SENG1120/6120 – Data Structures
Marking sheet – Assignment 2 – Sem 1, 2022

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DEMO:

1. Program compiles and works correctly with the files provided (each error will attract between 2- and 5- mark penalties).

A: Total (10.0 /10.0) B: Bonus (0.0 /1.0)

REMOVE MARKS IF:

- Code leads to memory leaks during execution (-0.5 /-1.0)

- Lack of macroguards (0.0 /-1.0)

- Lack of destructors (0.0 /-2.0)

- Lack of `const` qualifiers (0.0 /-1.0)

- Lack of comments/documentation in the code (-1.0 /-2.0)

- Lack of templates (0.0 /-5.0)

- Declaration of temporary variables as member variables of the class (0.0 /-1.0)

- Lack of use of dynamic memory allocation in `Node` or `LinkedList` (0.0 /-5.0)

- Use of `friend` qualifier (0.0 /-2.0)

- Violation of encapsulation / information hiding (0.0 /-5.0)

- Implementation in header file instead of .cpp (0.0 /-2.0)

- Incorrect classes and methods names (0.0 /-1.0)

- `#include "Node.h"` within `LStack` or `TowerHanoi` (0.0 /-2.0)

- `#include "LinkedList"` within `TowerHanoi` or `TowerHanoiDemo` (0.0 /-2.0)

- Not checking if movement is allowed (0.0 /-2.0)

- Does not detect if game has finished (0.0 /-2.0)

- Does not display the game properly (0.0 /-2.0)

- Complete `LinkedList` Public Interface not implemented (-1.0 /-5.0)

- Correctness of Submission, filenames and format (0.0 /-5.0)

- Other – use of `structs` and etc (0.0 /-10.0)

C: Total deductions (-2.5 / 58.0)

FINAL MARK [MAX(0, MIN(10, A+B-C))]: 7.5

Comments:

Compiles and runs well.

-0.5: Memory leak. Your destructor for TowerHanoi should call 'delete' on the rods. Setting them to NULL means the data still exists in memory but you no longer have a way to access it, creating a memory leak. Similarly, your LStack should call 'delete' on your list. Calling pop() to remove all the data in the LinkedList won't delete the LinkedList itself, only the Nodes inside it (and this is what the LinkedList destructor should do).

-1.0: Lack of inline comments and function header comments in LStack and LinkedList.

-1.0: Missing getters for head and tail.