Day 4

Wednesday, September 27, 2017 8:50 PM

collection - a group of objects

Some Interfaces that implement Collection

- List
  - Has order, so we can access elements by their index.
  - Typically allows duplicates
- Set
  - Does not allow duplicate values
  - Has no guarantee of order, so we cannot access elements by their index
- Queue
  - Typically first in first out (not always since there are priority queues)
- Deque
  - Extends the functionality of Queue
  - Allows access on both ends, not just one end

ArrayList	LinkedList
1) ArrayList internally uses **dynamic array** to store the elements.	LinkedList internally uses **doubly linked list** to store the elements.
2) Manipulation with ArrayList is **slow** because it internally uses array. If any element is removed from the array, all the bits are shifted in memory.	Manipulation with LinkedList is **faster** than ArrayList because it uses doubly linked list so no bit shifting is required in memory.
3) ArrayList class can **act as a list** only because it implements List only.	LinkedList class can **act as a list and queue** both because it implements List and Deque interfaces.
4) ArrayList is **better for storing and accessing** data.	LinkedList is **better for manipulating** data.

From <https://www.javatpoint.com/difference-between-arraylist-and-linkedlist>

Map

- Key-value pairs
- No duplicate keys
- Does not implement Collection interface