A System for Linking Doctors and Pharmacists

A Group Project

for

DCCT*2000

The doctor prescribed Zantac for an ulcer, but the pharmacist filled the prescription with Zytrec, an allergy drug. What happened? This is just one example of medical errors that result from confusion over drug names; a mistake that can happen when two drug names sound alike when spoken or look alike when handwritten. At best, such mistakes can delay proper treatment; at worst, they can be lethal.

- Adapted from: http://www.ppc.com/inside_knowledgecenter.asp?doc=129&cat=casestudy

Your have been hired by FarmadocSoft to develop a system for linking doctors and pharmacists so that pharmacists no longer need to decipher a doctor's hasty scribble. The two main users of the system will be: doctors and pharmacists. In addition, a system administrator or a third party company will be responsible for managing users' accounts and database files.

System Functionality for Doctors

The system should allow doctors to: create a patient's profile, view a patient's profile, edit or add comments to a patient's profile, create a prescription, cancel a prescription, and renew a prescription.

System Functionality for Pharmacists

The system should allow pharmacists to: view a limited portion of the patient's profile (e.g. name and address, and of course the prescription), add billing information, fill the prescription, add comments to the patient's profile (e.g. prescription has been filled and number of refills if any), and print prescription labels.

Things to Remember

- The client must be a stand-alone application (i.e. not an applet and it is not Web-based)
- The system should be user-friendly and easy to use.
- The system must authenticate users (users must login to use the system).
- The system should offer user-friendly error messages to the user.
- The system should have help menus.

To Proceed:

1. Form a group consisting of 4-5 members (if there are problems, see me)
2. Hold a brainstorming session with your group and discuss the requirements of the project
3. Discuss ideas for the front-end (GUI) as well as the back end (database) of the application. This is left up to your imagination
4. Design a system architecture that shows the interaction between the components of the application. For the database system, I recommend using MySQL
5. Write the design document (see below)
6. Identify the tasks of the project and distribute them among yourselves
7. **Meet on a regular basis and discuss your progress on the project**

Project Milestones

1. Design document: This is a 3 to 5 page design document in which your group describes the architecture of your solution, the tools and technologies that will be used, and screen mockups showing your vision for the application. Note that the user interface of the delivered application should have the same GUI. The design document is due on Friday, November 10 (at start of lab). [**2 marks**]
2. Presentation: In this presentation (15 – 20 minutes), your group will demo the application and its functionality to me and the rest of the class. All presentations will be held on Friday, December 1 between 9:00am – 12:40pm. [**Presentation & Level of Functionality: 6 marks**]
3. Code: Hand in a CD containing your .java classes as well as a printout of your code *at the start of your presentation* on Dec 1. The organization of your code will be looked at as well as the quality of the code in terms of style, efficiency, and comments. [**2 marks**]

Bonus: Develop an *additional* client interface for the BlackBerry device using J2ME (with the *same level of functionality* as the desktop client) and every member of your group will receive an extra 3.5% towards the final grade in DCCT*2000.

P.S. You'll be applying for co-op jobs soon and this is a project you can mention on your resume. During interviews you'll be asked about projects you have worked on. So aim for an A+.