Spring 2012 Senior Project Proposal

Secure Electronic Medical Record System

Ryan Kane & Ricky Orndorff

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1. **Date & Semester**
   26 January 2012 Spring '12
2. **Project Title**
   Secure Electronic Medical Record System
3. **Student Names**
   Ryan Kane & Ricky Orndorff
4. **Project Type**
   Software Project
5. **Project Description**

The aim of this project is to create a mobile patient record database look up to be used as a secure web application that enables authorized users i.e. doctors and nurses to view patient information. The software will have an web based front-end and a MySQL back-end.

System Outline

- Accessible through intranet
- Homepage:
  - "Welcome to MCHC"
  - Sign in: Each user should have a unique ID and an encrypted password
- The following tabs should be located at the top of the page:
  - Search
  - Settings
  - Help
  - Sign Out
- Search box that accepts: Birth year or Last name
- Each patient has: name, date of birth, age, address, photo, National ID
- Patients have the following sections:
  - Info Page: Summary of past events {Patient regimen changed by doctor on a particular date}, {Patient canceled appointment}; Insurance Info
  - Appointments/Visits: Date, Main reason for visit
  - Prescriptions: What, When, Dosage
  - Messages: Exchanged between departments
  - Access History: Who, When, Which department
  - Summary: Past medical history, Diagnosis history, Medication list history, Immunization, Allergies {Type, Medication used, Date}
  - Settings: Edit photo, Edit patient information

In an effort to solve the problem of displacement and damage to patients' files, we propose an establishment of a system whereby there will be little to no movement of files and also less patient contact with files. We plan to achieve this by providing computers to doctors, counselors, the pharmacy, and x-ray sectors. These computers would be equipped with unique a software that is very user friendly and allows the users to enter patient information in real time so that the records can be available immediately through the intranet system. Our project does not intend to eliminate files permanently, but rather it focuses on ensuring the safety of the files and patient information. The files will function as backup and at the end of each day a summary of the patient activities will be printed and placed in these files.

To help with the problem of patient identification, we propose that each patient have a recent photograph that is integrated into the system together with the patient's information. This way, patients will not need to provide an ID card and will be identified through facial recognition and name. This system will simultaneously eliminate identity theft an issue that the clinic recently experienced. Throughout the project, we will take photos of the patients and integrate them into the system. This will also present us with the opportunity to get more patient contact, and to get patient feedback and feelings about the new system.

Our dream is to implement a much simpler process that will save time and energy from not having to search for files. We want to provide a much smoother alternative and as a result give the patients the prompt focus they need, and make the clinic a highly systematic, organized setting for them to arrive into. Most patients feel like HIV/AIDS defines them as they have to center their lives around it. We want to help them gain back control by making their treatment process hassle free. We want to help restore their dignity and peace of mind.

6. Project Resource Requirements

- **Language:** PHP, HTML, JavaScript
- **Database:** MySQL
- **Server:** pluto.hood.edu

7. Deliverables

1. System integration
2. Midterm presentation
3. Testing completed
4. Final presentation

8. Schedule of Deliverables

1. Software Project Proposal - **2/23/2012**
2. Project/Resource Schedule - **2/23/2012**
3. Software Requirements Document - **3/1/2012**
4. Software Specification Document - **3/1/2012**
5. Software Design Document - **3/1/2012**
6. Source code/Executable - **4/26/2012**
   - **i.** Begin Development - **3/2/2012**
   - **ii.** Generate Tables - **3/7/2012**
   - **iii.** Load Data - **3/14/2012**
   - **iv.** Create Search Engine - **3/21/2012**
   - **v.** Authorization - **4/4/2012**
   - **vi.** Integration database with Web front-end by **4/19/2012**
   - **vii.** De-bug code by **4/26/2012**
7. Installation Manual/Users Guide- Due **5/3/2012**
8. Presentation (may include a poster)- Due before last class... **5/10/2012**

9. Faculty Advisor & Reader

Advisor: Professor Aijuan Dong
Reader: Professor William Pierce

10. Faculty Advisor Signature

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