CSE 220: Data Structures Lab (Spring '14)

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BRAC University

Department of Computer Science and Engineering

CSE 220: Data Structures

Lab 05

Program

You have to implement a waiting room management system in an emergency ward of a hospital. Your program will assign an Id number to a patient in a first come first serve basis. The lower the id, the sooner the service will be provided to the patient.

Your program will contain the following methods:

RegisterPatient(): This method assigns an Id (which is auto-generated) to a patient and register him/her to the system.

ServePatient(): This method calls a patient to provide hospital service to him/her.

CancelAll(): This method cancels all appointments of the patients so that the doctor can go to lunch.

CanDoctorGoHome(): This method returns true if no one is waiting, otherwise, returns false.

ShowAllPatient(): This method shows all ids of the waiting patients in SORTED order. (Hint: use the sorting methods learnt in class using the appropriate data-structure for each task) [Sorted according to their names]

Task 1

Solve the above problem using an array based queue.

Task 2

Solve the above problem using an array based circular queue.

Task 3

Solve the above problem using a linked list based queue.

Available from: Friday, 11 October 2013, 02:00 PM
Due date: Friday, 18 October 2013, 02:00 PM

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