

# Programming Assignment 4: Queues Using Double-Linked Linear Lists

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## The process of writing the code for the Queues Using Double-Linked Linear Lists

Firstly, after I found out that this assignment is C++, I looked through the requirements, then the power point about C++, after getting the gist of how to write the needed code, I started with the header files, which is provided, then writing the cpp file for both of the header files.

Secondly, the cpp file needed each function to be written separately, and where each element points is important, many needs to see whether the queue is empty, which is one of the scenarios, if not more steps would be taken to ensure where the other queues are pointed.

Lastly, is the main file, I needed the print out the required text, and using the functions in the header files to get the size of the queues, and to print them out, and most importantly is to remember to use C++ ways to write the whole code.

## The problems I faced when writing the code, and the solutions

The first problem that I encountered is that when writing the .cpp file, I couldn't think of how some functions work, after figured out that I could start with seeing if the queue is empty and if not reassign where the queues point to.

The next question that I ran into is due to this assignment is C++, I would forget some of the include above, which would lead to my code not being able to run correctly, after looking at the power point again, I found out which is the include I needed, then added it to my code, after that my code ran as it supposed to.

Finally, is the en and de's amount, en should be bigger than de, at first, I wanted to use do, while, but then I experimented with using the define part to say that the en is between 2 and 100, and de is between 1 and en-1, which would make sure that the enqueue is always bigger than dequeue, which is

what required.