

```
dekrek@dekrek-System-Product-Name:~/Desktop/MA1$ cmake --build bui;d
Error: /home/dekrek/Desktop/MA1/bui is not a directory
d: command not found
dekrek@dekrek-System-Product-Name:~/Desktop/MA1$ cmake --build buil;d
Error: /home/dekrek/Desktop/MA1/buil is not a directory
d: command not found
dekrek@dekrek-System-Product-Name:~/Desktop/MA1$ cmake --build build
Scanning dependencies of target MA1
[ 50%] Building CXX object CMakeFiles/MA1.dir/main.cpp.o
/home/dekrek/Desktop/MA1/main.cpp:12:1: error: new types may not be defined in a return type
   12 | class queue
      | ^~~~~~
/home/dekrek/Desktop/MA1/main.cpp:12:1: note: (perhaps a semicolon is missing after the definition of 'queue')
/home/dekrek/Desktop/MA1/main.cpp:33:22: error: return type specification for constructor invalid
   33 | queue::queue(int size)
      |                      ^
/home/dekrek/Desktop/MA1/main.cpp: In member function 'void queue::dequeue()':
/home/dekrek/Desktop/MA1/main.cpp:59:24: error: invalid operands of types 'const char [10]' and 'int' to binary 'operator<<'
   59 |     cout < "Removing " << arr[front] << '\n';
      |                      ~~~~~^~~~~~
      |                      |           |
      |                      |           int
      |                      const char [10]
/home/dekrek/Desktop/MA1/main.cpp: In member function 'void queue::enqueue(int)':
/home/dekrek/Desktop/MA1/main.cpp:69:9: error: 'isFul' was not declared in this scope; did you mean 'isFull'?
   69 |     if (isFul())
      |         ^~~~~
      |         isFull
/home/dekrek/Desktop/MA1/main.cpp: In member function 'int queue::peek()':
/home/dekrek/Desktop/MA1/main.cpp:88:16: error: 'numeric_limits' was not declared in this scope
   88 |     return numeric_limits<int>::min();
      |            ~~~~~~
/home/dekrek/Desktop/MA1/main.cpp:88:31: error: expected primary-expression before 'int'
   88 |     return numeric_limits<int>::min();
      |                               ^
/home/dekrek/Desktop/MA1/main.cpp:88:31: error: expected ';' before 'int'
   88 |     return numeric_limits<int>::min();
      |                               ^
      |                               ;
/home/dekrek/Desktop/MA1/main.cpp:88:34: error: expected unqualified-id before '>' token
   88 |     return numeric_limits<int>::min();
      |                               ^
/home/dekrek/Desktop/MA1/main.cpp: In member function 'bool queue::isFull()':
/home/dekrek/Desktop/MA1/main.cpp:108:24: error: lvalue required as left operand of assignment
  108 |     return (size()-1 = capacity);
      |                      ^
make[2]: *** [CMakeFiles/MA1.dir/build.make:63: CMakeFiles/MA1.dir/main.cpp.o] Error 1
make[1]: *** [CMakeFiles/Makefile2:76: CMakeFiles/MA1.dir/all] Error 2
make: *** [Makefile:84: all] Error 2
dekrek@dekrek-System-Product-Name:~/Desktop/MA1$
```



```
MakeLists.txt x main.cpp x queue.h x testQueue.cpp x testQueue.h x
    rear = -1; rear: -1
    count = 0; count: 0
}

// Destructor to free memory allocated to the queue
queue::~queue()
{
    delete arr; // you are not required to test this function;
    // however, are there issues with it?
}

// Utility function to remove front element from the queue
void queue::dequeue()
{
    // check for queue underflow
    if (isEmpty())
    {
        std::cout << "UnderFlow\nProgram Terminated\n";
        return;
    }

    std::cout << "Removing " << arr[front] << '\n'; arr: 0x56025cd752c0 front: 0

    front = (front + 1) % capacity;
    count--;

    // Utility function to add an item to the queue
    void queue::enqueue(int item)
    {
        // check for queue overflow
    }
}
```

← should be true

bug: MA1_Debugging x

Debugger Console

Frames

- Thread-1
- queue::dequeue queue.h:58
- testDeQueueEmpty testQueue.cpp:98
- main main.cpp:21
- __libc_start_main 0x00007fe1eed3f0b3
- _start 0x000056025bcd228e

Variables GDB Memory View

```
+ this = {queue * const | 0x7fff56112a70} 0x7fff56112a70
> arr = {int * | 0x56025cd752c0} 0x56025cd752c0
  capacity = {int} 10
  front = {int} 0
  rear = {int} -1
  count = {int} 0
```