Patient Administration System

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MSc Programming 2 Group Project - CSC 7051

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# Problem statement

## Introduction

We have designed a patient administration system for a Hospital’s Accident and Emergency (A&E) department. Patients entering the A&E department are booked into the system and placed into a queue for treatment.

# Design

## Database Schema

The first steps of the design process was to create a database schema for the system. A database is necessary to store the details of the patients and staff members of the hospital. The entities and relationships we in the database schema are as follows:

Entities

Relationships

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## UML Diagram

## User Interface Design

A user interface was created using Java FX and Scenebuilder. The user interface has various pages which we have designed to be consistent in colours and theme. The layout of the pages is quite simple as we intended the system to be intuitive and uncomplicated for users.

The user interface consists of the following pages:

* Login - To be accessed by doctors, nurses and receptionist. A login screen which the user will use to enter the credentials which are their staff number and password.
* Queue System - To be accessed by the triage nurse. This screen has a drop down box which allows the user to modify the patients position in the queue by assigning them a new triage priority. There is another drop down box which allows the user to select which treatment room to assign to the patient.
* Reception Layout - To be accessed by the receptionist. The screen allows the user to search for the details of patients who have entered the A&E department. There are four fields where patients details can be entered. These are first name, last name, postcode and NHS number. There is a table of search results of patients in the database whose details match those inputed. The patients information that is displayed is title, first name, last name, street, city, postcode and phone number. The user can select the patient from the list and add them to triage.

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* Treatment Room - To be accessed by doctors and nurses working in the treatment rooms. The first name, last name blood type and known allergies of the current patient being treated are displayed on the screen. The time the treatment began is also shown on the screen. The user has the option to extend the treatment time and there is a text box for the user to enter a summary of the treatment which they can save in the system.
* Triage - To be accessed by the triage nurse. This screen shows a table including the patients NHS number, first name, surname, allergies and condition. There is a drop down box which is used to assign a triage category to the patient which can then be saved into the system.

# IMPLEMENTATION

## How was the queue created?

multiple threads, priority queue, array lists linked lists

# Testing

Describe and evaluate testing strategy - what we intended, what we did, what we achieved

# Evaluation

## Project

## Product

requirements met

# retrospective