Standard Template Library

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Outline

- Lab 7 Solution
- Project 2 Solution
- Project 3 Overview
- Extra Credit Assignment
- C++ Standard Template Library (STL)

Lab 7

- Verify whether or not an array is in heap-order
- Idea 1: For each node verify its children (if present) are not larger
- Idea 2: For each node verify its parent is not smaller
- <In class look at my solution>

Project 2 Solution

- <In class look at my solution>

Project 3 Overview

- Concept: Hospital emergency room log
- Logs when (1) patients arrive, (2) patients are visited by a doctor, and (3) when patients leave

Input File

Priorities

01 Cough

10 Bleeding

Doctors

Dr. Doctor

Patient Arrivals

08:00 "Patient A" "Head ache" 25

08:00 "Patient B" "Bleeding" 60

Output File

08:00 Patient A arrives

08:00 Patient B arrives

08:00 Dr. Doctor visits Patient B about Bleeding

09:00 Patient B departs

09:00 Dr. Doctor visits Patient A about Head ache

09:25 Patient A departs

Data Structures to Use

- Queue
  - Patient arrivals
  - Available doctors

- MaxHeap
  - Patients who are waiting to see a doctor
  - Patients who are currently seeing a doctor

- Hash Table
  - Mapping of symptom to priority

Extra Credit Assignment

- 1024+ word reflection essay
- How has this course made an impact (can be both positive and negative) on you?
- Writing about what you directly learned will not be sufficient
- Due by class next Tuesday

C++ Standard Template Library

- algorithm

- vector

- queue

- unordered_map (tomorrow's lab)