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 `Maximum()` whose header is

```
double Maximum(Node<double>* root)
```

It returns the maximum value 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 `FrontAppend()` whose header is

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

  It appends the linked list referenced by *addon* to the beginning 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* $= [f, g, h, i, j, a, b, c, d, e]$.

- ☐ the function `LessThan()` whose header is

  ```
  bool LessThan(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 less 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 true. Do not assume that the lists are the same size.