Lab 05 - Nodes Problems

Direction: Submit typed work in the Labs directory of your github repositor or dropbox, or upload to the google classroom assignment. Each part should be a separate files. The files named should be "lab5A.cpp" and "lab5B.cpp" respectively.

Part A: In class

Your objective is to write the definition of the function `Average()` whose header is

$$\text{double Average(Node<double>* root)}$$

It returns the average of the values from the singly linked list referenced by *root*. If *root* is referencing an empty list, the function returns 0.

Part B: Take home

Your objective is to write the definition of the following functions

☐ the function `EndAppend()` whose header is

```
template <typename T>
void EndAppend(Node<T>*& data,Node<T>* addon)
```

It appends the linked list referenced by *addon* to the end of the linked list referenced by *data*. For instances, if *data* = $[a, b, c, d, e]$ and *addon* = $[f, g, h, i, j]$; then after the call of the function, *data* = $[a, b, c, d, e, f, g, h, i, j]$.

☐ the function `GreaterThan()` whose header is

```
bool GreaterThan(Node<bool>* op1,Node<bool>* op2)
```

Given that *op1* and *op2* references doubly linked lists that represent binary numbers, the function returns true if the list referenced by *op1* is greater than the list referenced by *op2*. For instances, if *op1* = $[0, 0, 1, 1, 0]$ and *op2* = $[1, 0, 0, 1]$, the function will return false. Do not assume that the lists are the same size.