# Advanced Programming COEN 11

Lab 3

#### Lab3

#### **Urgent Care, Waiting List**

- Change lab 2 to use an array of structures
- Due in week 3

#### Lab3

# Same functionality as Lab 2, but add two more commands

- The waiting list is created interactively with the following commands
  - 1, 2
  - Same as in lab 2 (for 2 you need to check the values)
  - 3 <dept>
  - Remove the oldest item with the dept given
  - 4 <dept>
    - Show the entries in the list that matches the dept
  - 0
    - Quits

### Lab3

#### Requirements

- Main: loop forever accepting commands, same
- Do not allow names to repeat
  - Add a function to check for repetitions
  - The function returns zero or one
- 6 functions
  - main, insert, show, remove, show\_dept, check\_duplicate
- List mechanism, same
  - Your list should stay in the oldest-to-newest order
    - Always insert a new entry at the bottom
    - Always shift entries up after removing one

# Lab3

#### New requirements

- Global variables
  - array of structs
  - counter
- Use a struct pointer to traverse the array in each function

# Lab 3

#### Grading

- Pre-lab
  - Flowchart of the show\_dept function 10%
- In the lab
  - Demo to the TA 30%
  - Submit your code to Camino 60%