

Assignment 03 Questions

1. Why doesn't the ReceiptBag work with the List as an underlying data structure?
 - a. Because the ReceiptBag's insert function is expected to return a unique integer, while the List's push_back and push_front functions don't do that.
2. What needs to change in the Circular List that derives from List?
 - a. I need to override the traverse function to deal with the 'end' of the List by checking to see if the function has reached the tail node and instead setting the pointer back to the head node of the List.
 - b. I also need to declare the private members of the Circular List, even though they function the same as the private members of the List, because we can't inherit private members from List.
 - c. I don't believe the List class needs to change to implement this circular list unless I could set the private member nodes to public or protected to streamline the inheritance to circular list.
3. Testing



Microsoft Visual Studio Debug Console



```
Running main() from D:\a\_work\1\s\ThirdParty\googletest\googletest\
[=====] Running 5 tests from 1 test case.
[-----] Global test environment set-up.
[-----] 5 tests from ListTest
[ RUN    ] ListTest.empty
[       OK ] ListTest.empty (0 ms)
[ RUN    ] ListTest.push_back
[       OK ] ListTest.push_back (0 ms)
[ RUN    ] ListTest.push_front
[       OK ] ListTest.push_front (0 ms)
[ RUN    ] ListTest.pop_front
[       OK ] ListTest.pop_front (0 ms)
[ RUN    ] ListTest.pop_back
[       OK ] ListTest.pop_back (0 ms)
[-----] 5 tests from ListTest (1 ms total)

[-----] Global test environment tear-down
[=====] 5 tests from 1 test case ran. (1 ms total)
[ PASSED ] 5 tests.

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580) exited with code 0.
Press any key to close this window . . .|
```



Microsoft Visual Studio Debug Console



```
Running main() from D:\a\_work\1\s\ThirdParty\googletest\googletest\src\gtest_m
[=====] Running 3 tests from 1 test case.
[-----] Global test environment set-up.
[-----] 3 tests from CListTest
[ RUN    ] CListTest.cEmpty
[       OK ] CListTest.cEmpty (0 ms)
[ RUN    ] CListTest.push_back
[       OK ] CListTest.push_back (0 ms)
[ RUN    ] CListTest.push_front
[       OK ] CListTest.push_front (0 ms)
[-----] 3 tests from CListTest (0 ms total)

[-----] Global test environment tear-down
[=====] 3 tests from 1 test case ran. (2 ms total)
[ PASSED ] 3 tests.

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15996) exited with code 0.
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