

Sun Sep 17 3:51 PM

RUN AND DEBUG

RUN

Run and Debug

To customize Run and Debug create a launch.json file.

Show all automatic debug configurations.

To learn more about launch.json, see Configuring C/C++ debugging.

main.cpp TestQueue.hpp Queue.h

```
135 Actual Result:  
136 Test Condition:  
137 */  
138 void test_peek()  
139 {  
140     cout << "Testing Peek" << endl;  
141  
142     queue testQueue;  
143     int successes = 2;  
144  
145     cout << "Top of list is " << testQueue.peek() << endl;  
146     if (testQueue.peek() == NULL)  
147     {  
148         cout << "Test passed for peeking into empty List" << endl;  
149         successes++;  
150     }  
151     else  
152     {  
153         cout << "Test failed for peeking into empty List" << endl;  
154     }  
155  
156     testQueue.enqueue(6);  
157  
158     cout << "Top of list is " << testQueue.peek() << endl;  
159     if (testQueue.peek() == 6)  
160     {  
161         cout << "Test passed for peeking into non-empty List" << endl;  
162         successes++;  
163     }  
164 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Testing Peek
Top of list is UnderFlow
Program Terminated
UnderFlow
Program Terminated
Test passed for peeking into empty List
Inserting 6
Top of list is 0
Test failed for peeking into non-empty List
Unit Test failed

MacBook-Pro-4:MA1 gabrielheinrichs\$ []

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main.cpp TestQueue.hpp Queue.h

```
1 // This code was taken from https://www.techiedelight.com/queue-implementation-cpp/  
2 // The code has been modified from the original to provide opportunities to learn  
3 // #include "Queue.h"  
4 #include "TestQueue.hpp"  
5  
6 // main function  
7 // If this is not running on a windows machine for whatever reason, delete system("clear")  
8 int main()  
9 {  
10     // call your test functions here!  
11     //helloWorld();  
12  
13     system("clear");  
14     //test.isEmpty();  
15     test_enqueue();  
16  
17     return 0;  
18 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Testing Enqueue
Inserting 6
Top of list is 0
Test failed for inserting into empty List
Inserting 10
Top of list is 1
Test failed for inserting into non-empty List
Unit Test passed

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The screenshot shows the Xcode IDE interface. On the left, the sidebar includes sections for RUN AND DEBUG, RUN, and DEBUG. The main editor window displays the code for main.cpp, which includes imports for queue.h and TestQueue.hpp, defines a main function, and calls test_isEmpty(). The terminal tab at the bottom shows the following output:

```
IsEmpty returned: 0
IsEmpty has Failed for empty list
Inserting 6
IsEmpty has passed for non-empty list
IsEmpty has failed in one case
○ MacBook-Pro-4:MA1 gabrielheinrichs$ []
```

The terminal tab also shows the command used to run the code: /usr/bin/g++ -fdiagnostics-color=always -g /Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp -o /Users/gabrielheinrichs/Desktop/Coding/MA1/main.

Fri Sep 15 1:53 PM

The terminal window shows the following error output from the compilation of main.cpp:

```
Last login: Thu Sep 14 22:53:22 on ttys004
The default interactive shell is now zsh.
To update your account to use zsh, please run "chsh -s /bin/zsh".
For more details, please visit https://support.apple.com/kb/HT208858.
MacBook-Pro-4:~ gabrielheinrichs$ /usr/bin/g++ -fdiagnostics-color=always -g /Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp -o /Users/gabrielheinrichs/Desktop/Coding/MA1/main
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:12:7: error: 'queue' cannot be defined in the result type of a function
class Queue
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:33:8: error: constructor cannot have a return type
queue::queue(int size)
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:35:5: error: use of undeclared identifier 'arr'
    arr = new int[size];
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:35:19: error: use of undeclared identifier 'size'
    arr = new int[size];
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:36:5: error: use of undeclared identifier 'capacity'
    capacity = size;
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:36:16: error: use of undeclared identifier 'size'
    capacity = size;
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:37:5: error: use of undeclared identifier 'front'
    front = 0;
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:38:5: error: use of undeclared identifier 'rear'
    rear = -1;
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:39:5: error: reference to overloaded function could not be resolved: did you mean to call it?
    count = 0;
^
/Libra.../Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/c++/v1/_algorithm/count.h:25:5: note: possible target for call
    count(_InputIterator __first, _InputIterator __last, const _Tp& __value) (
/Libra.../Developer/CommandLineTools/SDKs/MacOSX.sdk/usr/include/c++/v1/_bit_reference:330:1: note: possible target for call
count(_bit_iterator<_Cp, _IsConst> __first, _bit_iterator<_Cp, _IsConst> __last, const _Tp& __value)
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:59:24: error: invalid operands to binary expression ('const char[10]' and 'int')
    cout << Removing arr[front] << '\n';
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:69:9: error: use of undeclared identifier 'isFull'; did you mean 'isFull'?
    if (isFull())
^
    isFull
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:29:10: note: 'isFull' declared here
bool isFull();
^
/Users/gabrielheinrichs/Desktop/Coding/MA1/main.cpp:100:22: error: expression is not assignable
    return (size()-1) ^ capacity);
^
12 errors generated.
MacBook-Pro-4:~ gabrielheinrichs$
```