Jolie Khaled – 900211816

Assignment 3

```
Please enter the size of the vector:
6
Please enter the elements of the vector :
1
2
3
1
4
1
The vector before inserting any elements
1
2
3
1
4
1
Please enter the first and the second element:
1
6
The vector after inserting 6 after 1:
1
6
2
3
1
6
4
1
6
The value is 1 and its count is 3
The value is 6 and its count is 3
The value is 2 and its count is 1
The value is 3 and its count is 1
The value is 4 and its count is 1
The sum of all nodes is : 30
```

As we can see, this is the output of our code that aims to implement vectors and linked list topics. Of course while solving the problem I faced some difficulties, like the function of the linked list that count the occurrence took me some time to implement it. Let's now explain the output of the code. The code started by asking the size of the vector, then I decided that the size will be 6, then it started to ask me to enter the elements of the vector. I inserted the elements, and then I added a for loop that print another time the elements I have inserted to see the vector before any changes occurred. Then it asked what is the first element that it will be inserted the second element after it, and I said the first is 1 and the second is 6. And here comes the role of the function insert after that every time it sees 1, it must insert 6 after it. I have put three ones in the vector, so we can see that after every 1, it has inserted 6 after it. In the main function, I have created object of type class linked list, which I have used a source as a reference to my class attributes listed below, then I started to call the function that counts the occurrence of the values if they are repeated. As we can see after inserting the second element after the first, that we have 1 repeated 3 times, and 3 repeated 3 times, then 2, 3 and 4 are just repeated one time, and this is what the output has shown. So the function has successfully counted the occurrence of each value in my vector. Then I have called the function sum which has calculated the sum of all the nodes in my vector, so it did 1+6+2+3+1+6+4+1+6 which is equal to 30.

Here is the link of the site used as a reference: Program to implement Singly Linked List in C++ using classhttps://www.geeksforgeeks.org › program-to-implemen...