Monday, 18 February 2019

LAB DEMO 04

C++ STL priority_queue

- constructor
- top, push, pop
- http://en.cppreference.com/w/cpp/container/priority_queue
- It is a MAX priority queue by default

Conversion of Min ↔ Max PQ

- CS2040: Java PriorityQueue which is a Min PQ by default can be converted into a Max PQ in two ways
- CS2040C: C++ <priority_queue> which is a Max PQ by default can be converted into a Min PQ in two ways

1. Number-only technique
2. Changing the comparison function

Binary Heap Demo

- If we ever need to emulate (or enhance) Priority Queue by yourself, one way is to use Binary Heap data structure that we learned in class

- Here is a quick implementation of a basic Binary (Max) Heap in Java/C++ ☺, let's review the details
  - http://www.comp.nus.edu.sg/~stevenha/cs2040c/demos/BinaryHeapDemo.java (CS2040)
  - http://www.comp.nus.edu.sg/~stevenha/cs2040c/demos/BinaryHeapDemo.cpp (CS2040C)

Mock Midterm Test

- https://nus.kattis.com/problems/throwns

- You have 30m to try coding an AC solution

- Starting I/O template is given, see
  https://repl.it/@stevenhalim7/throwns

- Lab TA will give gradual hints per 5m interval

- Full AC solution will not be given,
  the last hint will be something that is "near AC"

Any other question for midterm test?

- Open-ended topic
- Your Lab TA will TRY TO answer on the spot
  - Will Tai-Chi to Tutorial TA or lecturer if the question is too hard :O
- All the best ☺

END HERE FOR 18 FEB 2019