2. No matter which type of exception it is, it always occur at run time
3. An exception is an event that disrupts the normal flow of the program.
4. It is an object which is thrown at runtime.
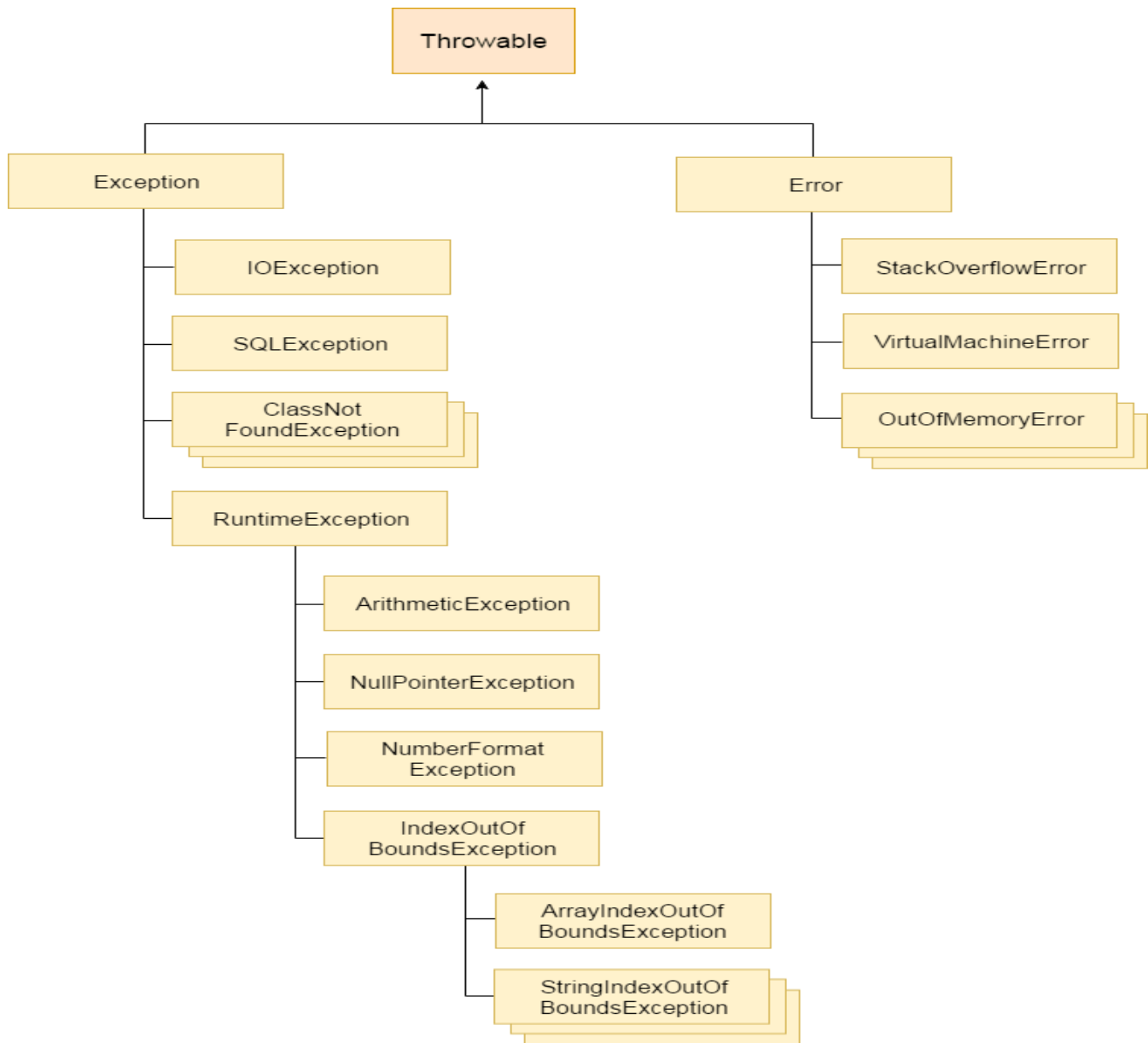
Java Exception classes
java.lang.Throwable class is the mother class of all Java Exception which is inherited by two subclasses:
1. Exception
2. Error.

Types of Java Exceptions
There are mainly two types of exceptions: checked and unchecked. Here, an error is considered as the unchecked exception.
1. Checked Exception
2. Unchecked Exception
3. Error

Throwable

Exception

- IOException
- SQLException
- ClassNot FoundException
- RuntimeException
  - ArithmeticException
  - NullPointerException
  - NumberFormat Exception
  - IndexOutOf BoundsException
    - ArrayIndexOutOf BoundsException
    - StringIndexOutOf BoundsException

Error

- StackOverflowError
- VirtualMachineError
- OutOfMemoryError

Checked and Unchecked Exceptions

1) Checked Exception

The classes which directly inherit Throwable class except RuntimeException and
Error are known as checked exceptions e.g. IOException, SQLException etc.
Checked exceptions are checked at compile-time.

2) Unchecked Exception

The classes which inherit from RuntimeException are known as unchecked exceptions e.g.
ArithmeticException, NullPointerException, ArrayIndexOutOfBoundsException etc.
Unchecked exceptions are not checked at compile-time, but they are checked at runtime.

3) Error

Error is irrecoverable e.g. OutOfMemoryError, VirtualMachineError, AssertionError etc.

Keywords used in Exception Handling

1. try
2. catch
3. throw
4. throws
5. finally