

Date: 16-03-2022

1. Java program on 5/0. What will be the error?

Ans: Arithmetic Exception.

2. Understand format exceptions

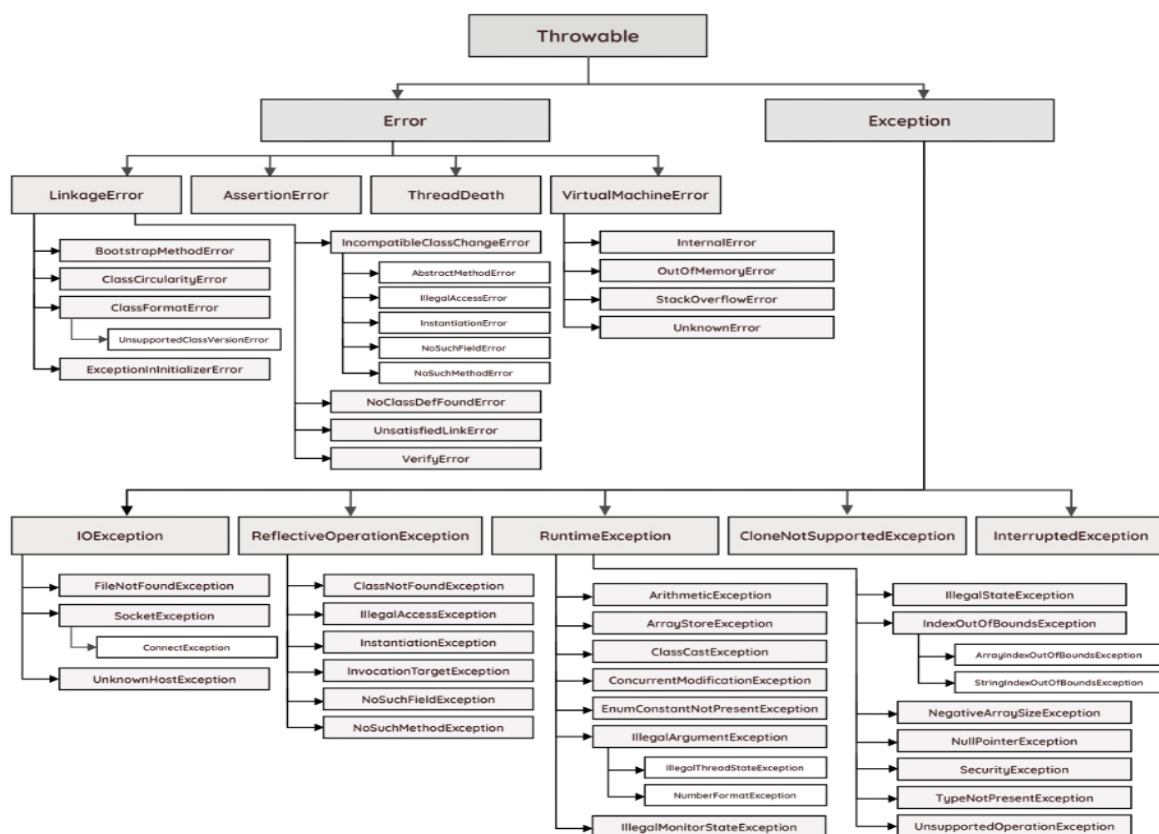
Ans: To handle this exception, try-catch blocks can be used. While operating upon strings, there are times when we need to convert a number represented as a string into an integer type. The method generally used to convert String to Integer in Java is `parseInt()`.

3. Is `arrayindexoutof bound` and `indexoutofbound` same?

Ans: `IndexOutOfBoundsException` is the super class of `ArrayIndexOutOfBoundsException` (thrown when accessing invalid index in an array) and `StringIndexOutOfBoundsException` (thrown when accessing invalid index in a String).

4. Understand the hierarchy of exceptions

Ans:



5. Can catch be written without a try block?

Ans: No

6. Can a try block be written without a catch block?

Ans: Yes, It is possible to have a try block without a catch block by using a final block.

7. Can a finally be written without try,catch?

Ans: Yes, it is not mandatory to use catch block with finally but Finally cannot be used without a try block.

8. Predefined functions in collections

Ans: A collection method is a built-in function or procedure that operates on collections and is called using dot notation.

You can use the methods EXISTS, COUNT, LIMIT, FIRST, LAST, PRIOR, NEXT, EXTEND, TRIM, and DELETE to manage collections whose size is unknown or varies.

9. Underlying data structures of linkedlist and arraylist

Ans: Both ArrayList and LinkedList are two different implementations of the List interface.

ArrayList is a resizable-array

implementation, whereas LinkedList is a Doubly-linked list implementation of the List interface. ArrayList is a resizable

array implementation in java. The backing data structure of ArrayList is an array of Object class

10. Advantages and disadvantages of arraylist

Ans: Advantages:

- ❖ You can define ArrayList as a resizable array.
- ❖ Elements can be inserted at or deleted from a particular position.
- ❖ The ArrayList class has many methods to manipulate the stored objects.
- ❖ If generics are not used, ArrayList can hold any type of objects.

Disadvantages:

- ❖ A possible disadvantage of ArrayList is that it holds only object types and not primitive types (eg, int).
- ❖ To use a primitive type in an ArrayList, put it inside an object or use the wrapper classes (eg, Integer, Double, Character, ...)

11. What are iterators and cursors?

Ans: To me, an iterator allows iteration of a container with no knowledge of the container itself. A cursor, on the other hand, allows iteration of a container as well but has implementation details specific to the container type, so it does keep a reference to the container.

12. What are list iterator, iterator, enumerator?

Ans:

Enumerator:

- ❖ It can be applied only to the legacy classes.
- ❖ Single direction, i.e., we can traverse elements present in the collection only in the forward direction.
- ❖ We can only perform the read operation.
- ❖ By calling elements() method present in the vector class.

List Iterator:

- ❖ It can be applied to the only list interface.
- ❖ Bidirectional, i.e. we can traverse elements present in the collection both in forward and backward directions.
- ❖ We can perform read, remove, add, and replace operations.
- ❖ By calling the listIterator() method present in the list interface.

Iterator:

- ❖ It can be applied to any collection interface.
- ❖ Single direction, i.e. we can traverse elements present in the collection only in the forward direction.
- ❖ We can perform a read and remove operation.
- ❖ By calling the iterator() method present in any collection interface.

13. Difference between comparable and comparator

Ans:

Comparable:

- ❖ Comparable provides a single sorting sequence. In other words, we can sort the collection on the basis of a single element such as id, name, and price.
- ❖ Comparable affects the original class, i.e., the actual class is modified.
- ❖ Comparable provides compareTo() method to sort elements.
- ❖ Comparable is present in the java.lang package.
- ❖ We can sort the list elements of Comparable type by Collections.sort(List) method.

Comparator:

- ❖ The Comparator provides multiple sorting sequences. In other words, we can sort the collection on the basis of multiple elements such as id, name, and price etc.
- ❖ Comparator doesn't affect the original class, i.e., the actual class is not modified.
- ❖ Comparator provides compare() method to sort elements.
- ❖ A Comparator is present in the java.util package.
- ❖ We can sort the list elements of Comparator type by Collections.sort(List, Comparator)

method.

14. List down the security breaches that can happen in the frontend & backend.

Ans: Injection

Broken Authentication

Sensitive Data Exposure

XML External Entities (XXE)

Broken Access Control

Security Misconfiguration

Cross-Site Scripting (XSS)

Insecure Deserialization.