

Cairo University
Faculty of Engineering
Computer Engineering
Department

Data Structures and Algorithms Lab Exam

Name:	ID:
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Answer Table:

Write (**yes**) in the cell(s) of the test case(s) that run with the correct output. Write (**no**) otherwise. Write either (yes or no) in the 4 test-case cells.

Problem #	TC#1	TC#2	Comments (if any)
Problem 1			
Problem 2			

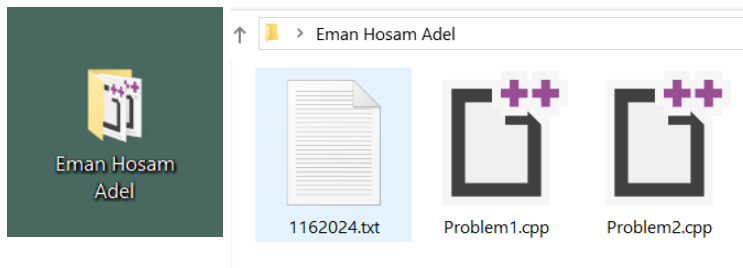
Write your **name and ID** at the beginning of **Problem1.cpp** and **Problem2.cpp**.

```
Problem1.cpp -# X
// TODO: WRITE YOUR NAME AND ID
// STUDENT NAME: Eman Hosam
// STUDENT ID: 1162024
```

Create a folder on **Desktop** having your **full-name** (as written in grades sheet).

Inside this folder, add **exactly** 3 files:

- 1- A text file, its filename is your **ID** (without any additions because it will be read automatically, and your grade depends on it).
- 2- The completed file of **Problem1.cpp** and **Problem2.cpp**. Copy paste the **WHOLE** modified file, NOT ONLY the required function.



Be Careful!! Not following any of the above constraints may make you lose the whole lab exam grade.

Lab Exam Rules:

- **Allowed Material:** The exam is totally closed book (NO material or any external resources or help is allowed).
- **Internet:** Connecting to the internet during the exam even without using it is considered cheating.
- **Printed Paper:** Leave the exam printed paper under the **keyboard**. Taking exam printed paper with you has a large grade penalty.
- **Visual Studio Only.**
- **Opened Windows:** close ALL windows except the visual studio window(s) you are working on.
- **Auto-Correction:** the exam will be corrected automatically in terms of the number of passed test cases, so if you don't pass any test cases, don't expect a grade in this problem. However, the constraints mentioned in the problem will be checked manually for applying any needed grade penalties. **Note: Submit your code anyway even if it doesn't work because we may reconsider.**
 - Don't use **system("pause")** because it prints "Press any key to continue" line which will make all test cases fail, and don't use extra **cin** or any similar function in the main (a similar problem).
 - Do NOT use **cout** or **cin** inside the required function(s). All **cins** and **couts** are written to you.
- **Hidden Test Cases:** there are some hidden test cases, you will not be able to see them or make any resubmissions .
- **Flash Memories and Storage Devices:** Seeing flash memories or any storage devices during the exam even without using them is considered cheating.
- **Smart Phones or Watches:** Having them during the exam even without using them is considered cheating.
- **Cheating Penalty:** any cheating attempt (even the failed attempts) in any form in the lab exam, both cheaters (the cheater and the cheated-from) will take the same penalty, which is ZERO in the lab exam grade and DEDUCTING some grades from OTHER classwork grades.
- **Notes:**
 - Breaking any of the above rules is considered cheating, same penalty.
 - Passing the lab exam problem ideas or code to students of different tutorial times is also considered cheating.