

# Tutorial 3, Week 4 - Queues and Stacks

## 1 Before Your Tutorial

- Complete your `intLinkedList.cpp` class, and/or download the example `intLinkedList.cpp` from UTSONline.
- If you completed your own version, compare it to the provided example code. Is anything significantly different? Figure out why, or hassle your tutor later!
- If you didn't complete your own version, first, don't panic, second, take a look at the example code. What bits were you missing, do they match with what you thought might be there?
- Using either version of the `intLinkedList`, attempt to implement either `intQueue.cpp` or `intStack.cpp`.

## 2 During Your Tutorial

- Try to complete both `intQueue.cpp` and `intStack.cpp` using a linked list as a base data structure.
- Compare this to the sample code which uses C++'s `vector` class, is it easier or harder? Better or worse? Or just different?

## 3 Extensions

- Implement a deque.
- If your linked list doesn't use templates, try to adapt it to. Once it does, adapt `intQueue.cpp` and `intStack.cpp` to templated versions.
- Try to decipher this: [https://gcc.gnu.org/onlinedocs/libstdc++/latest-doxygen/a01515\\_source.html](https://gcc.gnu.org/onlinedocs/libstdc++/latest-doxygen/a01515_source.html) (This is the source for the GNU GCC implementation of `libstdc++ queue` class). If the you're really keen on following things deeper, see <https://gcc.gnu.org/onlinedocs/libstdc++/latest-doxygen/>.