Exception Handling
Handling the exceptions.

Program ==> we will normally get
2 types of errors

1) Syntax Error
-> It occurs due to wrong usage of the java syntax
-> Syntax error normally occurs before we run the java
program

2) Run Time Error ==> Exception

-> It occurs after we run the program
-> whenever we run the program we get an error, Run
time error

ArrayIndexOutOfBoundsException ==> we get this exception
whenever we try to store more elements in the array
compared of the size of the array

NullPointerException ==> we get this exception
whenever we try to perform some operation on a null
value

ArithmeticException ==> we get this exception whenever
we are dividing a number by 0

try block and catch block

finally block

Resource Deallocation Code ==> The code written to deallocate the
resources(connection, database, network, ...)

Should be always kept inside finally block.

finally block code will 100% run even when there is
exception in the code OR even when there is no
exception in the code

throw and throws

throw keyword is used to generate an exception
manually

exception ==> handle that exception
developer ==> generate the exception ==> handle that exception

whenever we get exception ==>
remaining part of the code doesn't continue

throw ==> to generate an exception
throws ==. the exception that is generate should be handled by
the method who is calling it

throw new Exception("Invalid Amount!");

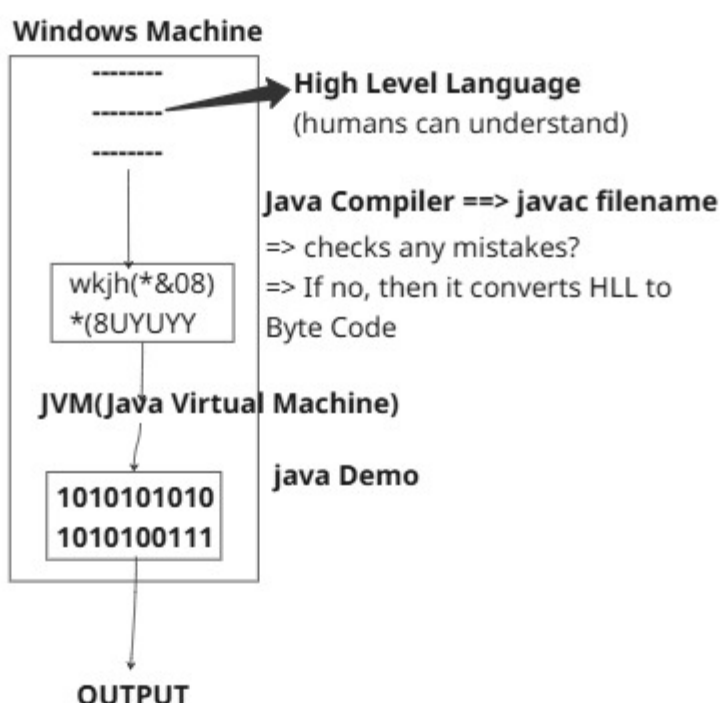**throw new** AmountInvalidException("Invalid Amount!");

OR

throw new InvalidAmountException("Invalid Amount!");

There is only one person who can store the custom error message
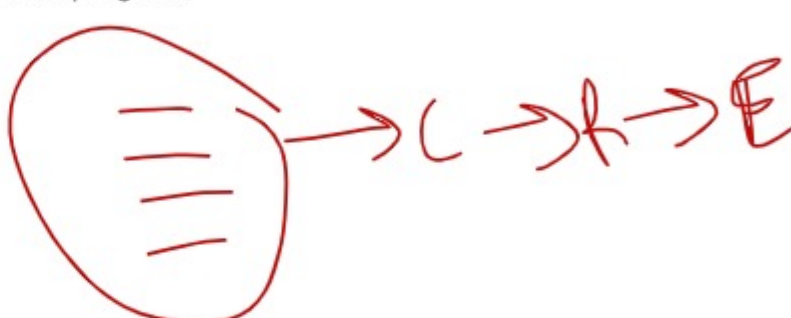and give it when you ask

cosntcruot of Exception class

Checked and Unchecked Exceptions:-

How a Java program runs:-

Windows Machine

--------   **High Level Language**
--------   (humans can understand)

Java Compiler ==> javac filename
=> checks any mistakes?
wkjh(*&08)   => If no, then it converts HLL to
*(8UYUYY   Byte Code

JVM(Java Virtual Machine)

1010101010   java Demo
1010100111

OUTPUT

Checked Exception
=> Are the exceptions that java informs to us at the Compile
time(before we run the program)

Unchecked Exception
=> Are the exceptions that occurs after we run the
program and compiler cant identify it during the
compile time.
Ex:
ArrayIndexOutOfBoundsException
NullPointerException
ArithemticException

FileInputStream f = **new** FileInputStream
    ("C:\\Users\\udayk\\OneDrive\\Desktop\\Observability.docx");

FileNotFoundException

Checked Exception

How to write the data to a file:-

1) FileWriter class

Find the first non repeatng character

s = "swiss"