Exception Handling -Java

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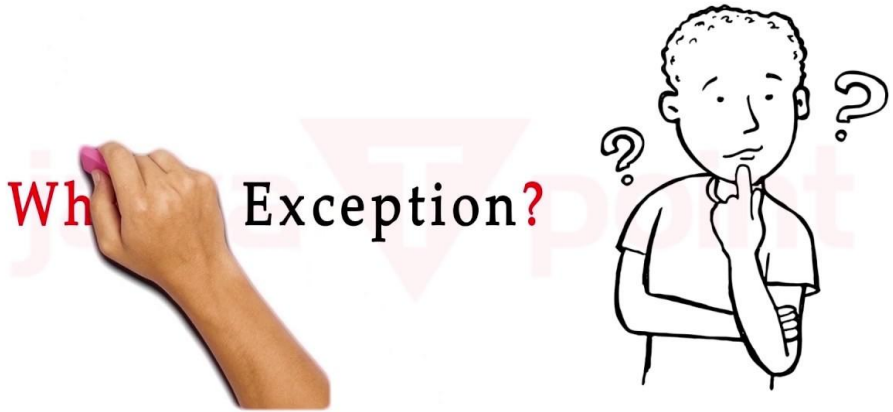
What is Exception?

- Exception is an abnormal condition in java, an exception is an event that disrupts the normal flow of the program.



What is Exception Handling?

- Exception handling is a mechanism to handle runtime errors such as

  Class Not Found Exception,

  iO Exception,

  SQl Exception

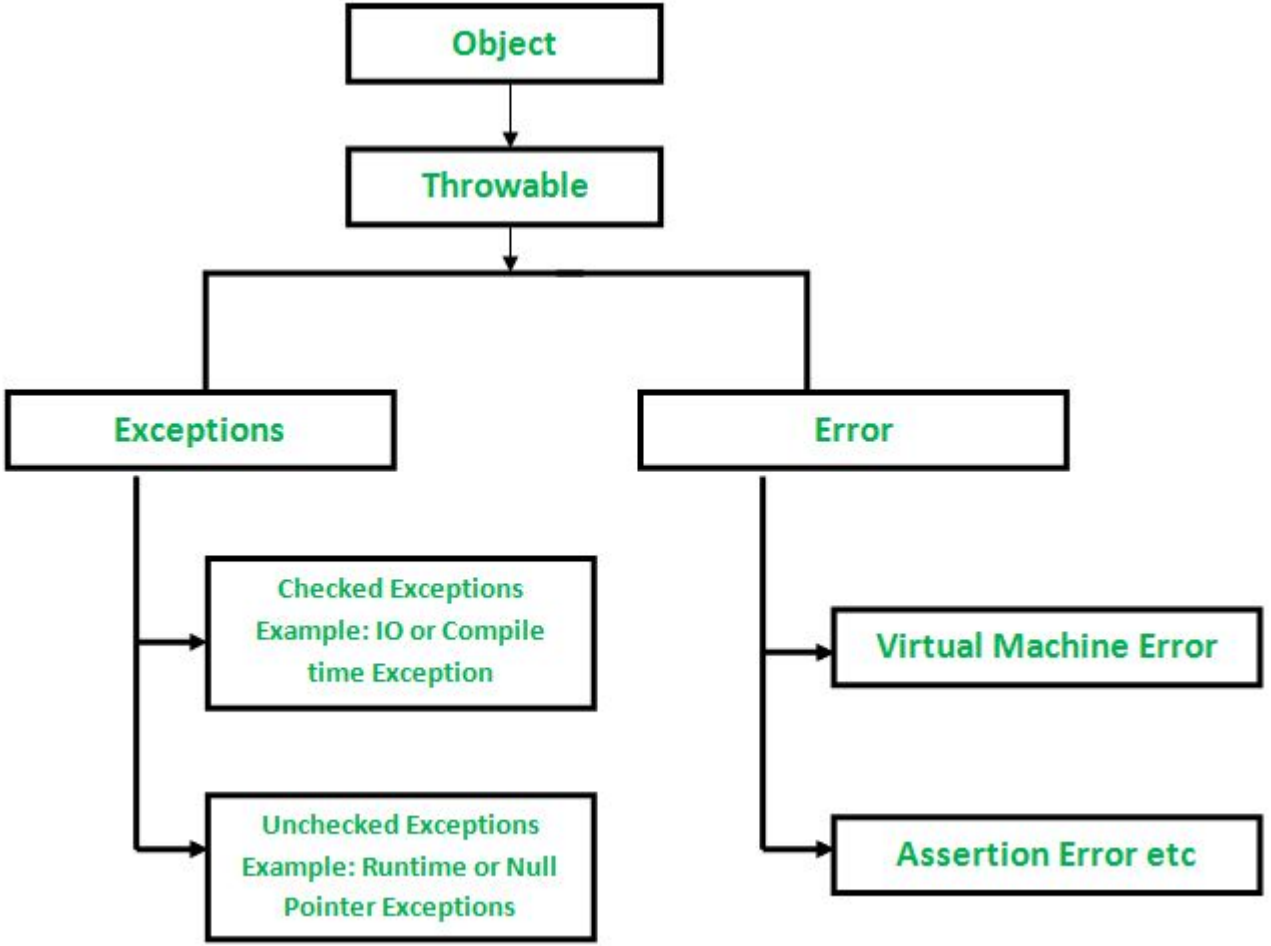
Advantages of Exception Handling

- The core advantage of Exception handling is to maintain the normal flow of the application.
- An Exception normally disrupt the normal flow of the application that is why we use Exception handling.
- Grouping and differentiating Error types

Errors VS Exception

Errors	Exception
Impossible recover from error	Possible to recover from Exception
Errors are of unchecked type	It can be of checked or unchecked
Happen at runtime	Can happen at compile & runtime
Caused by the environment on which application is run	Caused by application

Hierarchy of Exception Handling



Type of Exception Handling

There are mainly 2 types of Exception

1. Checked Exception
2. Unchecked Exception

Checked Exception

The class which directly inherit throwable class except **runtime exception & error** are know as checked Exception

Ex : IO Exception

Checked Exception are checked at compile time.

Checked exception cannot simply be ignore, the programmer should handle the Exception.

Unchecked Exception

The class which is inherit runtime Exception are known as unchecked Exception.

Ex : Arithmetic Exception

Null Pointer Exception

Array outer bound Exception

Unchecked Exception are checked at runtime

Runtime Exceptions are ignore at the time of compilation.

Java Exception Handling Keywords

There are 5 keywords which are used in Exception Handling

1. Try -: The “**Try**” keyword is used to specify a block where we should place exception code.

   The try keyword must be followed by either catch or finally.Its means we can not use try block alone.

2. Catch -: The “**Catch**” block is used to handle the Exception.

   It must be preceded by try block which means we can not use catch block alone.

cont..

3. Finally -: The “**finally**” block is used to execute the important code of the program.

   It is executed where an Exception is handle or not.

4. Throw -: The “**Throw**” keyword is used to throw an exception

5. Throws -: The “**Throws**”keyword is used to declare Exception. It doesn’t throw an Exception.

   It’s specify that there may occur an Exception in the method. And it is always used with method signature.

Common Role of Exception Handling

- Do not catch at all errors.
- Do not catch Exception if you not handle it.
- Catch most specific Exception.
- Never throw any Exception in finally block

Conclusion

Java Exceptions are great way of **handling exceptions**. It ensures program integrity in any condition. Programmers should always try to use **exceptions** as it makes their code more reliable.


THANK
YOU!