Main Screen:

User starts up program and is presented with 3 options:

Logging in

Adding Data

Shutdown

Logging in will take the user to the Login Screen where they can login or add a new user. Choosing to add data allows the user to enter a path of the sql file they wish to parse (as long as it’s in in the same folder as hospital.py). Shutdown allows the user to close the program.

Login Screen:

The login screen prompts the user for their login and password and allows them restricted access to the database depending on their role. It presents them with 4 options:

Enter ‘newuser’ to add a new user into the system

Enter ‘shutdown’ to close the program entirely

Enter ‘exit’ to go back to the Main Screen

Enter your login to begin the login process.

The login process consists of entering the username and password pair.

If the pair match a pair in the database, then the user moves to the Action Screen

The new user entry takes the user to the New User Screen.

New User Screen:

From the New User Screen the user can choose to exit back to the Main Screen by typing ‘exit’ or begin by entering their desired staff\_id.

The New User Screen will prompt users for desired entries for the tuple:

(staff\_id, role, name, login, password)

And then prompts them to ask if they want to commit their decision (y), reject it and try again (n) or exit to the Login Screen.

After they choose their option, they will be returned to the Login Screen if they choose yes or exit, or back to the start of the New User Screen if they choose no.

Action Screen:

From here, the user can choose to execute actions related to their Role by entering one of 5 numeric commands. For example, the nurse Action Screen has the following appearance:

What option would you like to choose?

(1) Create a new chart/add a patient

(2) Close a patient's chart

(3) Same as 1. for the doctors.

(4) Same as 2. for the doctors.

(5) Logout user

Selection:

Where the user can enter 1 through 4 to choose an action, or 5 to logout and return to the Login Screen.

Detailed Design

Doctors:

Our program prompts the user to enter a number ranging 1-5 corresponding to:

(1) Display Chart information for a patient

(2) Record a symptom

(3) Record a diagnosis

(4) Prescribe a medication

(5) Logout user and return no main screen

Wherein if the number matches, eg. 1 for (1) it will call a function corresponding to that option.

Our first option for Doctors is listing all charts for a selected patient and listing all entries associated with that chart. This is done by calling a function get\_hcno which prompts the user to enter the patients health care number and checks it exists in the database and checks it a valid hcno. A valid hcno is a 5 digit integer. A sql statement then query that hcno against the database to return a name and all charts associated with that person. The user can then can choose to select a chart and display all entries associated with the specified chart.

Our second option is to record a symptom. This is done by calling get\_hcno(already specified) then querying the database to find th open open chart associated with that person. Calling a function get\_symptom we get the specified symptom. Then we use that symptom, the current time, and already known hcno, chart\_id and staff \_id we automatically insert a entry into their chart and return to the doctor options page.

Our third option is to add a diagnosis. This is done identical to our second option. We get the patient’s hcno and then query against the database to see if the patient has an open chart. Then we call get\_diagnosis() to get the specified diagnosis. The chart is automatically inserted with the current time, staff\_id, hcno and specified diagnosis

Our fourth option is to add a medication. This is done by calling get\_hcno and finding all open charts associated with that hcno. The open chart Id and name is printed. A sql statement is used to get all symptoms associated with that chart\_id. If there are symptoms they are displayed. Allergy\_check is called and if there exists an allergy.

The user is prompted to enter a medication. A series of queries gets the suggest amount for that medication for the patients age group. If the specified amount prescribed is larger than the suggest amount. A warning is displayed. The user can choose to continue or specify an new amount. Two function are called to get the start and end date. The current time is recorded and the data is entered if no error occur.

Our fifth option is to exit and return to the main screen.