Backend and Database Development

13 classes

Day 6 : May 7 2024

Java Technologies

Collection Framework with Data structure

Map : Map help use to store the data in the form of key-value pairs. Key is unique and value may be duplicate.

Map classes : below map classes directly or indirectly implements Map interface.

HashMap : UnOrder

LinkedHashMap : Maintain the order. LinkedHashMap internally extends HashMap

TreeMap : TreeMap internally implements SortedMap interface and that interface internally extends Map interface. So SortedMap interface provide algorithms to display the data ascending order as key. So in TreeMap we need key must same data types.

Hashtable : Hashtable is legacy class. By default all methods in hashtable are synchronized.

Queue : Queue is a type data structure which provide features as first in first out.

Queue classes : below queue classes directly or indirectly implements Queue interfaces.

ArrayList:

PriorityQueue :

According to polymorphism we can create the object of class and reference can type of interface.

Retrieve the data from collection one by one

1. Using for each loop or enhanced loop : we can use with set, list
2. Iterator interface : only forward direction : we can use with set, list
3. ListIterator interface : forward as well as backward direction : we can use with list
4. Enumeration interface : old legacy iterator we can use with Vector.

Map : we can’t use forEach loop, Iterator, ListIterator, Enumeration.

Collection Framework with Generics

Syntax

CollectionClass<Type> objectName = new CollectionClass<Type>();

Type can be Integer, Float, Character, String or user defined class object.

User defined class

Like Product, Customer, Order, Employee etc

Service class : this class contains business logic.