Approach

Cameron Burkholder

# Tuesday 09/08/2020

## Goals:

* Download all contents from Canvas, start to read through instructions
* Watch Smart Pointer video
* Read through lab description and files, look for possible places Smart Pointers would be useful
  + The array in bag would be a good place to use a shared pointer, whereas using temp variables would be good for unique pointers
* Read Chapter 4 contents related to lab (dictionaries, etc.)
* Analyze BagADT and start to brainstorm for ABag.
* Start to build ABag

## Notes

* Unique pointer: automatically deletes when it goes out of scope
* Shared pointer: uses reference counting to delete pointer when count is 0
* Weak pointer: can point to memory location without increasing reference count
* Dictionary is a data structure that will use Bag for its implementation, which will be implemented via an array that stores KeyValue objects
* Kvpair.h is already implemented, so I can start with implementing the array in Bag
* A Bag is like a stack, so I can look at the AStack implementation for starting cues
* Max dictionary size is 10, so the array can be of size 10

## Results

* I did not use a shared pointer for the array, as I could not figure out how to declare the shared pointer to the array without defining it outside the constructor
* I did not use the unique pointers either, as there wasn’t quite a place that made sense inside the bag.
* I finished implementing ABag and wrote some initial tests.
* Implementing the ABag based off of the AStack from the book was pretty straightforward, so I’m glad I did that.