

```

(lldb) run
Process 3377 launched: '/Users/owner/Desktop/lab05/EECS268-Lab05/EECS268-Lab05/lab05' (x86_64)

-- AN EMPTY LINKED LIST HAS BEEN CREATED.

-- THE NEW ENTRY apples AT POSITION 1 HAS BEEN BE INSERTED INTO THE LIST.

-- RETURNING THE AMOUNT OF NODE OBJECTS IN THE LIST.
1

-- THE NEW ENTRY bananas AT POSITION 2 HAS BEEN BE INSERTED INTO THE LIST.

-- RETURNING THE AMOUNT OF NODE OBJECTS IN THE LIST.
2

-- THE NEW ENTRY sweet potatoes AT POSITION 3 HAS BEEN BE INSERTED INTO THE LIST.

-- RETURNING THE AMOUNT OF NODE OBJECTS IN THE LIST.
3

-- THE NEW ENTRY argula AT POSITION 4 HAS BEEN BE INSERTED INTO THE LIST.

-- RETURNING THE AMOUNT OF NODE OBJECTS IN THE LIST.
4

-- RETURNING THE AMOUNT OF NODE OBJECTS IN THE LIST.

grocery list:
1. apples
2. bananas
3. sweet potatoes
4. argula

Process 3377 exited with status = 0 (0x00000000)
(lldb) b main
Available completions:
  main.cpp
  main
  main_image_has_section
(lldb) b main.cpp:10
Breakpoint 1: where = lab05`main + 23 at main.cpp:10:14, address = 0x0000000100002077
(lldb) list
(lldb)
17         std::cout << groceries -> getLength() << std::endl;
18         groceries -> insert(3, "sweet potatoes");
19         std::cout << groceries -> getLength() << std::endl;
20         groceries -> insert(4, "argula");
21         std::cout << groceries -> getLength() << std::endl;
22     } catch (std::exception &e) {
23         std::cout << e.what() << std::endl;
24     }
25
26     try {
(lldb) frame variable
error: invalid thread
(lldb) next
error: invalid thread
(lldb) run
Process 3389 launched: '/Users/owner/Desktop/lab05/EECS268-Lab05/EECS268-Lab05/lab05' (x86_64)
Process 3389 stopped
* thread #1, queue = 'com.apple.main-thread', stop reason = breakpoint 1.1
    frame #0: 0x0000000100002077 lab05`main at main.cpp:10:14
       7     int main() {
       8
       9         LinkedList<std::string>* groceries;
->    10         groceries = new LinkedList<std::string>();
       11
       12
       13         try {
Target 0: (lab05) stopped.
(lldb) frame variable
(LinkedList<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) groceries = 0x000000000000001e
(std::exception &) e = 0x0000000000000000
(std::exception &) e = 0x0000000108551010 {}
(lldb) print groceries
(LinkedList<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) $0 = 0x000000000000001e
(lldb) print *groceries
error: Couldn't apply expression side effects : Couldn't dematerialize a result variable: couldn't read its memory
(lldb) print groceries->headptr
error: Couldn't apply expression side effects : Couldn't dematerialize a result variable: couldn't read its memory
(lldb) breakpoint list
Current breakpoints:
1: file = 'main.cpp', line = 10, exact_match = 0, locations = 1, resolved = 1, hit count = 1
   1.1: where = lab05`main + 23 at main.cpp:10:14, address = 0x0000000100002077, resolved, hit count = 1

(lldb) b main
Available completions:
  main.cpp
  main

```

```

    main_image_has_section
(lldb) b main.cpp:11
Breakpoint 2: where = lab05`main + 72 at main.cpp:14:3, address = 0x0000001000020a8
(lldb) breakpoint list
Current breakpoints:
1: file = 'main.cpp', line = 10, exact_match = 0, locations = 1, resolved = 1, hit count = 1
    1.1: where = lab05`main + 23 at main.cpp:10:14, address = 0x000000100002077, resolved, hit count = 1

2: file = 'main.cpp', line = 11, exact_match = 0, locations = 1, resolved = 1, hit count = 0
    2.1: where = lab05`main + 72 at main.cpp:14:3, address = 0x0000001000020a8, resolved, hit count = 0

(lldb) run
There is a running process, kill it and restart?: [Y/n] n
(lldb) frame variable
(LinkedList<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) groceries = 0x000000000000001e
(std::exception &) e = 0x0000000000000000
(std::exception &) e = 0x0000000108551010 {}
(lldb) run
There is a running process, kill it and restart?: [Y/n] Y
Process 3389 exited with status = 9 (0x00000009)
Process 3418 launched: '/Users/owner/Desktop/lab05/EECS268-Lab05/EECS268-Lab05/lab05' (x86_64)
Process 3418 stopped
* thread #1, queue = 'com.apple.main-thread', stop reason = breakpoint 1.1
    frame #0: 0x0000000100002077 lab05`main at main.cpp:10:14
        7   int main() {
        8
        9       LinkedList<std::string>* groceries;
->  10       groceries = new LinkedList<std::string>();
        11
        12
        13       try {
Target 0: (lab05) stopped.
(lldb) run
There is a running process, kill it and restart?: [Y/n] n
(lldb) next

-- AN EMPTY LINKED LIST HAS BEEN CREATED.
Process 3418 stopped
* thread #1, queue = 'com.apple.main-thread', stop reason = breakpoint 2.1
    frame #0: 0x00000001000020a8 lab05`main at main.cpp:14:3
        11
        12
        13       try {
->  14           groceries -> insert(1, "apples");
        15           std::cout << groceries -> getLength() << std::endl;
        16           groceries -> insert(2, "bananas");
        17           std::cout << groceries -> getLength() << std::endl;
Target 0: (lab05) stopped.
(lldb) frame variable
(LinkedList<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) groceries = 0x0000600000010000
(std::exception &) e = 0x0000000000000000
(std::exception &) e = 0x0000000108551010 {}
(lldb) next

-- THE NEW ENTRY apples AT POSITION 1 HAS BEEN BE INSERTED INTO THE LIST.
Process 3418 stopped
* thread #1, queue = 'com.apple.main-thread', stop reason = step over
    frame #0: 0x00000001000020eb lab05`main at main.cpp:15:16
        12
        13       try {
        14           groceries -> insert(1, "apples");
->  15           std::cout << groceries -> getLength() << std::endl;
        16           groceries -> insert(2, "bananas");
        17           std::cout << groceries -> getLength() << std::endl;
        18           groceries -> insert(3, "sweet potatoes");
Target 0: (lab05) stopped.
(lldb) frame variable
(LinkedList<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) groceries = 0x0000600000010000
(std::exception &) e = 0x0000000000000000
(std::exception &) e = 0x0000000108551010 {}
(lldb) print groceries
(LinkedList<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) $3 = 0x0000600000010000
(lldb) print *groceries
(LinkedList<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) $4 = {
    headptr = 0x00006000000201160
    m_length = 1
}
(lldb) print groceries.headptr
(Node<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) $5 = 0x00006000000201160
Fix-it applied, fixed expression was:
    groceries->headptr
(lldb) print groceries->headptr
(Node<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) $6 = 0x00006000000201160
(lldb) print *groceries->headptr
(Node<std::basic_string<char, std::char_traits<char>, std::allocator<char> > > *) $7 = {
    entry = "apples"
    next_node = nullptr
}
(lldb)

```