For this lab you will create your own custom ArrayList class. This lab will leverage the knowledge you have garnered about doubly Linked List and Arrays that you have garnered through the last few weeks.

The basic is assignment is to create a Generic ArrayList where all elements in the ArrayList must be of the same type. This is to be done in C++ and Java. In every node of the linked list the size of the array it contains must be at least double the size of the previous node's array. Users should be able to access elements of the array in between O(1) time and O(n) time.

For reference you may check
https://docs.oracle.com/javase/8/docs/api/java/util/ArrayList.html
On how array list in java methods functions

add(int index, E e)
clear()
contains(E e)
ensureCapacity(int minCapacity)
isEmpty()
get(int index)
remove(int index)
size()

- For Partial credit create an integer arraylist in C++/Java
- For full credit create an generic arraylist in C++/Java
- For a lab replacement lab grade plus full credit in this lab create dynamic arraylist in C++/Java that can accept any public datatype ie datatypes of of different types can be contained in the single arraylist (for credit it need to work in C++ and Java)