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):**

it takes a vector as a parameter and creates a linked list using the elements of the vector. If there are any duplicates in the vector, it only makes one node for that number and increments its number of occurrences accordingly. It then returns the linked list created.

**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

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. Then the insertAfter in this test had the parameters (list,4,6) so it inserts a 6 after the 4 in the new linked list and prints the new values. Then it returns the sum using the sum function. The screenshots of the outputs are below:

