Friday, 02 February 2018

LAB DEMO 02

Quick Class Roster Check

Today, I will call 4 names that I have remembered from last week ☺️

- A, B, C, D

My target today is to remember at least 4 more names:

- E, F, G, H

C++ OOP, Revisited

- From tut01 **this week**
  - Which will be Lecture 03a stuff later today
  - **Quick** review of the working solution

C++ OOP, Revisited

- ## From tut01 **this week**
  - Now changing the underlying data structure :O
    - https://visualgo.net/en/list?slide=2-4 with STL vector (mentioned in https://visualgo.net/en/list?slide=2-7)
  - To illustrate the concept that ADT _may_ be implemented with more than one data structure

Working C++ Code for VisuAlgo Ex

- https://visualgo.net/en/sorting?slide=1-2
- Pick one of application 1-6 and Lab TA will **code** the solution on the spot for you ☺️
  - You should have listened to the general idea from T01/T02

Birthday Reminder Problem

- CP3.17b, page 13, task 5: Given the distinct and valid birthdates of n people as triples (DD, MM, YYYY), order them first by ascending birth **months** (MM), then by ascending birth **dates** (DD), and finally by ascending **age**.

VisuAlgo Online Quiz Training Mode

Make sure that you understand the explanation in:
https://visualgo.net/en/sorting

You can use VisuAlgo Online Quiz training mode to check your basic understanding about Sorting on "infinite"* number of random questions:
https://visualgo.net/training?diff=Medium&n=5&tl=5&module=sorting
(for now, you have to login for this URL to work)...

PS1 Status (after 6 days :O)

Name	A	B	C
Group A	AC	AC	AC
Group B	AC	AC	
Group C	AC		
Have not tried: Group D			

This PS is meant to be a warm up for harder things to come
Please get your hands dirty with C++ coding
Practice is important for these 5 PSes (15%) + end of semester PE (12%)

Don't hesitate to contact me for more help if you need it

PS1 Preview

- Number of operations that the server that hosts Mooshak can do in about 1s is approximately ~100M+
  - (you can 'test' the judge)
- A:
  - TC = 100, N = 500
  - $O(TC * N^3)$ = **12,5**00,000,000, likely CMI*
  - $O(TC * N^2 \log_2 N)$ = **2**24,144,607.11, "seems possible"

- B:
  - TC = 100, N = 3,000
  - $O(TC * N^2 \log_2 N)$ = **10,3**95,672,106.84, likely CMI
  - $O(TC * N^2)$ = **9**00,000,000, "seems possible"

- C?
  - TC = 3, N = 100,000 :O...