

1. What is collection framework in java?

Ans:Collection framework is the combination of classes and interface which is used to store and manipulate the data in the form of object. It provide various classes like ArrayList, Haset, vector, stack And interfaces such as queue, List, Set.

2. What is difference between ArrayList and linkList?

ArrayList	LinkList
<ol style="list-style-type: none">1. ArrayList use a dynamic array.2. ArrayList is not efficient for manipulation.3. ArrayList is better to store and fetch the data.4. Array list provide random acces of data.5. It required less memory as it store only object.	<ol style="list-style-type: none">1. LinkList use a doubly linked list.2. LinkList is efficient for manipulation.3. Linklist is better for manipulation.4. LinkList does not provide random access of data.5. It required more memory as it store object and its address also.

3.What is the difference between iterator and listlterator?

Iterator	Listlterator
The iterator traverse the data into forward direction.	Listlterator traverse the data into bidirectional.
The Iterator can used in list, Queue and set.	Listlterator can be used oonly in list.
The Iterator van perform only remove operation while traversing the collection.	Listlterator can perform add, remove, and set operation while traversing the collection.

4.What is the difference between Iterator and enumeration ?

Iterator	Enumaration
It can traverse lagecy and non legacy element.	It can traverse only legacy element
It can perform only remove operation .	It can traverse operation
The iterator is fail – fast	The enumeration is not fail-fat.

5. What is the difference between list and set?

Ans: these both extend the collection interface, however these both have slight difference .

- The List can contain duplicate data, but a set can contain only unique data.
- The list is ordered collection so that it maintains insertion order, while in other hand set is preserved insertion order.
- List interface contains a single legacy class that is Vector class, while in other hand set doesn't have any legacy data class.
- It allows number of null values, in other hand set can contain only one null value.

6. What is the difference between HashSet and TreeSet?

Ans: Both HashSet and TreeSet implement the set interface in Java. But they have some difference in terms of their usages and properties.

Ordering: HashSet is an unordered collection of data in other hand TreeSet is the ordered collection of data.

Duplication: Both HashSet and TreeSet do not allow duplicate elements.

Implementation: HashSet is implemented by HashMap while TreeSet is self-balancing.

Storage: HashSet uses less memory as compared to TreeSet.

Iteration: HashSet doesn't provide guarantee for order of insertion of elements while TreeSet has order of insertion of data.

Usage: HashSet is suitable when order of elements is not needed to maintain, and also it is used when fast accessing of data is needed. In other hand TreeSet is suitable to use when it is important to maintain the order of insertion of elements.

7. What is the difference between Array and ArrayList?

Ans: Both array and ArrayList are used for storing the collection of elements but they have some difference when we talk about their properties and usages.

Type: Array can store primitive and object type data, in other hand ArrayList can store only objects.

Size: The size of array is fixed while the size of ArrayList is dynamic, it changes according to its use.

Mutability: Array is mutable means- we can change or modify the elements of array, while ArrayList is also mutable here we can modify the data by adding, removing and modifying elements.

Performance: the performance of Array is faster than ArrayList for certain operation such as accessing the element by its indexing order. In other hand the performance of ArrayList is slower than Array.

Method: Array have less method as compare to ArrayList, ArrayList have method such as adding, removing and deleting element.

Initialization: Array have initial value at the time of creation while ArrayList require use of method for its operation.

Compatibility: Array are compatible with the traditional for-loop, and ArrayList are compatible with latest for-each Loop.

8. What is a map in java?

Ans: A map is a collection in java that uses key – value pair for storing the data, where each key is unique.

9. What are the commonly used implementations of Map in Java?

Ans: The commonly used implementations of Map in Java are HashMap, TreeMap, LinkedHashMap, and ConcurrentHashMap.

10. What is the difference between HashMap and TreeMap?

Ans: HashMap is unordered collection of data which use key value pair for storing the element.

While in other hand the TreeMap is ordered collection of data this also use key value format for storing the data, according to natural order it maintain.

11. How do you check if a key exists in a Map in Java?

Ans: we can check if a key exists in a Map in Java using the **containsKey()** method or the **get() method**. The **containsKey()** method **returns** a boolean value indicating whether the Map contains the specified key, while the **get()** method **returns** the value associated with the specified key, or null if the key is not present in the Map.