

Objective:

Work with template classes and doubly linked lists.

Download the doubly linked list class discussed in class. The directory can be found on our class's website <https://github.com/nasseef/cs2401>. Modify the doubly linked list as follows:

- The doubly linked list should use template types for its data type. Note that when using template classes, include the class definition and implementation in the same file or include (`#include`) the implementation file inside your header file.
- Add a function called `numOccurrences` that returns the number of occurrences of an item in the list.

To test your program, run the provided tests using the provided Makefile. Make sure you use the same function names as outlined above and in the original code.

```
make run_tests
```

Grading:

Programs that contain syntax errors will earn zero points.

Programs that use global variables, other than constants, will earn zero points.

27 Points:

- (20 points) for modifying the linked list and the node classes to use templates
- (7 points) `numOccurrences` function

3 points: Programming Style & documentation.

- All files must have your name, date, and a description of their content
- All functions must be documented in the header file using the style outlined in the coding style below

Follow the coding style outline on GitHub:

<https://github.com/nasseef/cs/blob/master/docs/coding-style.md>

Submission:

Submit a link to your repository on Blackboard before the deadline.