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Impact trainee

1) Difference between Interface and Classes

INTERFACE:

- i. Interface is created with keyword interface
- ii. Interface may contain data member method. But method not defined inside interface
- iii. Member of interface can always be constant
- iv. Interface always be public

CLASS:

- i. Class is created with keyword class
- ii. Class contains datamember and method. Method are defined inside clas
- iii. Members of class can be constant or final
- iv. Class use access specifiers like public , private , protected

2) Interface and its types

Interface is similar as class but it is constant.

There are 2 typs of interface:

Functional interface

Marker interface

i) Functional interface

When an interface contains only one abstract method

Types of functional interface

- Runnable
- Comparable
- Callable

- Item listener
- Action listener

ii) Marker interface

If an interface is empty it is called marker interface

Types of marker interfaces

- Cloneable
- Formattable
- Iterable
- Serializable
- Transferable
- Drawable

3) Dictionary in Java

Dictionary is abstract class that represents a key/value storage repository and operates like map. Once the value is stored in dictionary we can retrieve it by using its key.

4) Why interface is base?

An interface in Java programming language is defined as an abstract type used to specify the behaviour of class. Interface in Java is blueprint of class. Interface in Java is mechanism to achieve abstraction. Java does not support multiple inheritance in the case of class, by using an interface it can achieve multiple inheritance.

5) Throw and Throws

Throw: Throw keyword is used to throw an exception from any block of code

Throws: Throws keyword is used in the signature of method to indicate that this method throws one of the listed types exceptions. The caller to these methods has to handle the exception using try-catch block.

6) Why map is not in collection?

Collection has sub-interfaces such as set, list and queue. But map is altogether a separate interface. Map works with key/value pairs, while other collections work with just values.

7) Hash map, Hash set, Tree set, Tree map

Hash map:

- A hash table-based implementation of the Map Interface

- Stores key-value pairs in an array using hash codes

- Allows null keys and values

Hash set:

- A hash table-based implementation of the Set interface

- Stores unique elements in an array using hash codes

- Does not allow duplicate elements

Tree set:

- A tree-based implementation of the Set interface

- Stores unique elements in a sorted order

- Not Synchronized

Tree map:

- A tree-map implementation of the Map interface

- Stores key-value pairs in a sorted order based on keys

- Does not allow duplicate keys

8) Naming convention of Interface

Most of the interface ends with "able"

- Start with capital letter
- Use nouns or adjectives-nouns combinations
- We should not use verbs