## LinkedList

* 1. It implements list interface, Clone able serializable, Deque interface.
  2. Internal data structure is doubly linked list.
  3. It is grow-able in nature.
  4. It allows to Store duplicate data.
  5. It is not synchronized .
  6. It is not thread safe.
  7. Search operation is complex.
  8. In this list random access is not possible.
  9. We can store heterogeneous type of data.
  10. Null value can also be inserted.
  11. In Array List insertion order is preserved.
  12. In array insertion and deletion operation are complex to ArrayList.

1. How many constructors in Linked List ?

Ans : Linked list have two constructors

* 1. LinkedList()
  2. LinkedList( Collection )

**Linked list don’t have int parameter constructor because**

**We can’t set capacity of Linkedlist.**

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| **No.** | **Linked List** | **Array List** |
|  | It Internal Work on doubly linked list | It Internal Work on resize able array. |
|  | It is prefer to use for insertion because it is less complex. | In this operation of insertion is complex because lot of shifting is required. |
|  | It is prefer to use for deletion because it is less complex. | In this operation of deletion is complex because lot of shifting is required. |
|  | Search operation is complex. | Search operation is complex. |
|  | In this list random access is not possible. | In this list random access is possible. |
|  | Linked list have two constructors | Array list have Three constructors |
|  | It needs more memory as compare to Array List Because it store address of next and previous nodes. | It needs less memory as compare to Linked List. |
|  | Deque is implemented | Random access is implemented |

Similarities between ArrayList and Linkedlist.

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| **No**. | **Linked List** | **Array List** |
|  | It is grow-able in nature. | It is grow-able in nature |
|  | It implements list interface, Clone able serializable, Deque interface. | It implements list interface, Clone able serializable, Deque interface. |
|  | It is not synchronized . | It is not synchronized . |
|  | It is not thread safe | It is not thread safe |
|  | Null value can also be inserted | Null value can also be inserted |
|  | It allows to Store duplicate data. | It allows to Store duplicate data. |
|  | We can store heterogeneous type of data. | We can store heterogeneous type of data |

Internal data structure is doubly linked list.

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Search operation is complex.

In this list random access is not possible.

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In Array List insertion order is preserved.

In array insertion and deletion operation are complex to ArrayList.