

CL2001 – Data Structure Lab

Lab Task # 03

Note:

- Plagiarism will not be **tolerated!!**
- Variable names should be meaningful.
- Use comments wherever applicable.
- Submit a pdf file containing all of your C++ code with all possible screenshots of every task output on Google Classroom. The name of file should be your roll no followed by your name (roll-no-name.pdf) i.e., (23P-1234-Ali.pdf).

Problem: 1

Implement the following operations of List ADT by using array class.

- Constructor and Destructor.
- createList(): create a new list (presumably empty)
- copy(): set one list to be a copy of another
- clear(); clear a list (remove all elements)
- void insert(); insert at the end of list
- insert(X, ?): Insert element X at a particular position in the list
- remove(?): Remove element at some position in the list
- get(?): Get element at a given position
- update(X, ?): replace the element at a given position with X
- find(X): determine if the element X is in the list
- length(): return the length of the list.
- printList(): print all elements of list
- reverseList(): reverse all elements of list
- sort(): sort all elements of list in ascending order
- isFull(): check whether list is full or not
- isEmpty(): check whether list is empty or not

Note:

- Write a driver (main) program to test your code (provide menus for all operations).
- Use pointer notation instead of array indexes.