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| --- | --- |
| **Vector** | **Array list** |
| * Vector came in jdk 1 * Vector double the size of the capacity if limit is reached * Vector have the function of capacity * Insertion order is saved * No sorting by default * Works in one thread and other thread waits * Can store different type of objects at same time | * Array List came in jdk 1.2 * Array List increases the size of the Array List by 50% if limit is reached * Array List does not have the function of capacity * Insertion order is saved * No sorting by default * Can work in multithreaded structure * Can store different type of objects at same time |
| **HashSet** | **Sorted Set** |
| * Uses Sets data Structure * No insertion order * Not synchronized between threads * Unordered data * It allows one null element * No duplicates allowed | * Uses Sets data Structure * No insertion order * Sorted order is maintain * Comparator must be implemented * Other interface methods must be overridden in class where sorted set are used |
| **Tree set** | **HashSet** |
| * No duplicates allowed * Data is managed * Use tree structure for saving values * No nullable values allowed * Inputs are stored in order | * Uses Sets data Structure * No insertion order * Not synchronized between threads * Unordered data * It allows one null element * No duplicates allowed |
| **Array** | **List** |
| * Fixed size * Can only store one datatype at one time * Consecutive locations in memory * Can’t access out of bound * Accessing is fast * No sorting by default * Insertion depend on input by index | * Growable * Can store one datatype at a time * Variable locations in memory * Cant access out of bound * Slow accessing * No Insertion order is maintained * No sorting by default |
| **List** | **Set** |
| * Growable * Can store multiple datatype at a time * Variable locations in memory * Cant access out of bound * Slow accessing * No Insertion order is maintained * No sorting by default | * Simple set is the mother interface * No insertion order preserved * No duplicates allowed * Accessing is in O(n) * Can inset naywhere * Can hold multiple datatype at a time as it is the collection framework |
| **Navigable Set** | **Navigable Map** |
| * No duplicates * Sorting by default * Child interface of sorted set * Can access by just pointing to positions without know the indexes * No insertion order is preserved | * Can access by just pointing to positions without know the indexes * No repeated key * Only same key value pair can be added * Same key different value cant exist * No duplicates allowed * Same value with different key can exist |