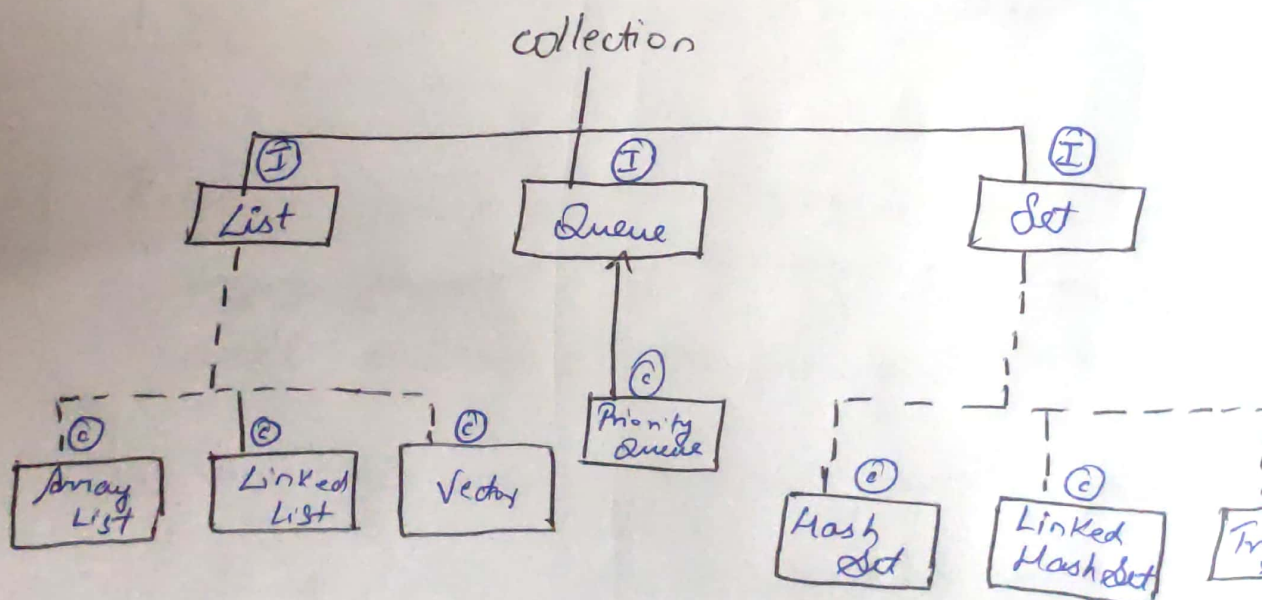


## 1] Difference between Array and collection?

Array	Collection
1] Array itself a data-structure and has some restrictions for entering the value.	1] Collection has various data-structure available providing freedom to user for manipulating of objects.
2] Arrays are not growable	2] Collections are growable.
3] Array elements cannot be removed.	3] In collections elements can be removed.
4] Array elements doesn't allow null values	4] Collection allow null values.

## 2] Explain various interfaces used in collection framework?



### 3] Difference between Array List and Vector?

S.No	Array List	Vector
1.	It is developed in v1.2	It is developed in v1.0
2.	It is non-legacy class	It is Legacy class
3.	Non-synchronized	It is Synchronized
4.	Not Thread Safe	Thread Safe.
5.	capacity is 50% of old capacity	capacity is 100% of old capacity.

### Difference Array List and Linked List?

S.No	Array List	Linked List
1.	Data Structure of Array List is growable.	Data Structure of list is doubly Linked List
2.	It is used for data retrieval and when insertion order is finally prioritised.	It is used for deletion of data (or) insertion order.
3.	It implements serialization, cloneable and Random access.	It implements Serialization, cloneable.



### 5] Difference between List Iterator & Iterator?

Sl No	Iterator	List Iterator
1.	Iterator is the unknown class which is used to fetch the data.	List Iterator is the interface extends Iterator.
2.	Iterator can only print forward.	List Iterator can present in forward and Backward.
3.	Iterator prints from first to Last.	List Iterator can print in any specified position.

### 6] Difference between Set and List?

List	Set
List is adopted when insertion order is high.	Set is adopted to remove duplicate values.
Deleting the elements is recommended we go to list.	Set is used when insertion order is not mandatory.
List is used when sorting is of Last priority.	Set is used when sorting is given priority.

~~7] Differ~~

## 7] Difference Hash Set and Tree Set?

Hash Set	Tree Set
* Data structure of hash set is hash table.	Data structure of Tree Set is Binary tree.
* Iteration order of hash set is Arbitrary.	Iteration order of tree set is Sorted.
* Single Null values are allowed.	Null values are not allowed.
* Hash Set process is fast compared to tree set.	Tree set processing time is slow compared to hash set.

## 8] Difference between Hash Set and Hash Map?

Hash Set	Hash Map
Duplicate values are not allowed in hash set.	Duplicate Keys are not allowed but duplicate values are allowed.
Single null value is allowed.	Single null key allowed but multiple null values are allowed.
In hash set we use add() method to add the data.	Here in Hash Map, we use put() method to add the data.



9] Difference b/w Hashmap and Hashtable ?

Hash Map	Hashtable
Hash Map is non-synchronized and not thread safe.	Hashtable is synchronized and thread safe.
Hash map allows one null key and multiple null values.	Hashtable doesn't allow any null key or value.
Hashmap is fast. Hashmap is traversed by iterator.	Hashtable is slow. Hashtable is traversed by Enumerator <del>or</del> & iterator.

10] Difference between Comparator and Comparable ?

Comparator	Comparable
i] Multiple sorting sequences	Provides single sorting sequence.
ii] Comparator doesn't affect the original class (i.e., the actual class is not modified).	ii] Comparable affects the original class (i.e., the actual class will be modified)
iii] Comparator is present in java.util package.	Comparable is present in java.util package.
iv] Comparator provides compareTo method to sort elements.	Comparable provides compareTo method to sort elements.

Compare To():

Compares this object with an ~~oi~~ object and returns an ~~object~~ integer.

Compare():

Compares the first object with second object and returns an integer.

11] How to Synchronize List Set and Map elements?

1] In order to get a synchronized list from an Array List, we use Synchronized List [List<T>] method.

2] collection. Synchronized Set() method is used to Synchronize Set elements.

3] collection. Synchronized map (HashMap) is used to Synchronize map elements.

12] What do you understand by fail fast and fail safe?  
In java, collection supports two types of iterators  
they are,

i] Fail Fast

ii] Fail Safe

Fail Fast:

The fail fast iterator aborts the operation as soon as it exposes failures and stops the entire operation comparatively.



Fail Safe:

Fail safe iterator doesn't aborts the operation in case of failure. Instead it tries to avoid failures as much as possible.

Difference between Array and ArrayList?

Array	ArrayList
Array is static in size.	ArrayList is dynamic in size.
Array does not accept null values.	ArrayList accepts null values.
It is fixed Length data structure.	It is variable length data structure.