CpSc 2120 — Goddard — Spring'18

Lab 5: Linked Lists

Create a class Blister that is a linked-list implementation of a structure that stores and compares base-sequences.

It should implement the header file Blister.h provided, without alteration. Bases are stored as characters. It should use a ***singly-linked linked list***, with all operations running in linear time.

The operations are:

- The constructor takes a string and creates a linked list with those characters in order (first char in first node).
- The destructor should free up new'ed memory.
- The stream insertion operator should output the sequence.
- The length member function returns the number of bases in the sequence.
- The isSubstitutionOf member function compares two base-sequences and returns true if they have the same length and differ in exactly one base.
- The isInsertionOf member function compares two base-sequences and returns true if the one it is called on is obtained by adding exactly one base to the other base-sequence. For example, MADAM is insertion-of MAAM as well as ADAM.

A driver is provided to help with testing. Edit as desired. Do not add a main to Blister.cpp. Submit via handin just the one file Blister.cpp.