UTCN
Computer Science Department
Software Design 2016/2017

ASSIGNMENT A3

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1. Objective
The objective of this assignment is to allow students to become familiar with the client-server architectural style.

2. Application Description
Use the C# API to design and implement a client-server application for managing the consultations of doctors in a clinic. The application has three types of users: the clinic secretary, the doctors and an administrator.

The clinic secretary can perform the following operations:
- Add/update patients (patient information: name, identity card number, personal numerical code, date of birth, address).
- CRUD on patients' consultations (e.g. scheduling a consultation, assigning a doctor to a patient based on the doctor's availability).

The doctors can perform the following operations:
- Add/view the details of a patient's (past) consultation.

The administrator can perform the following operations:
- CRUD on user accounts.

In addition, when a patient having a consultation has arrived at the clinic and checked in at the secretary desk, the application should inform the associated doctor by displaying a message.

3. Application Constraints
There will be 3 applications, on for every type of user and including only the functionality for that type of user. The architecture should be client-server and the data will be stored in a database. The client applications will be Windows Forms applications. Use a .Net Web API to expose the server functionality to the client applications. Create a pooling mechanism in a separate Thread which will query the server at predefined short intervals to find out if a new patient has checked in.

4. Requirements
- Create the analysis and design document (see the template).
- Implement and test the application.

5. Deliverables
- Analysis and design document.
- Implementation source files.

6. References

http://www.codeproject.com/Articles/769671/Web-API-without-MVC
https://msdn.microsoft.com/en-us/library/e1dx6b2h(v=vs.110).aspx

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