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An exception is an unexpected event that occurs during program execution.

It affects the flow of program instructions which can cause the program to terminate abnormally.

[•] Reasons:

An unexpected occur for many reasons. Some of them are:

- Invalid User Input
- Device failure
- Loss of network connection.
- Physical limitations (out of disk memory)
- Code errors
- Opening an unavailable file

→ Java Runtime Exception :

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A runtime exception happens due to programming error.

They are also known as unchecked Exceptions.

These exceptions are not checked at compile-time but run-time.

[•] Some of the common runtime exceptions are :

→ Null Pointer access [missing the initialization of a variable] - Null Pointer Exception.

→ Out-of-bound array access -
Array Index Out Of Bounds Exception

→ Dividing a number by 0 -
Arithmetic Exception.

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You can think about in this way.

"If it is a runtime exception, it is your fault".

→ Java IO Exception Exceptions :

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An IO Exception also known as checked exception.

They are checked by the compiler at the compile-time and the programmer is promoted to handle these exceptions.

Some of the examples of checked exceptions are:

- Trying to open a file that doesn't exist result in

FileNotFoundException.

- Trying to read past end of a file.