Java collections

<https://www.tutorialspoint.com/java/java_collections.htm>

Collections were a way to better unify Dictonary, Vector, Stack, Properties so they would be easier to manage, since the way you would work with Vector was different from Properties.

Collections were designed to:

High performance

Permit different types of collections to work in similar manner, even interoperabitily

Needed to extend or adapt easily

Some standard implementatinos of collections are: LinkedList, HashSet and TreeSet

Maps are key-value pairs and collections are groups

Collections: ArrayList ,TreeSet, LinkedList

Maps: HashMap, TreeMap

HashMap is unsorted

TreeMap is sorted by the key, not the value.

Collections are Mutable, meaning they can change their size after creation, other primitive arrays could not.

Collections are containers that group many different types together as a single unit

Provides architecture to store and manipulate a group of objects

Java collections various operations can be performed on the data like searching, sorting, insertion, manipulation, deletion, ect

Java collection framework provides many interfaces and classes

Map: HashMap, HashTable (SortedMap; treeMap)

Preset collections are:

Java.util.map

Java.util.collections

Sample from [www.w3schools.com/java/java\_arraylist.asp](http://www.w3schools.com/java/java_arraylist.asp)

Fundamental interfaces of collection:

List: ArrayList, LinkedList, Vector, (stack)

Queue: PriorityQueue, ArrayDeque

Set : HashSet, LinkedHashSet SortedSet:TreeSet

Notes from others:

[https://github.com/hord-brayden/CIT-360/blob/master/14 Topics/javaCollections.java](https://github.com/hord-brayden/CIT-360/blob/master/14%20Topics/javaCollections.java)

I really enjoyed the functionality of the ArrayList collection, and how it can mesh up, in this example, of the hashmap constructor! I made them use some Missionary based literal values, so we can see some modern applications for some of these collections. To go one step further, would be to integrate JSON and javascript to spin it out into a browser friendly model where a mission can use it to keep track of Books of Mormon and other examples!