Computer Science - Programming 2 - Object Oriented
Laboratory class #9

Define and implement List class representing linked list.

Part I have to be realized first.
Parts II-VI can be realized in any order.

General hint: Desired output is presented in output.txt file.

Part I 2.0 points
- declare (in List.h file) and implement (in List.cpp file) all elements of List class needed for Part I (constructors, destructors, operators).
- uncomment declaration (in List.h file) and implement (in List.cpp file) Clean and Get methods of List class.
- Clean method frees memory allocated for list elements, this method should be used in other List class members.
- Get method takes and removes from list its first element (for empty list it returns 0).
- uncomment Part I in main function (Lab09main.cpp file).

Part II 1.0 point
- uncomment declaration (in List.h file) and implement (in List.cpp file) PushFront, At and Max methods of List class.
- PushFront method adds element (of value v) at the beginning of the list.
- At method returns value of k-th list element, if k is negative or greater (or equal) than number of list elements the method returns 0.
- Max method returns value of the greatest list element (the list remains unchanged).
- uncomment Part II in main function (Lab09main.cpp file).

Part III 0.5 point
- uncomment declaration (in List.h file) and implement (in List.cpp file) SubList method of List class.
- SubList method returns list which consists of count elements starting from start element of the list, if start parameter is negative the method returns empty list.
- uncomment Part III in main function (Lab09main.cpp file).

Part IV 1.0 point
- uncomment declaration (in List.h file) and implement (in List.cpp file) Reverse method of List class.
- Reverse method reverses order of list elements (returns void).
- uncomment Part IV in main function (Lab09main.cpp file).

Hint: remember about tail field

Part V 1.5 points
- uncomment declaration (in List.h file) and implement (in List.cpp file) GetMax method of List class.
- GetMax method takes and removes from the list its greatest element (for empty list the method returns 0).
- uncomment Part V in main function (Lab09main.cpp file).

Hint: remember about tail field

Part VI 2.0 points
- uncomment declaration (in List.h file) and implement (in List.cpp file) Remove method of List class.
- Remove method removes from the list all elements equal to its parameter and returns the number of removed elements.
- uncomment Part VI in main function (Lab09main.cpp file).

Hint: remember about tail field