Project Report

HOSPITAL MANAGEMENT SYSTEM

CSE2004- Database Management Systems

Submitted by

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Contents

Title – Hospital Management System

Abstract

A Hospital management system will be created. It will have 3 different users. They include the doctor, patient and the admin/receptionist. During creation of a user the user will enter his/her role and according to the role user will get connected to the required database.

The patient will be able to book appointments on this database. The doctor can view his schedule and see his appointments. Moreover, the doctor can provide the medicines and give the solution to the problem. The receptionist/admin will be in charge of appointing the patients to the respective doctors depending upon symptoms and doctor department. The receptionist can also remove the data or edit it. A database for patient-doctor appointment will be created which will contain all the appointments of different patients and doctors and each user will have specific permission and visibility to view this database.

Introduction

Booking an appointment in a hospital is a tedious and tiring process. Often the patient either has to call the hospital or physically go to the hospital to get a appointment. The receptionist/admin will have to comb through schedules to see if a doctor is free and available on that time. Even doctors need to know their patients and also about the medicines in the hospital.

To reduce all of this workload a simple Hospital Management System can be created. It will have a simple interface where the patient can book appointment, the receptionist can assign doctors and the doctor can see his/her schedule and help the patient. It is easy to manage the database and all the records will be stored in a virtual environment thus saving paper and money.

Literature Study

The following links provide a brief explanation and insight on Hospital Management System-

https://doctors.practo.com/hospital-management-system/

https://github.com/onthir/Hospital-Management-System

https://ieeexplore.ieee.org/document/5564121

https://ieeexplore.ieee.org/document/7020594

Methodology and Tools

Front End – Python 3.7 with Tkinter
Python 3.7 was used as a frontend tool with Tkinter being used to give it GUI (Graphical User Interface).

Tkinter is a GUI tool used to make applications with python.
A client-connector was downloaded to connect python with the MySQL server and database. The connector is named as mysql-connector-python.

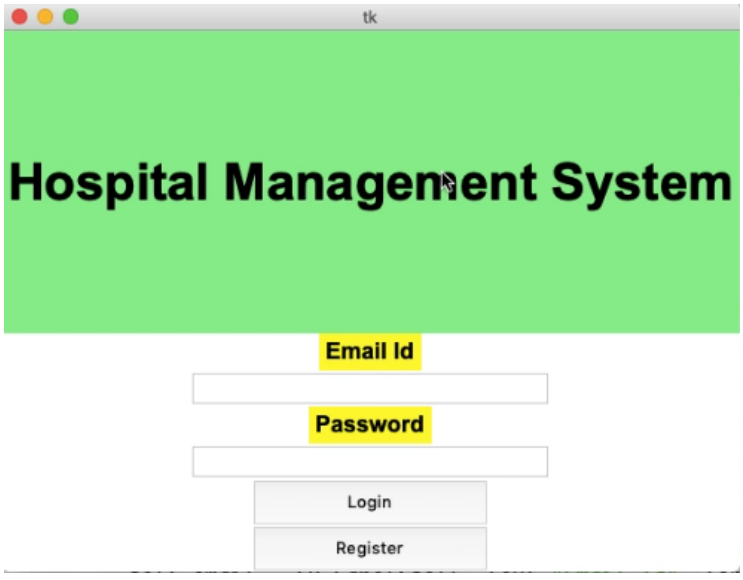
Database - MySQL

One of the most popular SQL databases which is open source. A browser for viewing the database MySQL Workbench was also used. This was to facilitate easier Viewability of the database schema and table

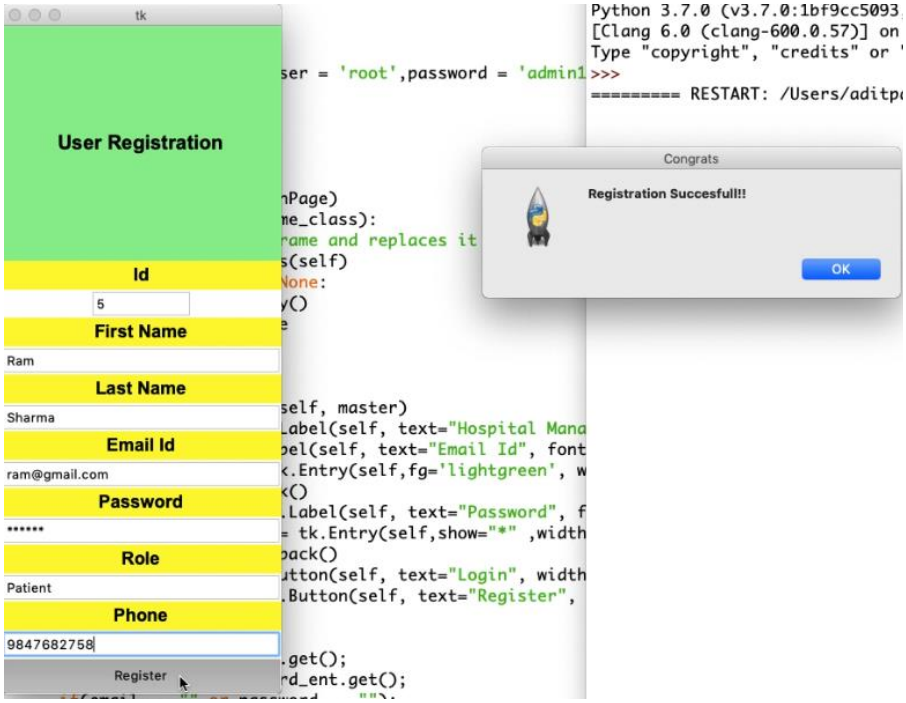
Experiment and Result

We illustrate this process with a complete appointment being booked. We register a user as a patient and then book an appointment, the receptionist assigns the doctor and the doctor gives the solution to the issue of the patient. The patient can then view his/her results.

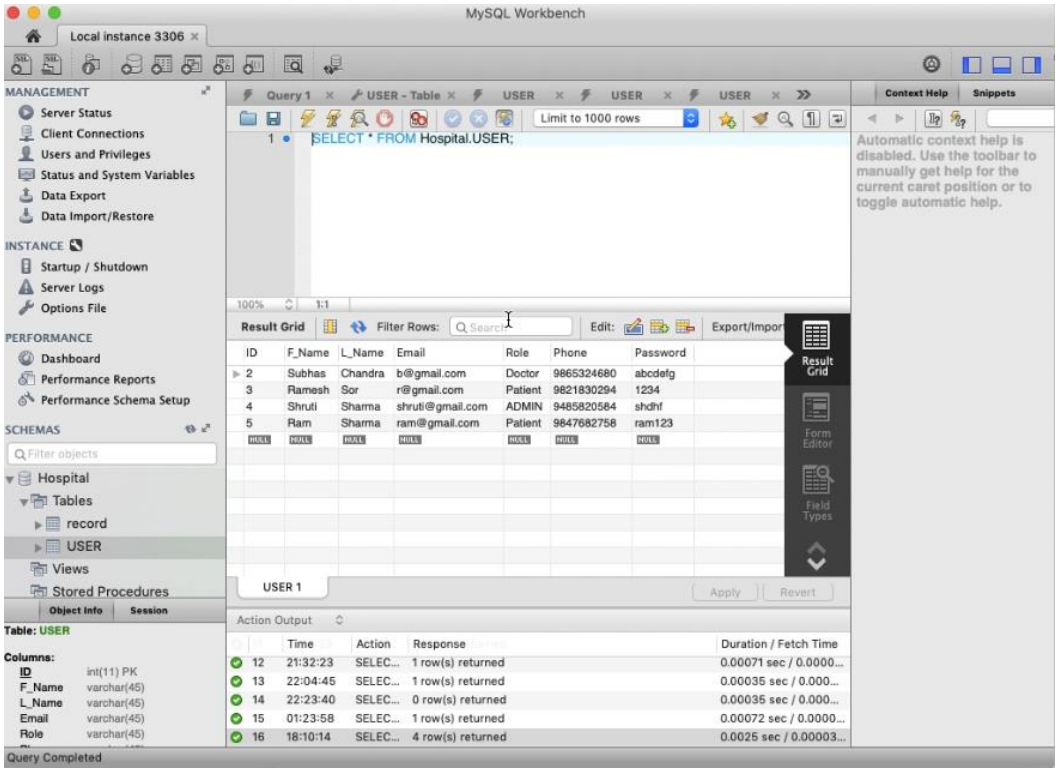
This is the login screen, the home screen.



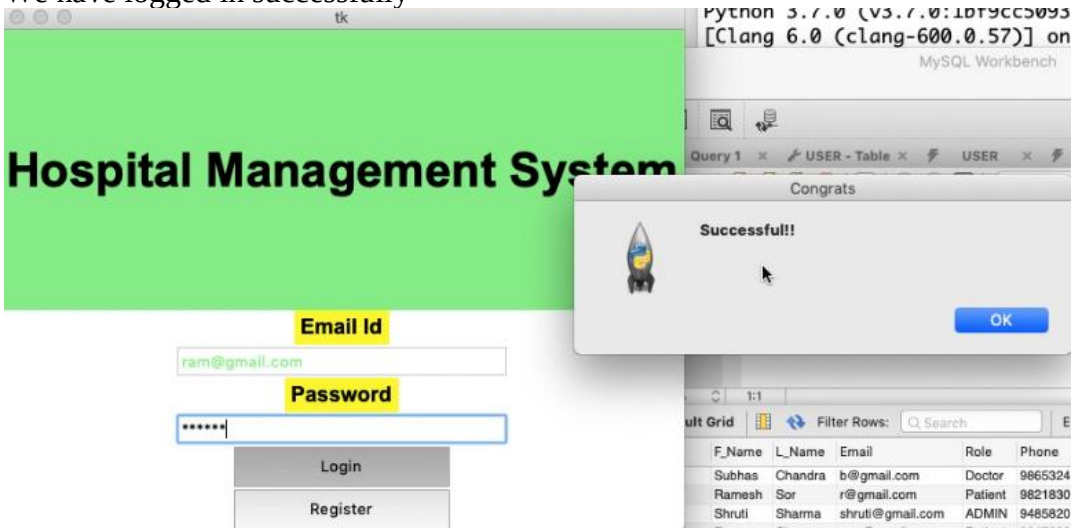
Now we register as a patient Ram



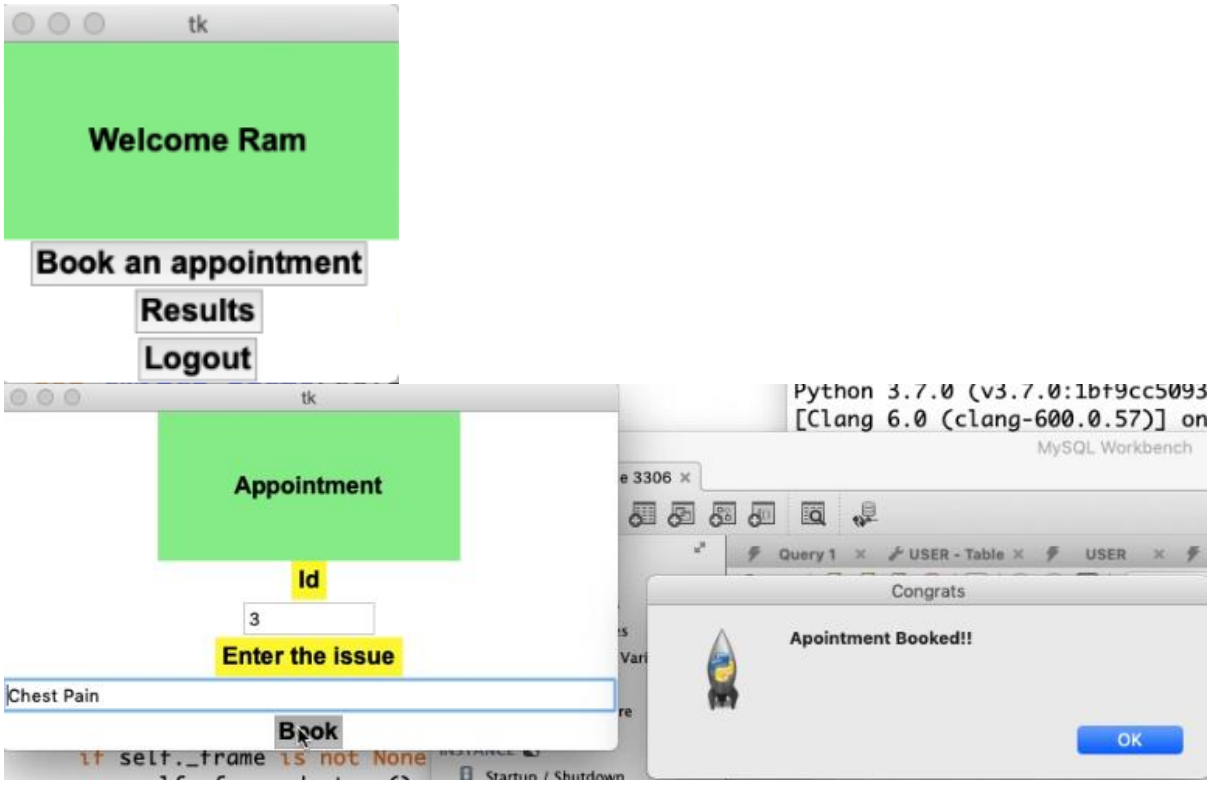
This is the database where the value of the table user has been updated.



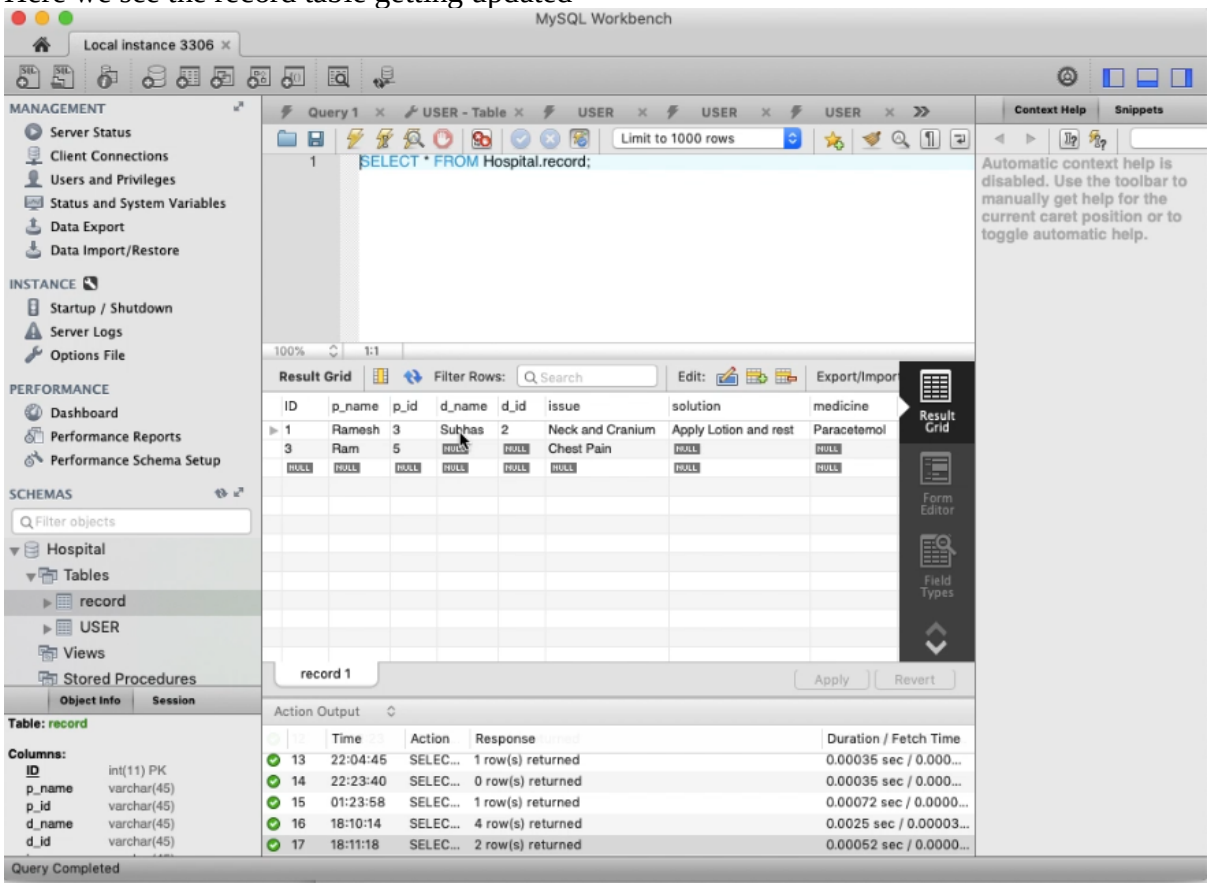
We have logged in successfully



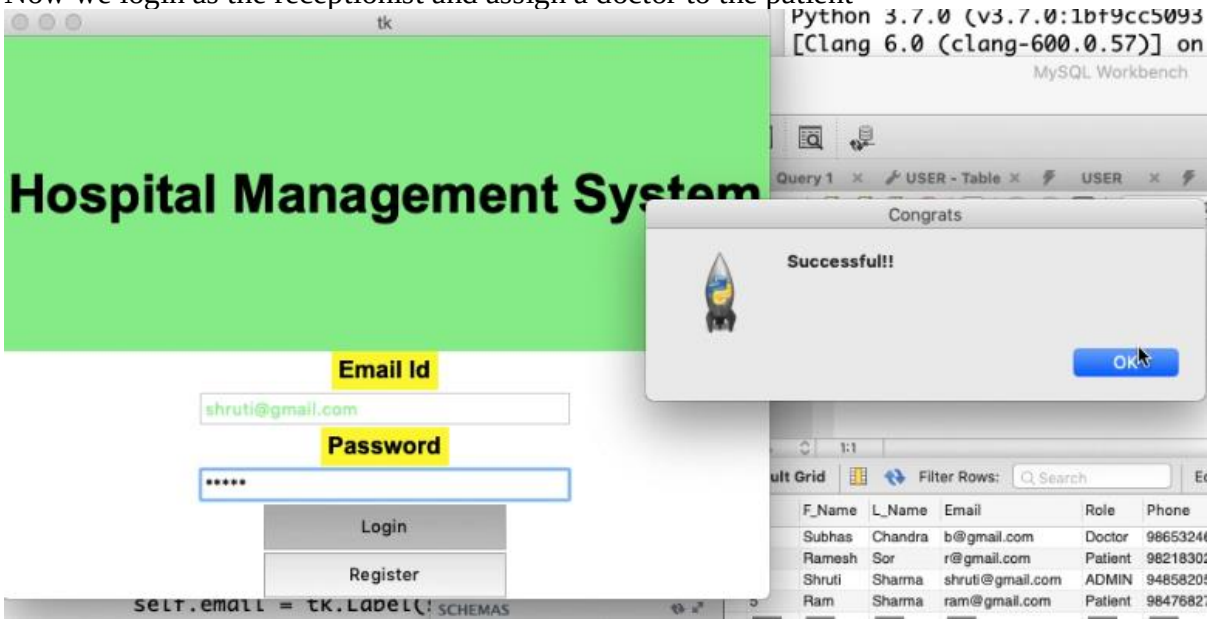
Now we book an appointment

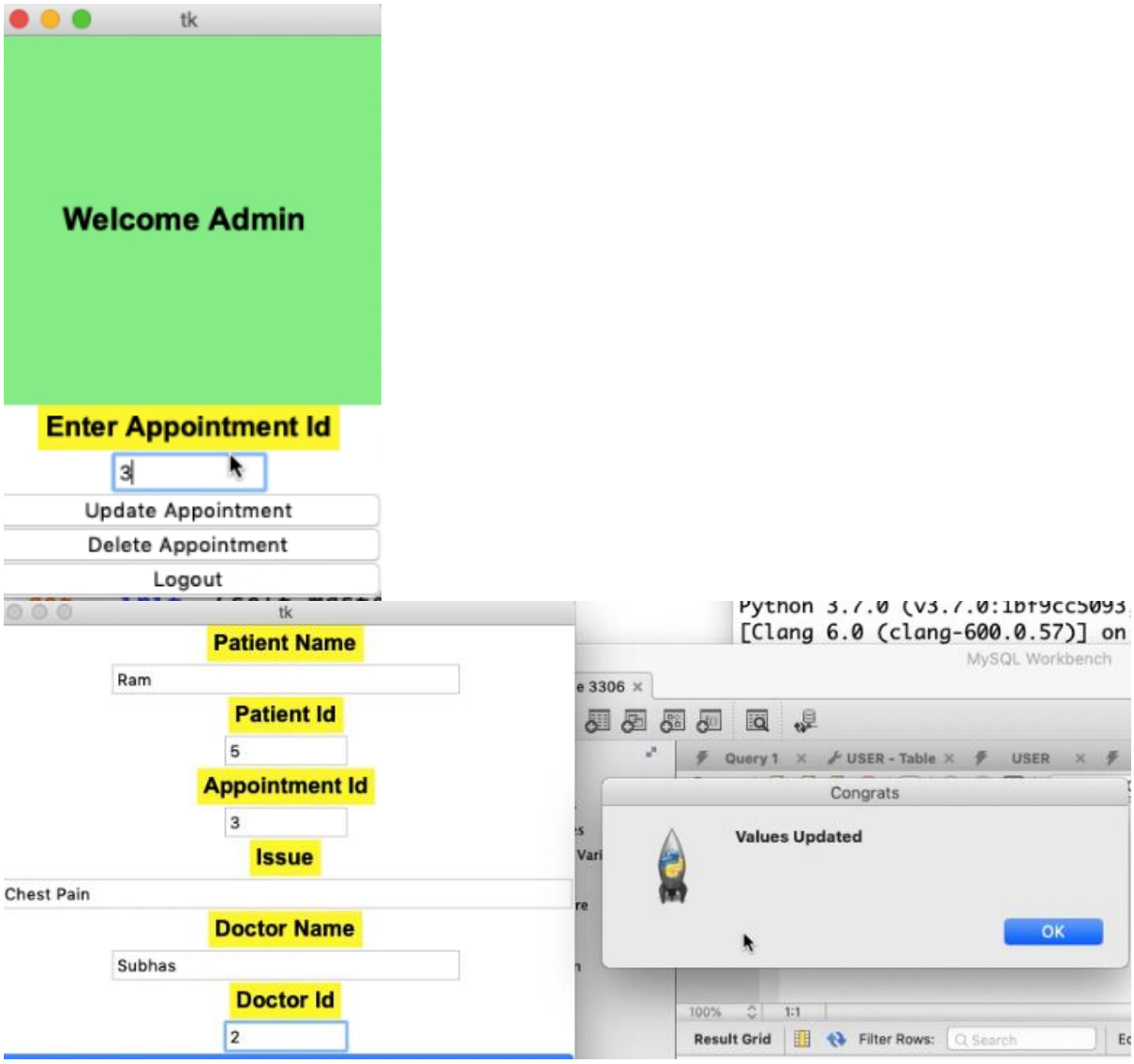


Here we see the record table getting updated

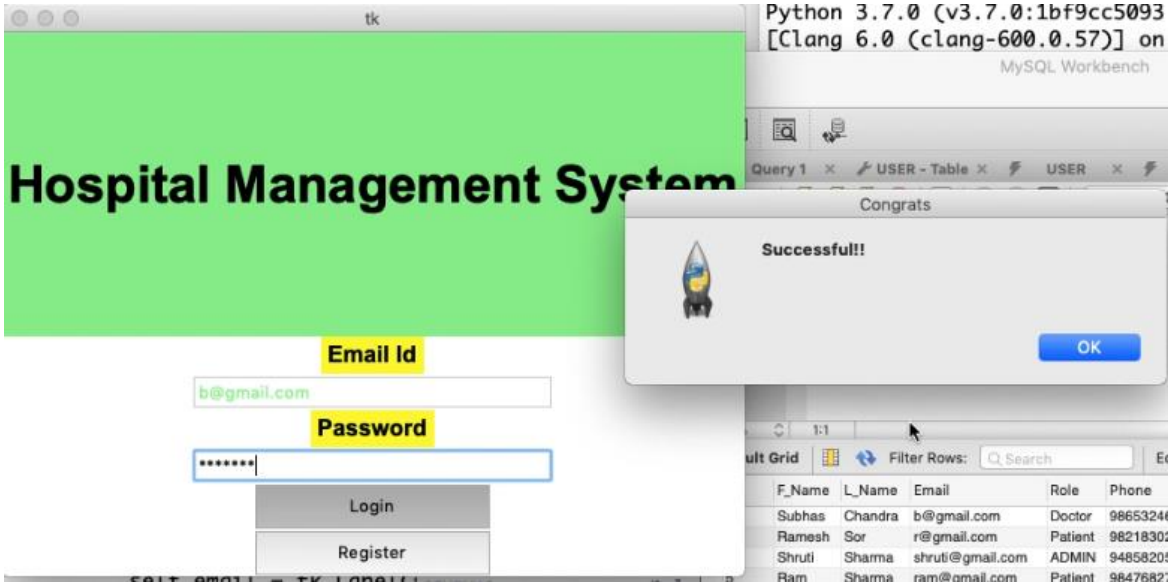


Now we login as the receptionist and assign a doctor to the patient



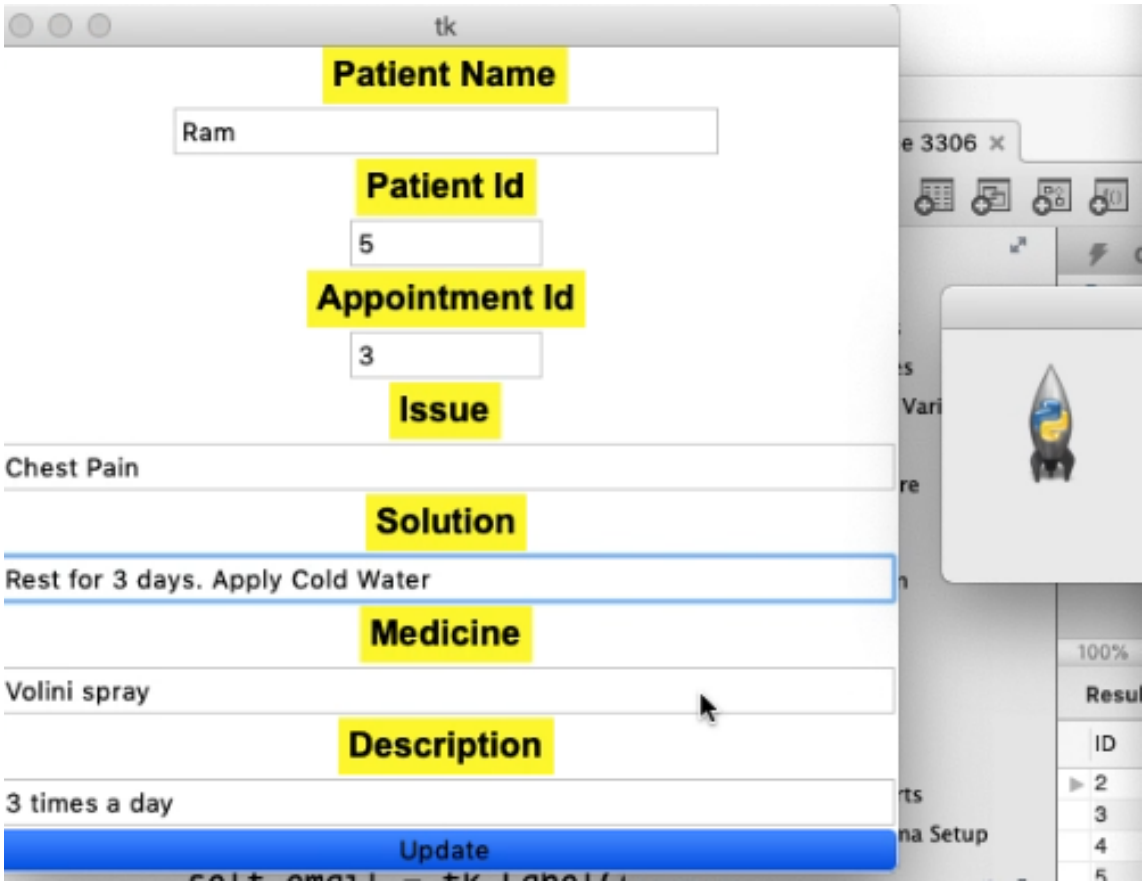


Now we login as the doctor

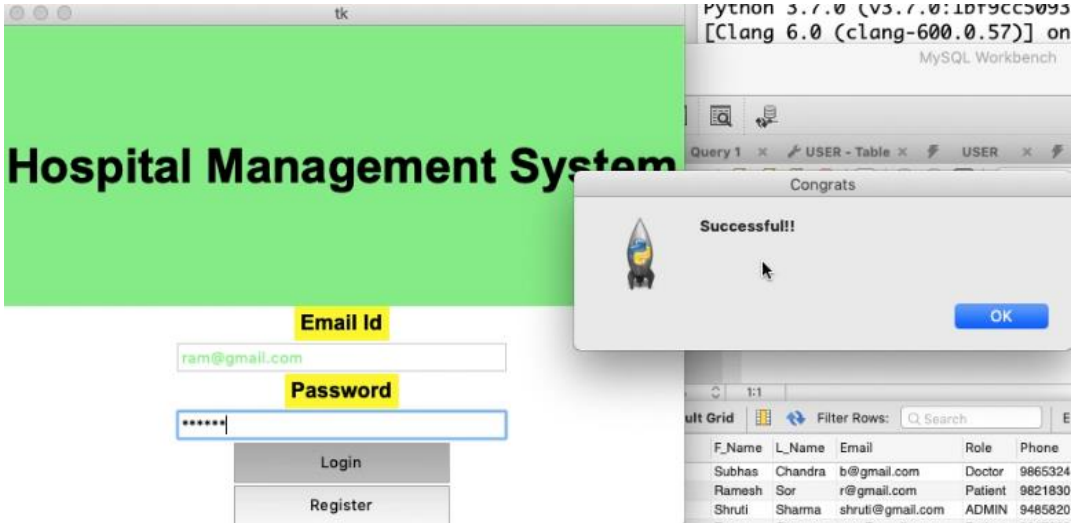


Update the appointment

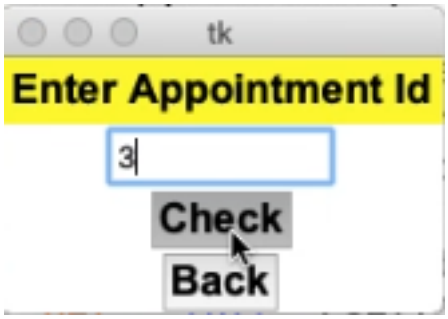
And Update the field

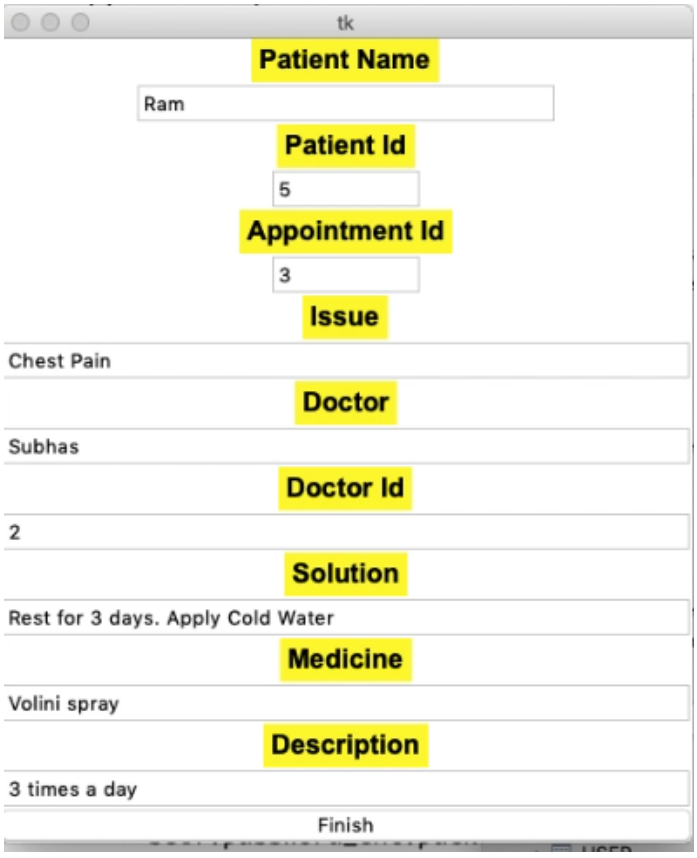


Now we login back as the patient

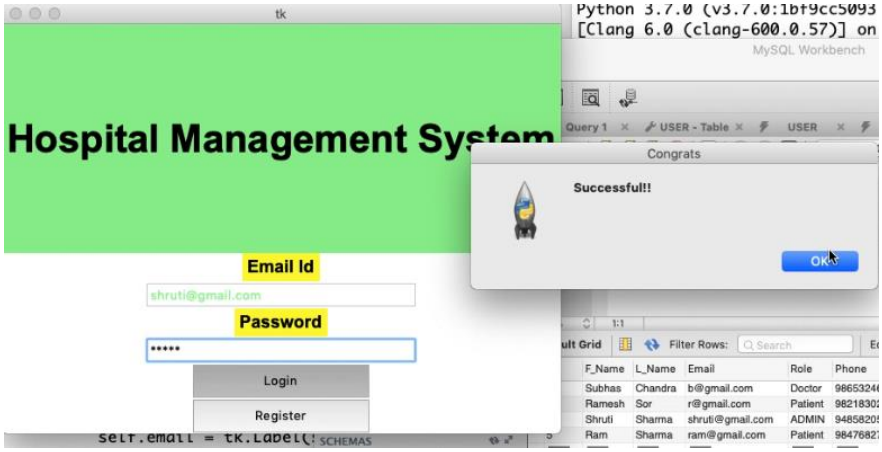


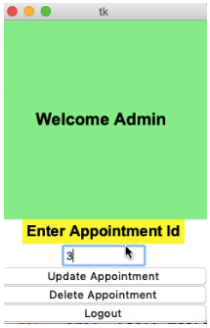
Look at the results and and enter the id





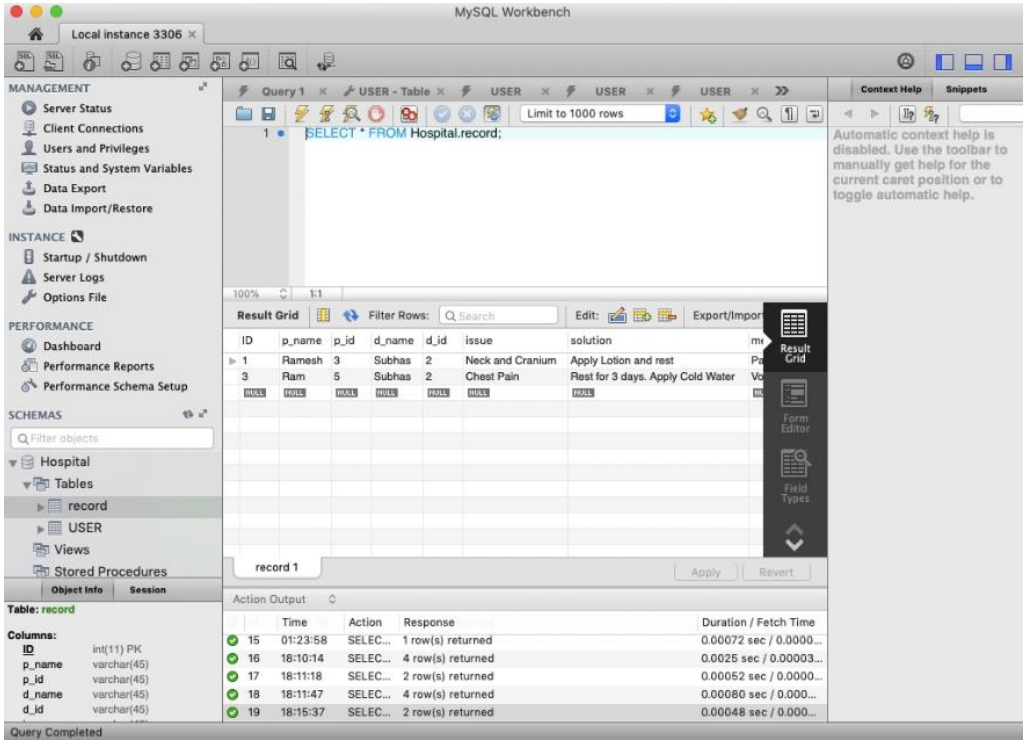
Now since the results have come, we can delete the appointment. This can be done by the receptionist

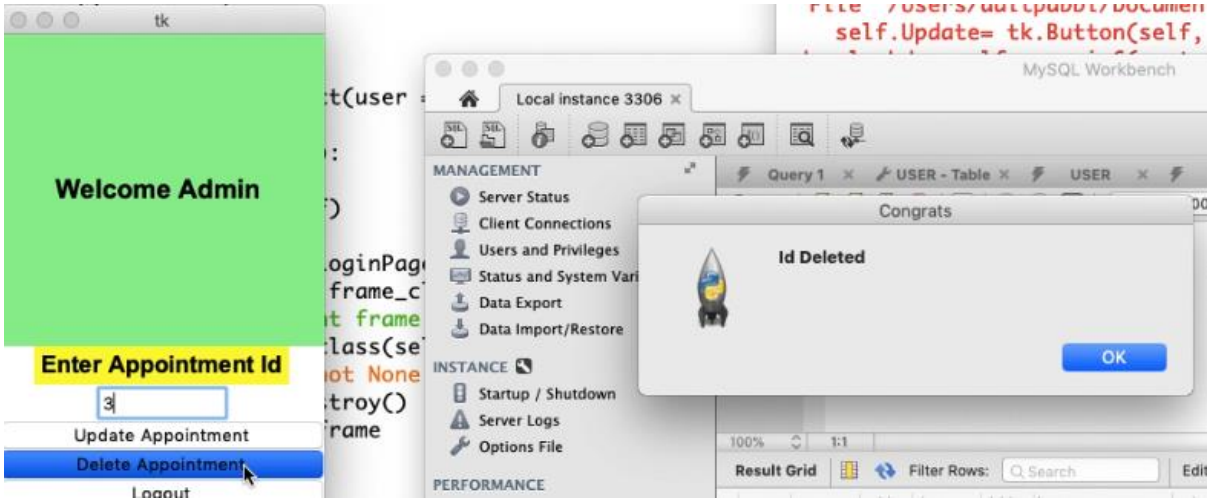




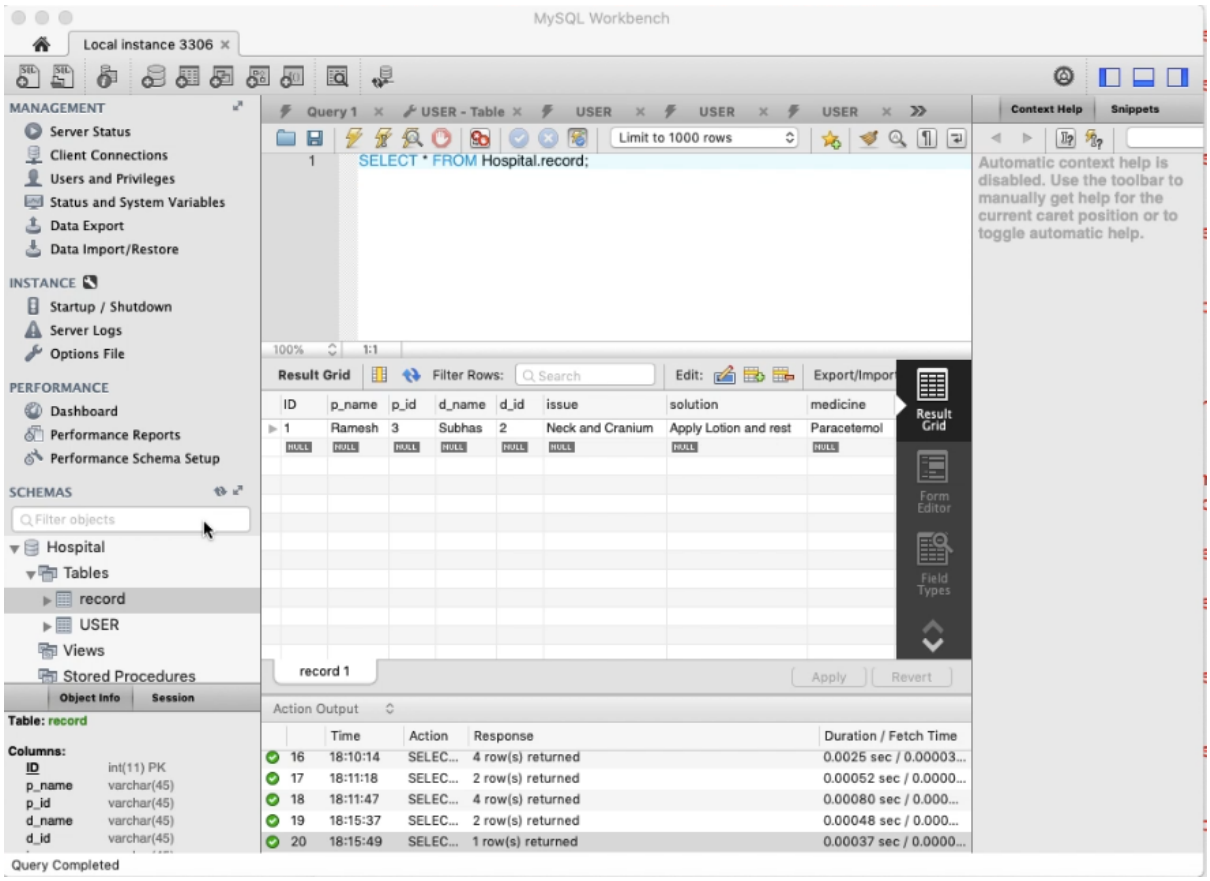
And Delete it

Table Before the deletion





And After the Deletion



Thus we illustrated the operation of **Insertion** by the patient, **Updating** by the doctor and the receptionist, **Selection** by the patient and **Deletion** by the receptionist.

Conclusion

This is a simple hospital management system which can be used instantly. However, this is still a prototype and other additional functionalities can be added to make it more useful like a billing system, laboratories, even other hospitals. We can also model it better to the real world demands. We could use other databases to reduce the access time and also make it more interactive. Moreover we can always extend this to multiple hospitals and make a website for the people to access it.

References

http://effbot.org/tkinterbook/pack.htm

https://wiki.python.org/moin/TkInter

Fundamentals of Database Systems (Sixth Edition) - Ramez Elmasri and Shamkant B. Navathe