Online0: Static Arraylist [20 pts]
Due: 5:50 PM June 30

Problem

Your task is to implement the following two functions

int is_duplicate(int idx): @returns 1 if the item @param idx is a duplicate item in the list; otherwise @returns 0.

int delete_duplicate_items(): @returns SUCCESS_VALUE if at least one duplicate item is deleted from the list; otherwise @returns 0 when there are no duplicate items to delete. You must use the *int is_duplicate(int idx)* to implement this function.

While impleting both these functions, try to call the functions that have already been implemented in static_arraylist.cpp file as much as possible. 30% marks are allocated whether you can call the already implemented functions or not.

Sample Input-Output [Function call | Return value]

List: 1,3,4,1,5,2,3,2,1,11,5,1,3	
is_duplicate(0)	0
is_duplicate(2)	0
is_duplicate(3)	1
is_duplicate(10)	1

Initial List: 1,3,4,1,5,2,3,2,1,11,5,1,3	
delete_duplicate_items()	10000
Updated List: 1,3,4,5,2,11	

Initial List: 1,3,4,6,10,5	
delete_duplicate_items()	-10000
Updated List: 1,3,4,6,10,5	

Instructions

a. Use the functions that have already been provided in the static_arraylist.cpp file. Do not any advanced C library.
b. You cannot use object oriented programming
c. You must not use other's code. You must not share your code. You must not copy from any other sources such as web, friends etc
d. Try to use the functions that have already been provided in the static_arraylist.cpp file rather than writing plain code

Submission

a. Rename the file to your 10 digit student ID, then submit. E.g., if your student id is 2021-3-60-999, your file name should be 2021-3-60-999.c.

b. There will be penalty for late submission. However, unfortunate conditions, will be considered case by case
c. If there is a sudden power outage, please solve the problem in paper and submit the pdf of your solution properly renaming it.