Matt Jones, Johnnie Ho, Eddie Lee

Prof. Zhaurov

Data Structures

9/21/19

Project 1 Write-Up

Analysis:

The analogy of a grocery bag is quite fitting for the ADT bag. In the ADT bag you can put various items and just like in a grocery bag they are in no particular order. Removing a specific item in the ADT bag is just like in a grocery bag: it rifles through until it finds it and gets rid of the first one it sees. Any operation you can perform on an ADT bag is something you can do with a grocery bag in real life.

However, the bag ADT would not at all be an accurate representation of a dictionary. Seeing as it is completely unsorted this would be the exact opposite of how dictionaries operate as they are carefully sorted into alphabetical order. Also items generally are not removed from dictionaries with any real frequency.

The ADT bag works great for a guessing game because it is good for storing a few pieces of data with no particular order as is done in the guessing game.

The ADT bag is useful in cases where you need to store a bunch of data with no particular order.

Summary:

The work was divided up simply based on who could get what done and when and we were able to collaborate easily using a shared GitHub repository. We all have looked over the code as well as this very write up in order to solve problems and to understand the project better. Each of us had a role in one way or another in every piece of this project. Changes to the

code and testing was often coordinated via Discord, a popular chat application. Working with partners was very beneficial as it often makes solving problems much easier. One hurdle we encountered was users guessing too many numbers. We solved this by having the scanner dump everything past the number limit. Other than that we have been able to understand most of every topic in this project. We learned most importantly how to use generic data types past just the bag example in this project which will be very useful for future projects. The only suggestion for improvement would be that the way certain methods had to be implemented wasn't the most efficient at times so that could be changed.