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

Ans: When 5 divided by 0 it throws an Arithmetic Exception.

2. Understand format exceptions.

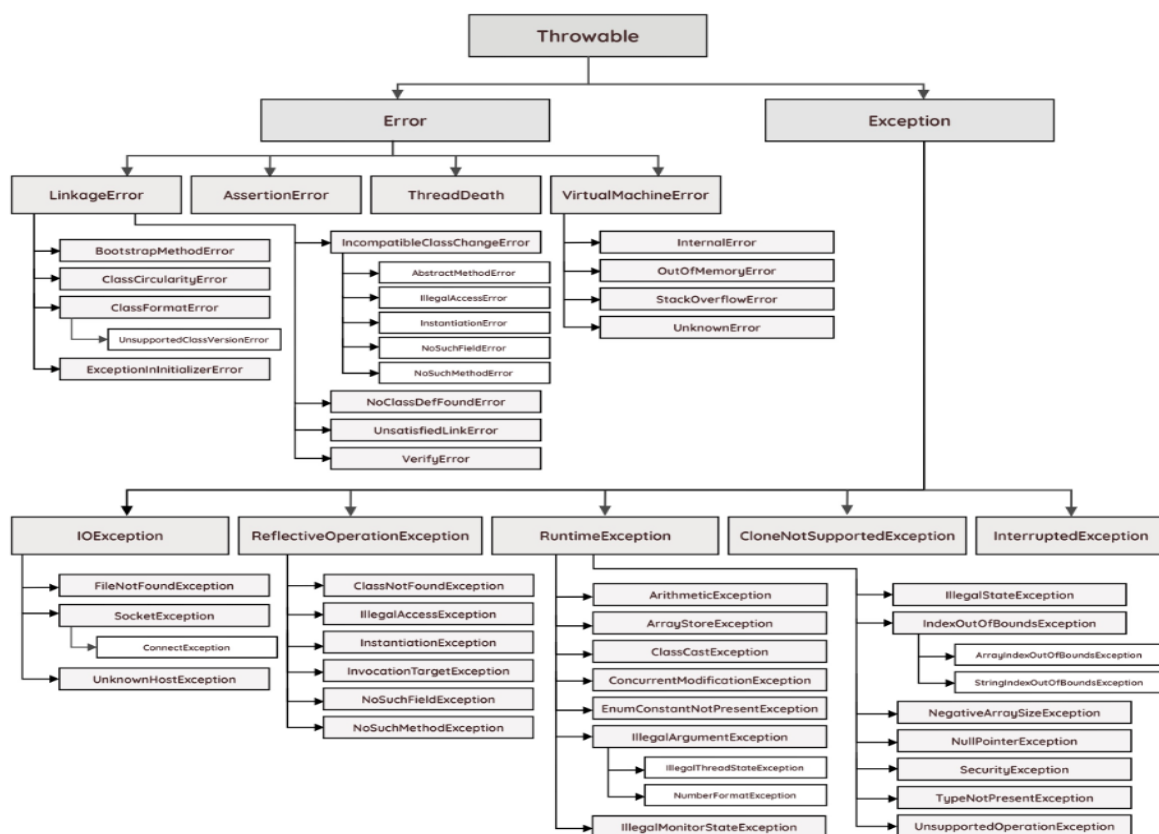
Ans: Format Exception is thrown or raised while operating on strings i.e., when the number of string type need to be converted to an integer type. This exception can be handled using a try-catch block.

3. Is arrayindexoutof bound and indexoutofbound same?

Ans: IndexOutOfBoundsException is the super class of ArrayIndexOutOfBoundsException. ArrayIndexOutOfBoundsException is thrown when accessing invalid index in an array and StringIndexOutOfBoundsException is 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, we can't write a catch block without writing a try block.

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.

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

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

8. Predefined functions in collections

Ans: A Collection method is a predefined function or procedure that operates on Collections. The methods are EXISTS, COUNT, LIMIT, FIRST, LAST, PRIOR, NEXT, EXTEND, TRIM, and DELETE.

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.

10. Advantages and disadvantages of arraylist

Ans: Advantages:

- ❖ 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: An iterator allows iteration of a container with no knowledge of the container itself. A cursor 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.