1. What is collection framework in Java?

Ans. collection framework is a combination of classes and interface, which is used to store and manipulation the data in the form of objects. It provides various classes such as Arraylist , Vector ,Stack and HashSet etc. and interfaces such as list ,Queue ,Set , etc. for this purpose.

1. What is the difference between ArrayList and LinkedList?

Ans. Arraylist LinkedList

ArrayList uses a dynamic array LinkedList uses a doubly linked list.

ArraylIst is not efficient for manipulation linkedlist is efficient for manipulation

Because too much is required

Arraylist is better to store and fetch data Linkedlist is better to manipulation data.

ArrayList provides random access. LindkesList does not provide random access.

Arralist taken less memory overload LinkedList takes more memory overhead, as it stores the

As it stores only object object as well as the address of that object

1. What is the difference between iterator and Listiterator?

Ans. a. The iterator traverses the elements in the forword direction only while listiterator traverse the elements in backword and forword direction both.

b.The iterator can be used in list , Set , and Queue while listiterator used in list only.

1. What is the difference between iterator and Enumeration ?

Ans. a. The iterator is fall fast while the iterator can traverse legacy and non legacy elements while

Enumerator can traverse only legacy elements.

b. the iterator is slower than enumeration.

1. What is the difference between List and Set?

The list and Set both extend the collection interface.However , there are some diffrences between the two which are listed below.

a. The List can contain duplicate element whereas Set includes unique items.

b. The list is an orders collection which maintains the insertion order whereas the set does not have any legacy class.

c. The List interface can allow a number of null values whereas

Set interface only allows a single null value.

d. the list interface can allow a number of null values whereas   
Set interface only allows a single null value.

1. What is the difference between HashSet and TreeSet?

Ans. Both HashSet and TreeSet are implementations of the Set interface in java, but they have some differences in terms of their properties and usage:

a. Ordering: HashSet is an unordered collection of elements , while TreeSet is a sorted set of elements based o their natural order or a custom comparator.

b. Duplication: HashSet does not allow duplicate elements, while TreeSet does not allow duplicates as well.

c. Implementation: Hashset is Implemented using a hash table, while Treeset is implemented using a self-balancing binary search tree(red-black tree)

1. What is the difference between Array and ArrayList?

Ans. Both arrays and Arraylist are used to store collections of elements in Java, but they have some differences in terms of their properties and usage:

Type: Arrays can store elements of primitive data types as well as object, while arraylist can only store objects.

Size: The size of an array is fixed once it is created, while the size of an arraylist can be dynamically increased or decreased by adding or removing elements.

Methods: Arrays have a limited set of methods compared to ArraysLists which more methods for manipulation the collection , such as adding, removing and sorting elements.