Project 4 report

1. I believe that all of my functions perform in the time complexity required.
2. My hashtable performs correctly for basic test cases but often fails when I test my other functions and classes with my implementation of Hashtable. However, my other functions and classes passed all tests that I ran on them with the Hashtable given for testing purposes.

3. Pseudocode

pseudocode for set

if full

return false;

create a new node

if not permanent

    attach node to end of the list

properly arrange pointers

if the bucket was empty then insert the node

for the first node in a bucket,

    if its already in there update it

     appropriately switch pointers

     delete old node

     otherwise

     add it at the end of list

return true

pseudocode for touch

for each node in the list that tracks the order

    if you find the node

    appropriately update its position in the linked list of its order list

   as well as in the hashtable

     delete it

     return true

return false if no node found

Pseudocode for discard

if the linked list that tracks the order is empty

    return false

for the first node in the list

    if the last one is NOT equal to nullptr

update its lasts next pointer to the current next pointer

    if next is NOT equal nullptr

update its lasts next pointer to the current next pointer

     fix the line

set the value and key to that of the node

         delete ptr

return true