

Difference Between Error and Exception in JAVA

The table provided below shows the difference between error and exception in JAVA based on recoverable, timing, etc. These differences help understand Errors and Exceptions in Java for the upcoming GATE exam and provide a strong base for exam preparation.

Key Differences Between Error and Exception in JAVA

Error	Exception
An error can be considered an explosion that occurs when there is no defense or checks against a specific failure condition.	An exception can be thought of as the last line of defense against errors.
An error can potentially terminate your program and possibly your entire system.	When an exceptional case occurs, an exception has the ability to disrupt the normal flow of the program and redirect it to another location.
Errors are classified into three types: syntax errors, runtime errors, and logical errors.	Exceptions are classified into two types: Exceptions, both checked and unchecked
At runtime, an error cannot be handled.	At runtime, an exception can be handled.
An error can occur both during compilation and during runtime.	Even though all Exceptions occur during runtime, checked exceptions can be detected at compile time.
An error is an unpredictable event that no one can predict or control.	An exception can be guessed, handled, and used to alter the program's original flow.

What is Error?

An error is a sudden occurrence that cannot be handled at runtime. Errors can cause your program to crash. Most programs are incapable of recovering from errors. Errors cannot be detected or corrected. They are usually the result of the environment in which the code is running. Based on this concept, various questions can be seen in the previous year's GATE CSE exam. Error handling is beyond the scope of a program. It is possible to handle it externally.

Errors are classified into three types:

- Syntax Error
- Runtime Error
- Logical Error

What is an Exception?

An exception is an event that occurs that can disrupt the normal flow of program instructions. Exceptions can be caught and handled, so the program continues to work for the exceptional situation rather than stop it.

If the exception is not handled properly, the program may be terminated. Exceptions can be used to indicate that a program error has occurred. There are 2 types of Exceptions:

- Checked Exceptions
- Unchecked Exceptions

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