1. Chapter 3
   1. Collection is an ADT whose sole purpose to collect/store data
   2. Benefits of collection
      1. Grow it as needed
         1. Better than arrays
      2. Implementation can be changed
         1. \*Flexibility
      3. Information hiding
         1. It is an API that accesses your items
            1. No need to expose specific details
      4. Reusable code
   3. Bag ADT / Multiset
      1. Unordered collection of things
         1. There can be repetition
      2. Types
         1. Static – fixed number of items
            1. Max and current size +
         2. Dynamic – Grows at running time
            1. Current +
            2. Using object composition?
      3. First créate vector class
      4. bagIterator
         1. Allow users of bag class to inspect element without giving direct access to array
         2. Not sure why
   4. Sets / set
      1. Unordered collection of items w no repetitions
      2. Types
         1. Static
         2. Dynamic
   5. List
      1. Ordered collection (indexing) where repetitions are allowed
      2. Type
         1. Static
         2. Dynamic
   6. Linked List
      1. Fully dynamically allocated space
      2. Connected nodes in sequence
         1. Fields:
            1. Value
            2. Next reference to the next node
      3. Benefits
         1. Small memory footprint
         2. no limit capacity
         3. support for all ADT Lists
         4. No need to reallocate
      4. Singly Linked List - nodes point to next
      5. Doubtly Linked List - nodes point to next and previous
      6. Circular doubtly-linked list – nodes form circular chain