

Exception Handling:

1) Types of Exception:

- 1) Error:
 - 1) Irrecoverable
 - 2) Eg: OutOfMemoryError
- 2) Checked Exceptions:
 - 1) They will inherit the Throwable class but not the RuntimeException and Error class
 - 2) They are checked during compile-time
 - 3) Eg: IOException, SQLException
- 3) Unchecked Exception:
 - 1) Inherit the RuntimeException class
 - 2) They are checked at Runtime
 - 3) Default message is thrown by the Java Runtime System
 - 4) Eg: ArrayIndexOutOfBoundsException

2) Handling Mechanism:

- 1) Try-Catch Block:
 - 1) The statements that tends to throw any sort of exceptions must be placed inside the try block
 - 2) Once the exception is encountered inside the try block it will stop the execution and will go to the catch blocks and will execute the exception matched catch block
 - 3) The first exception that occurs gets caught, no matter after that exception any number of exception occurs
- 4) Syntax:

```
1) try{
    -----
    -----
}
catch(Exception1 e){
    -----
}
catch(Exception2 e){
    -----
}

2) try{
    -----
    -----
}
catch(Exception1 | Exception2 e){
    -----
}
```

- 2) Throw:
 - 1) It is used to manually throw the exception
 - 2) Can throw only one exception at a time
 - 3) It is used inside a function/method
 - 4) Used to throw exceptions explicitly
 - 3) Throws:
 - 1) It is used inside the function definition
 - 2) It can be used to throw multiple exceptions separated by comma(,)
 - 4) Finally:
 - 1) It will execute no matter exception is caught or not
 - 2) Followed by try-catch block
- 3) **Custom Exception:**
- 1) Refer to the code-files

Hierarchy:

