**Data Structures**

**Chapter 1**

* Learned the types of data structures as well as what a data structure is, how choosing a data structure impacts the efficiency, how data comes from many sources and how many data structures are implemented as linked lists.
* Learned the pros and cons to the types of data structures.

**Chapter 2**

* Learned about the Java collection interface, its sub-interfaces and the sub-interface’s sub-interfaces. Learned that the collections framework provides high quality implementations of data structures and algorithms.
* Learned about iterable interfaces, how each collection has an iterator object to traverse the elements, how it provides the tools for walking through a data structure, how it hides the details of how data is stored, and how the iterable interface is an extension of the collections interface.
* Learned about the ArrayList data structure, which implements the List interfaces, how it is the most frequently used data structure, how it creates an object array that grows as needed, and how it can hold different types of values as well as the different methods used with the ArrayList data structure.
* Learned about the LinkedList data structure, where the access to the elements is always linear, that the class uses a doubly linked list to manage the collection of objects and also learned about the different methods used with the LinkedList data structure.
* Learned about the Vectors data structure, how its similar to the behavior of an ArrayList, how it automatically provides synchronization which causes its performance to suffer as well as the different methods used with the Vectors data structure.
* Learned about the Stack data structure, how it uses last in, first out order (LIFO), how the last element in a stack data structure is the first to come off, and how a stack is a linear list in which items are added and deleted from the same end as well as the different methods used with the Stack data structure.
* Learned about the Queue data structure and how it is a linear list where items added to one end and deleted from the other end as well as the different methods used with the Queue data structure.