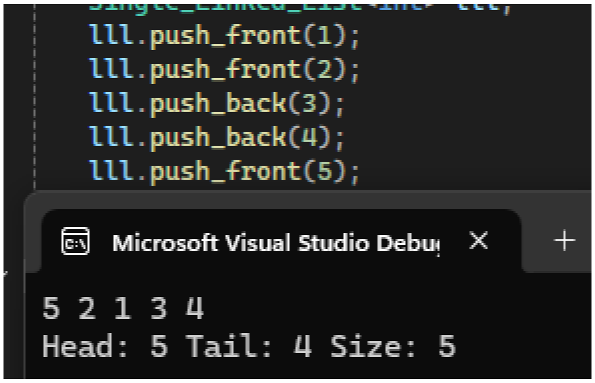
CS 303 Assignment 2 – Linked List

(All code and returns will be built off of the previous results)

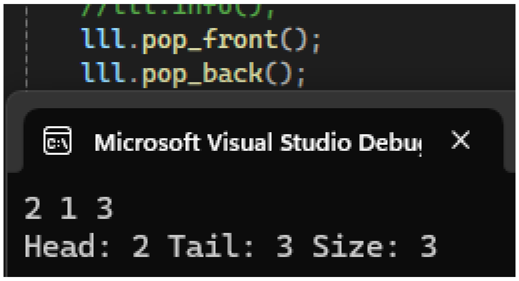
1. Push_front and push_back functions – as expected, will push the parameter to the front of the back of the linked list as called.



```
lll.push_front(1);
lll.push_front(2);
lll.push_back(3);
lll.push_back(4);
lll.push_front(5);
```

```
5 2 1 3 4
Head: 5 Tail: 4 Size: 5
```

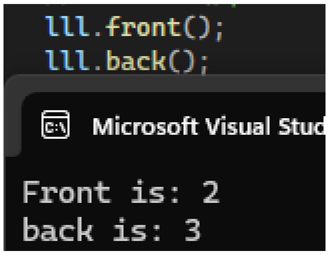
2. Pop_front and pop_back functions will delete the entry from the front or the back of the link list as called.



```
lll.pop_front();
lll.pop_back();
```

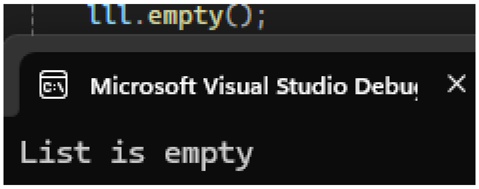
```
2 1 3
Head: 2 Tail: 3 Size: 3
```

3. Front, Back, and empty will work to return the necessary information when called. Front will returned the item in the foremost index, while back will return the item in the last index. Empty will return a message if the list is found to be empty, otherwise it would be passed without obstructing the program.



```
lll.front();
lll.back();
```

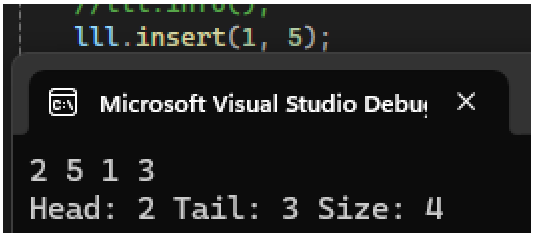
```
Front is: 2
back is: 3
```



```
lll.empty();
```

```
List is empty
```

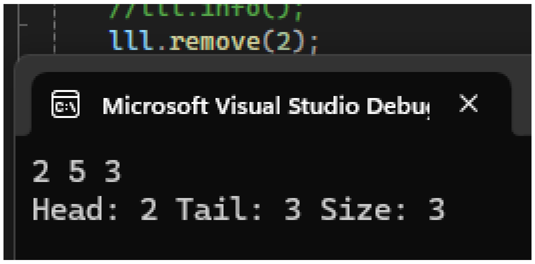
4. The insert function will take two parameters, one being the designated index for the insertion of the item, and the other being the actual item that will be inserted into the linked list. Here we can see that the integer “5” is inserted into index 1.



```
    //lll.info();
    lll.insert(1, 5);
```

```
2 5 1 3
Head: 2 Tail: 3 Size: 4
```

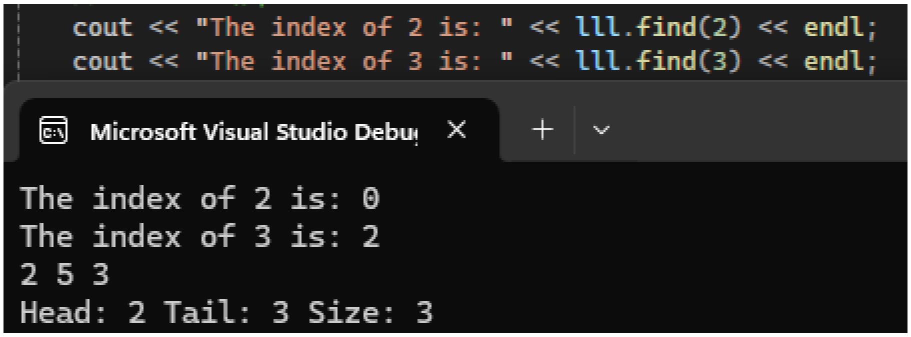
5. The remove function works similarly to the insert function, however this time it will only take one parameter being the index. The function will work to remove the item at the indicated index. We can see that the indicated index for removal is “2”, and so the integer at index two was removed.



```
        //lll.info();
        lll.remove(2);
```

```
2 5 3
Head: 2 Tail: 3 Size: 3
```

6. The final function of the program will return the index of the indicated item after searching through the linked list.



```
    cout << "The index of 2 is: " << lll.find(2) << endl;
    cout << "The index of 3 is: " << lll.find(3) << endl;
```

```
The index of 2 is: 0
The index of 3 is: 2
2 5 3
Head: 2 Tail: 3 Size: 3
```