Assignment 3 Report

**Linked List Class:**

**I made one insert function and two remove functions:**

* first insert:

insert(int data) which inserts as the last element of the list, it also creates a linked list if the list is empty.

* first remove:

removeFromEnd(), where it deletes the last node of the list.

* second remove:

removeFromMiddle(int previousNodeValue), where the function takes the value of the node they want to delete the value of the node after, and the node they want to delete is deleted from the list after that value.

**Create(vector<int>v):**

The code I originally ran for this function is added as a comment in the function body because it had a "Thread 1: EXC\_BAD\_ACCESS (code=1, address=0x4)" error that I couldn’t fix. I tried a different method where I sort the vector so all the duplicates come after the other and then I used the unique function in vectors to remove the duplicates, then I resized the vectors to only include the original numbers. Then I added the elements of the vector one by one into the linked list. The issue with this method is that I could not do the number of occurrences for each node, however the method written as comments had the number of occurrences in it.

**Sum():**

Returned the sum of all the elements in a linked list.

**GetHead():**

Made a function to return the head pointer to be used in the insertAfter function in the main

**Print():**

Made a function to print all the elements of a linked list.

**Main function:**

I made the insertAfter function to insert a number after a specific node, but its code also produces the "Thread 1: EXC\_BAD\_ACCESS (code=1, address=0x4)" error that I don’t understand.

User enters the number of elements they want in the vector, then enter the elements of the vector. The main function then creates a linked list from these elements using the Create function and prints the values using the print function and returns the sum using the sum function. The screenshots of the outputs are below:

