**DATABASE SYSTEMS**

(CS220)

**GROUP MEMBERS**

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**Hospital Management System**

**Introduction:**

Starting with our main reason behind this project, a brief introduction to “Captain Moazzam Ali Shaheed Memorial Hospital”. A setup started in Jhelum a couple of years ago. This is basically a trust organization, dream of a senior and respectable doctor of Jhelum “Doctor Yousaf”. He basically lost his son “Major Moazzam” in a cross fire at the pak-indo borders. After that he started a hospital to help the poor, helping hundreds of poor patients every month. Running on donations from all over the world. From this real life scenario we got our idea to develop a data base that can be implemented in such a hospital, helping the administration retrieve and organize the data they gather every day.

**A view of the hospital:**



Mission Statement:

Our mission in developing this data base is to create such a system that can be implemented in any sort of hospital, either working on a small scale or working on a large scale, a hospital located in village or a hospital located in a central city like Lahore, Islamabad this management system will perform just fine, storing everyday data about the patients, doctors, treatments. Helping the administration get basic information about the doctors working in hospital, patients being admitted, tests being conducted

Objectives:

1. Building a secure system so that only the administration or the selected people can get access to the data stored in the management system.
2. Helping the administration such that by pressing only a number of buttons they can retrieve whole data stored in the data base
3. By entering doctors id, all his/her information and the patients treated can be obtained
4. By entering patient’s id, all his/her information and the tests conducted on him/her can be obtained.
5. Providing 95% of paper-less record.
6. Providing reliable storage and backup facilities

Software Interface includes:

1. **Front End**: Laravel/atom/html software
2. **Back End**: MySQL Workbench

Hospital link:

<http://www.muazzamalihospital.org/index.html>

**Implemented Features**

|  |  |  |
| --- | --- | --- |
| Feature | Description | Status |
| **Doctors information** | A simple feature that requires doctors id as an input, performs queries, gets all the information about the doctor along with the information of the patients that have been treated by that particular doctor | **Working at its best** |
| **Patients information** | Another user friendly feature of our management system that requires patients id, and gets all the information about that particular patient along with the test that have been conducted on him/her and their results | **Working at its best** |
| **Login/Signup** | A necessary feature of any management system that requires a username and a password to login to the system to avoid data from being stolen and that the authorized person can only use the system | **Working at its best** |
| **GUI** | Feature that makes the system user friendly, easy to interact and operate rather than being so complicated that the user gets confused on how to use the particular software | **Made Simple interactive, user friendly** |

**KNOWN ISSUES**

Bugs:

We basically faced many bugs during our procedure of making this management system which we removed time by time but the major bug which is left unremoved due to shortage of time is that our basic assumption was that only our administration will be able to use this system but we created a login/signup page for this system. In this anyone can sign up for the system. So there is a chance of stealing of the data.

Errors:

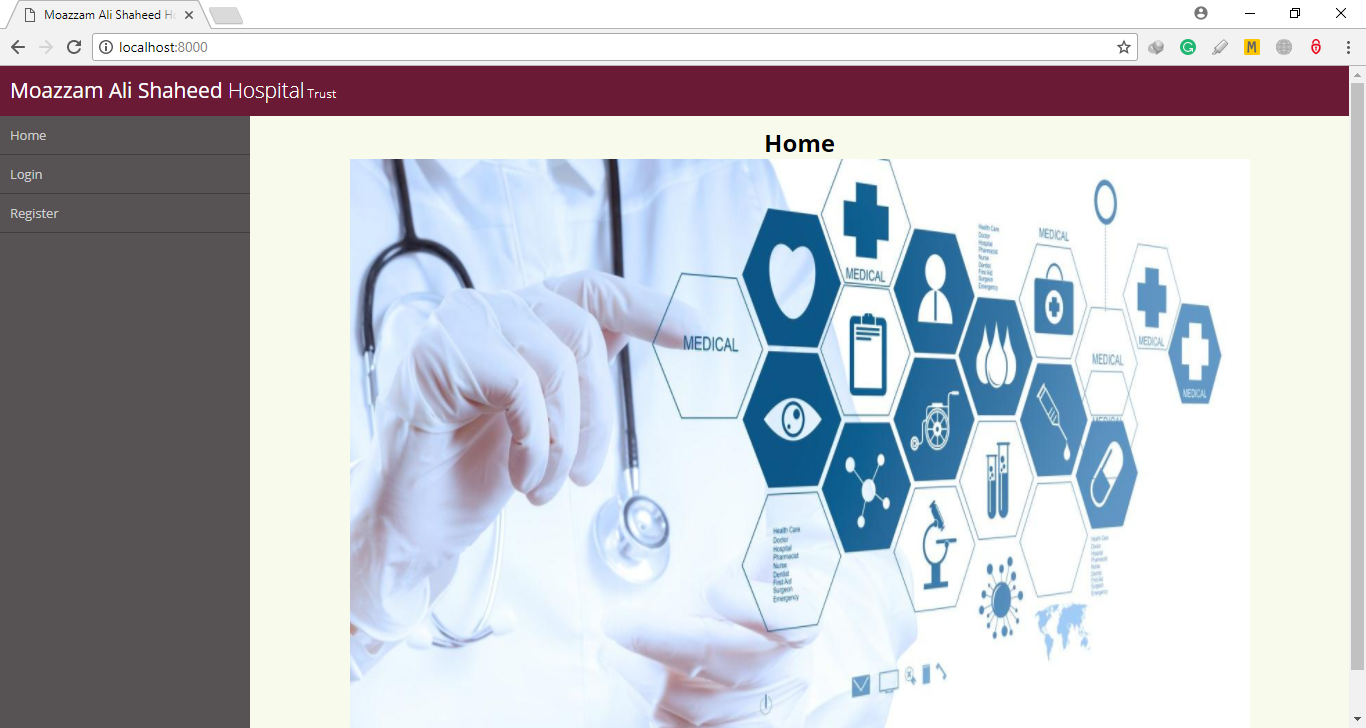
The Basic error we faced is that we created too many tables at first, too many tables resulted in complex queries hence getting it very much difficult to obtain data from these tables and extraction of excessive data. We fixed this error by combining certain tables with each other and removing excess tables that we don’t need for the procedure

Incomplete Features:

We planned that we will also get a track on the finance of the hospital, how the money is being placed in the hospital accounts and how this is being used for different purposes, for this we had created tables and made queries, but due to certain issues hospital management refused to give us information about this fact, and declared the information as private. Hence this is an incomplete feature of our project due to unavailability of data on this fact.

**USER WALKTHROUGH**

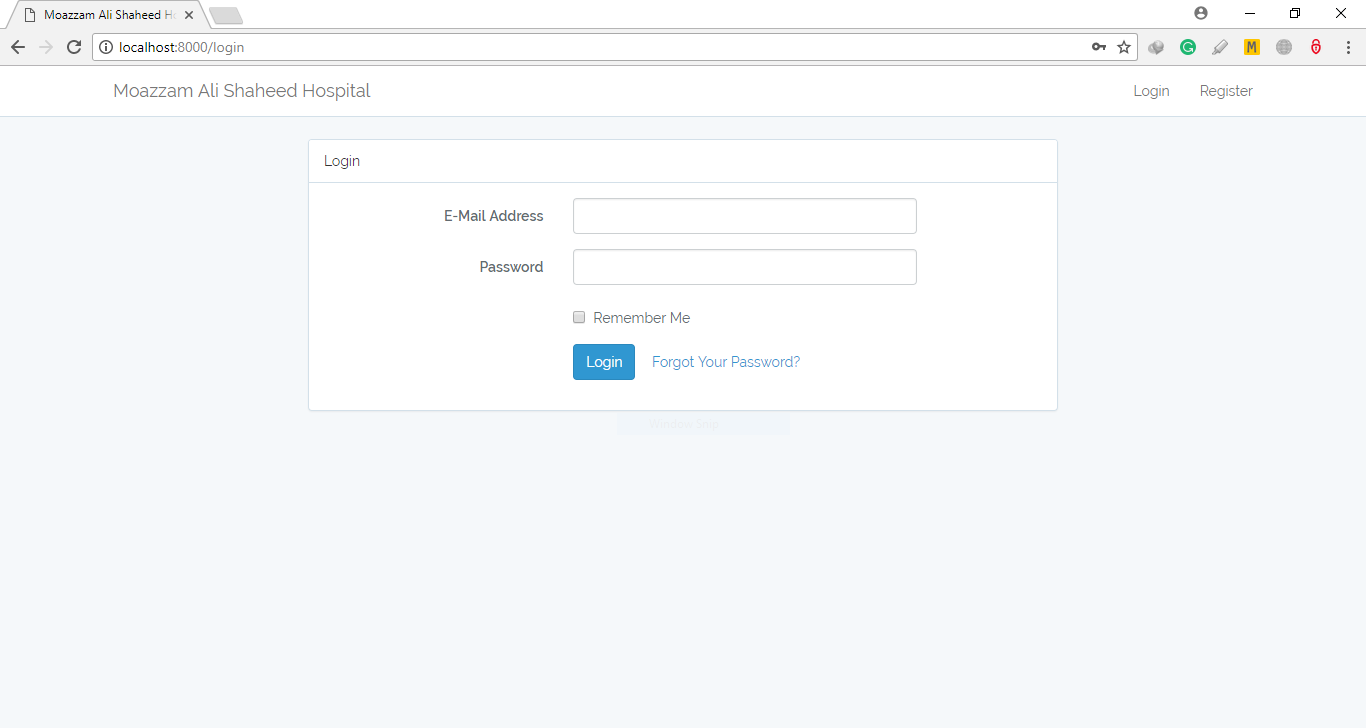
Hay, I am here to help you through our management system.

Let’s start with our homepage, a simple page to use.

Containing only 3 buttons, it’s up to you, you want to signup if you are new to this management system, if you already have an account its well and good.

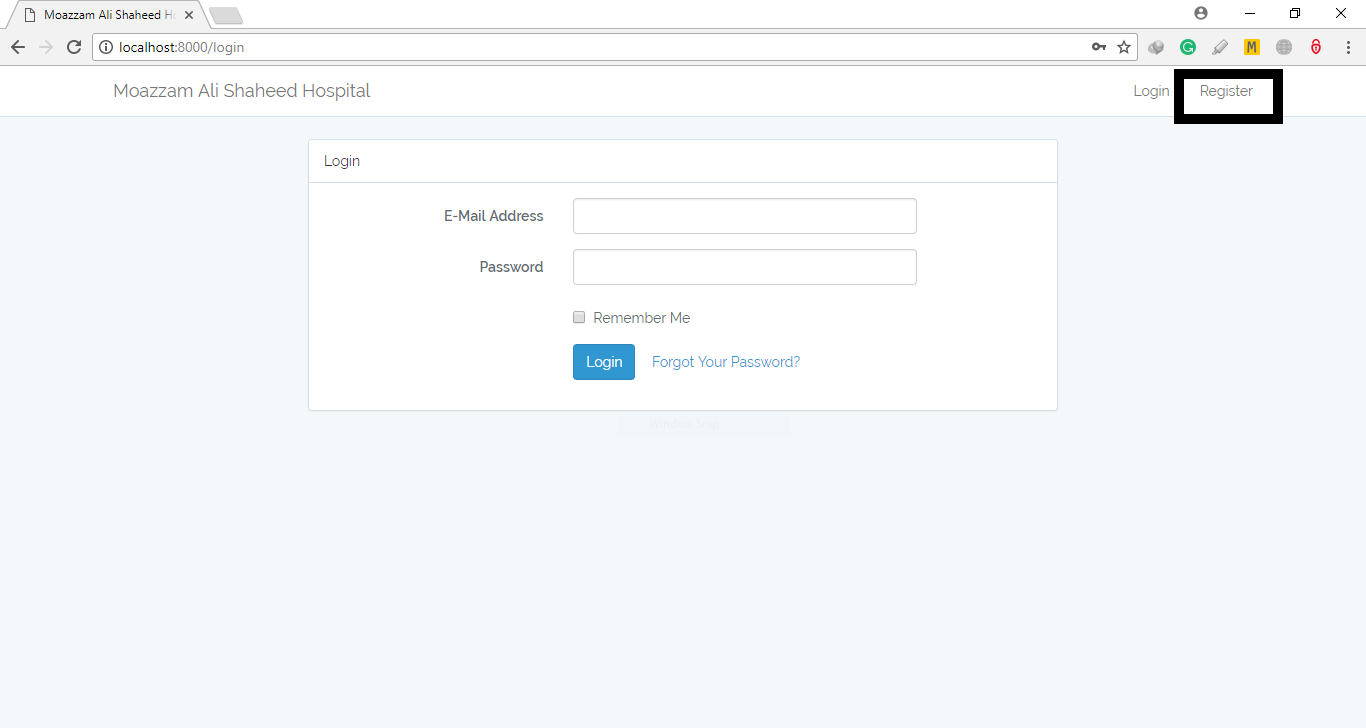
Click the login button.

Let’s start with our login system, the page will look like this



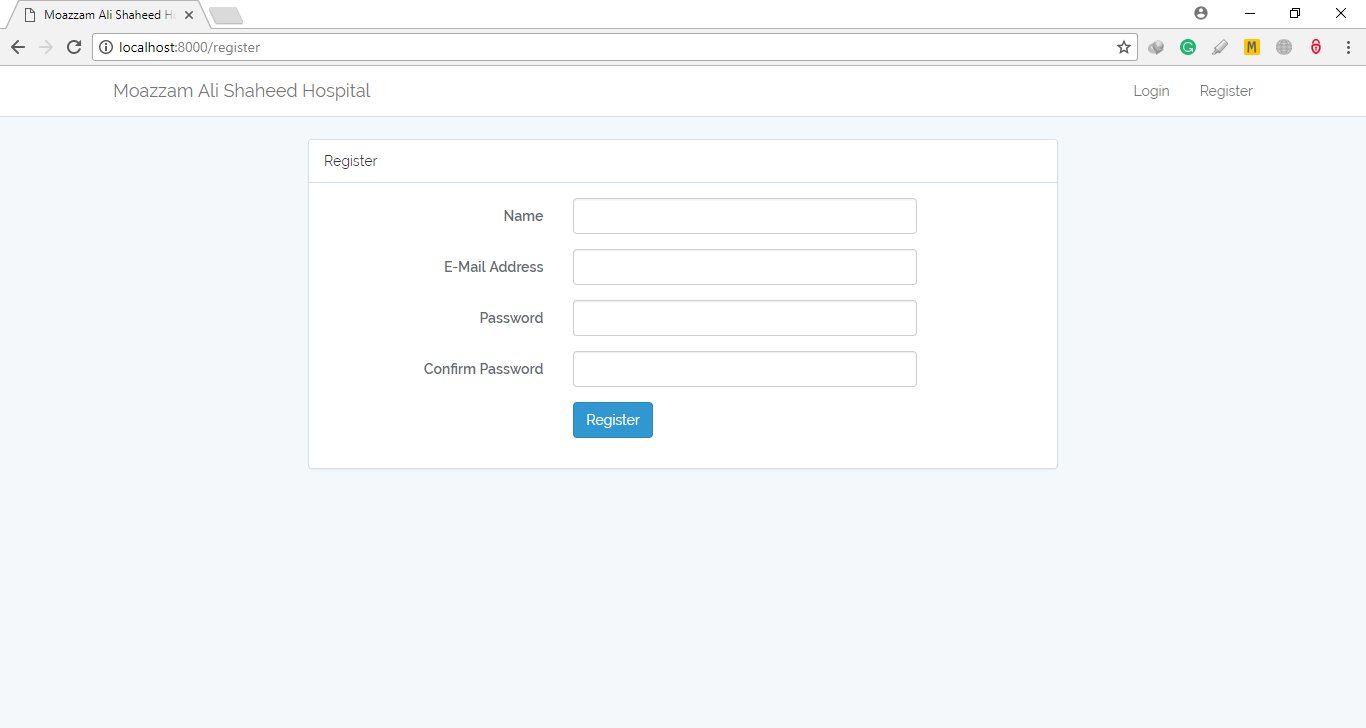
It’s a simple log in page, requiring your username, and password, with a login button to proceed to the next page when you have entered your email address and password.

New to this management system, not to worry. We will get you registered.

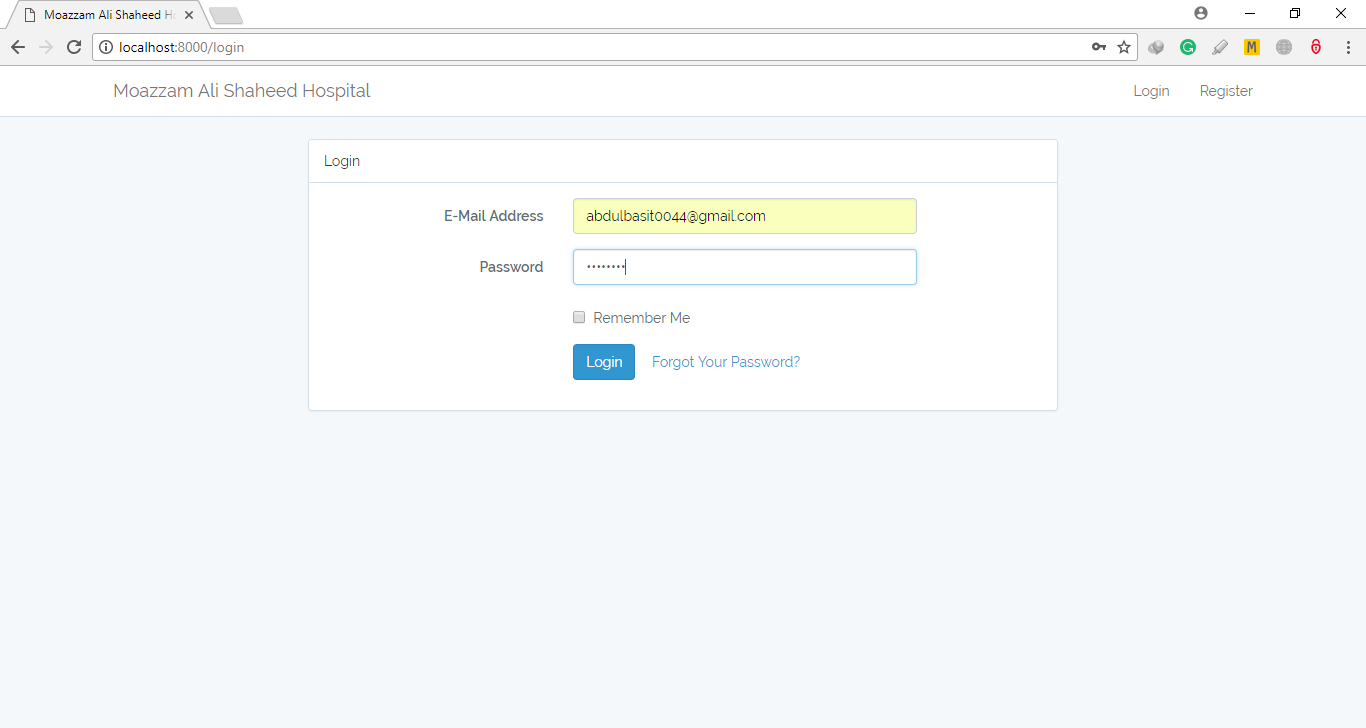


Click the register button, a newer window will appear looking something like this.

You can also register from the homepage.



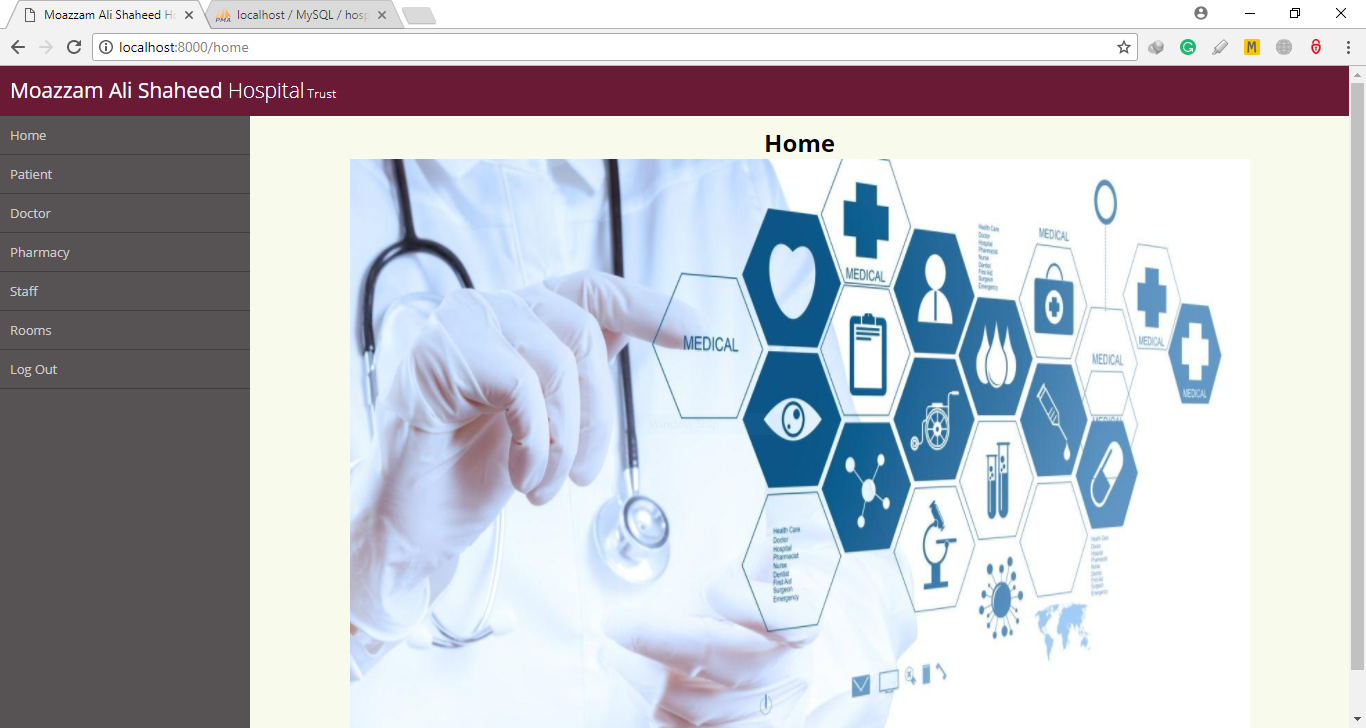
Entering your name, email address, password, confirm password. Press the register button and you are registered.

Username and password, working right now is 

USERNAME: [abdulbasit0044@gmail.com](mailto:abdulbasit0044@gmail.com)

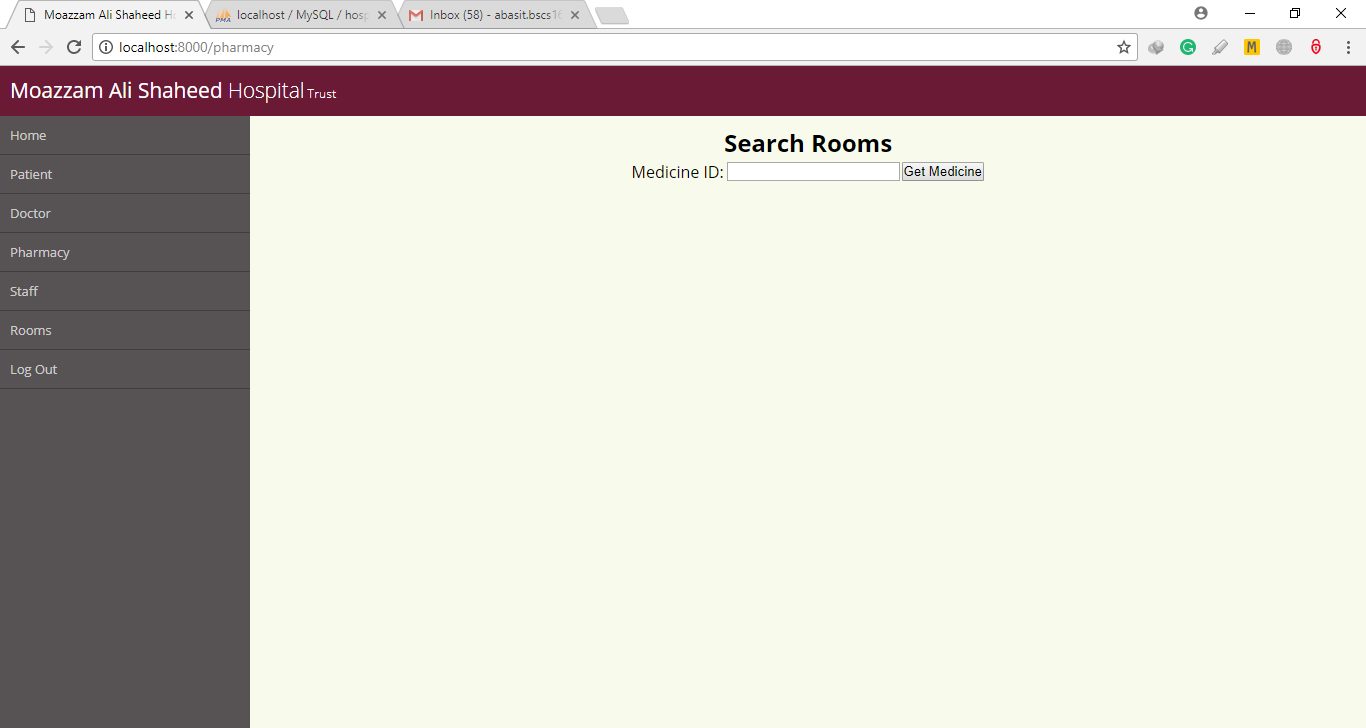
Password: test@123

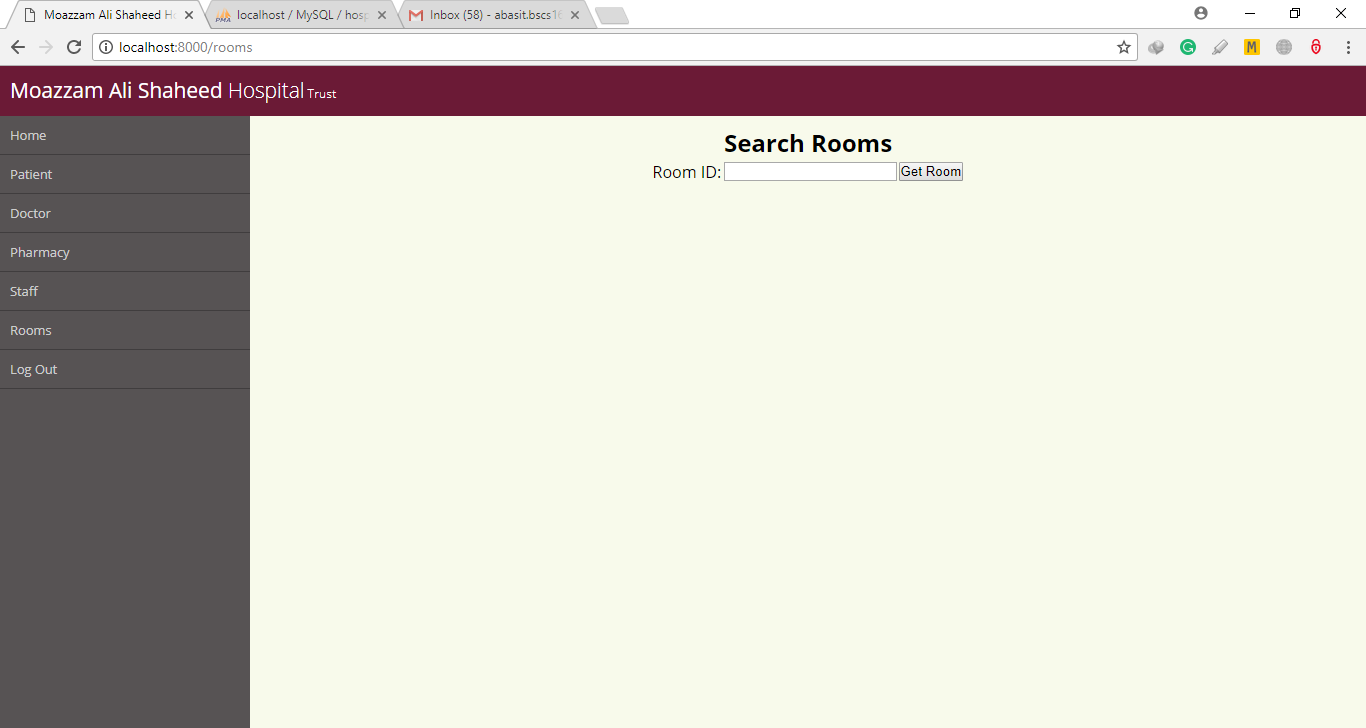
A new window will popup that will look like this.

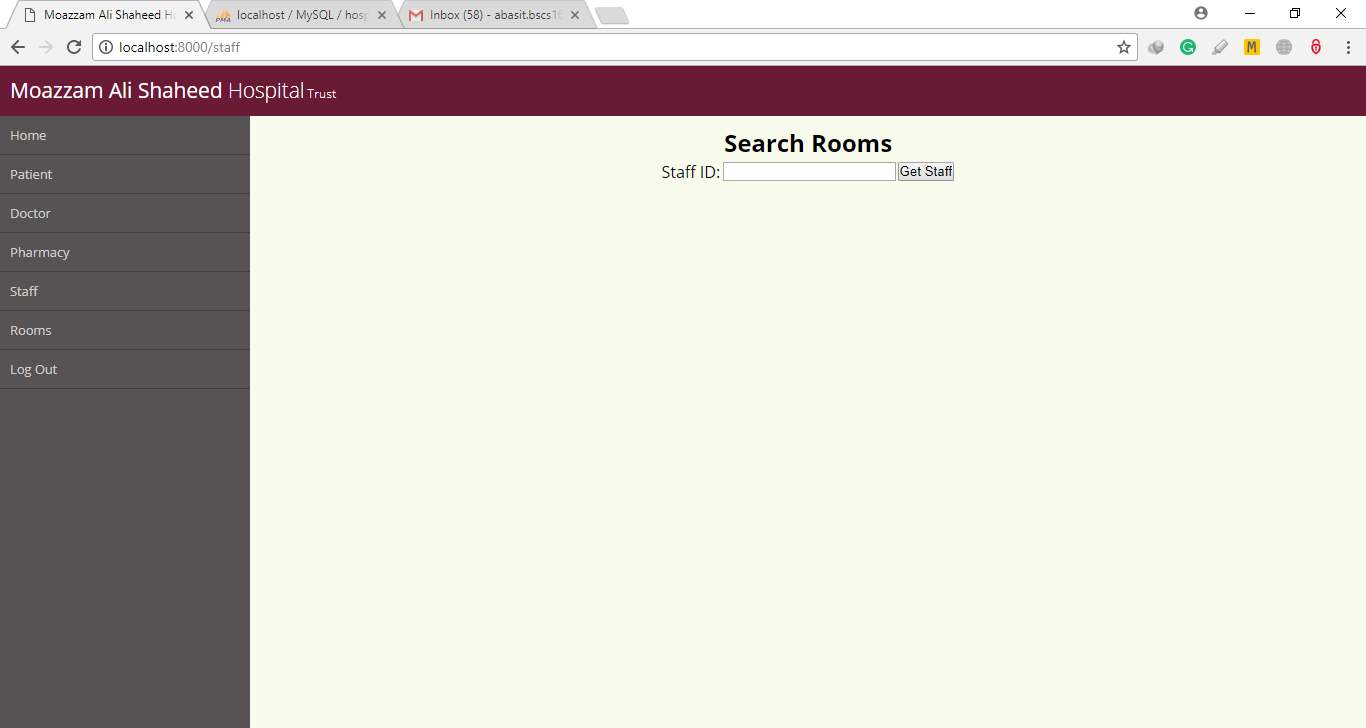


Out of these options some of the options are not yet implimented as describe in our report

Clicking these options you will enter a black page



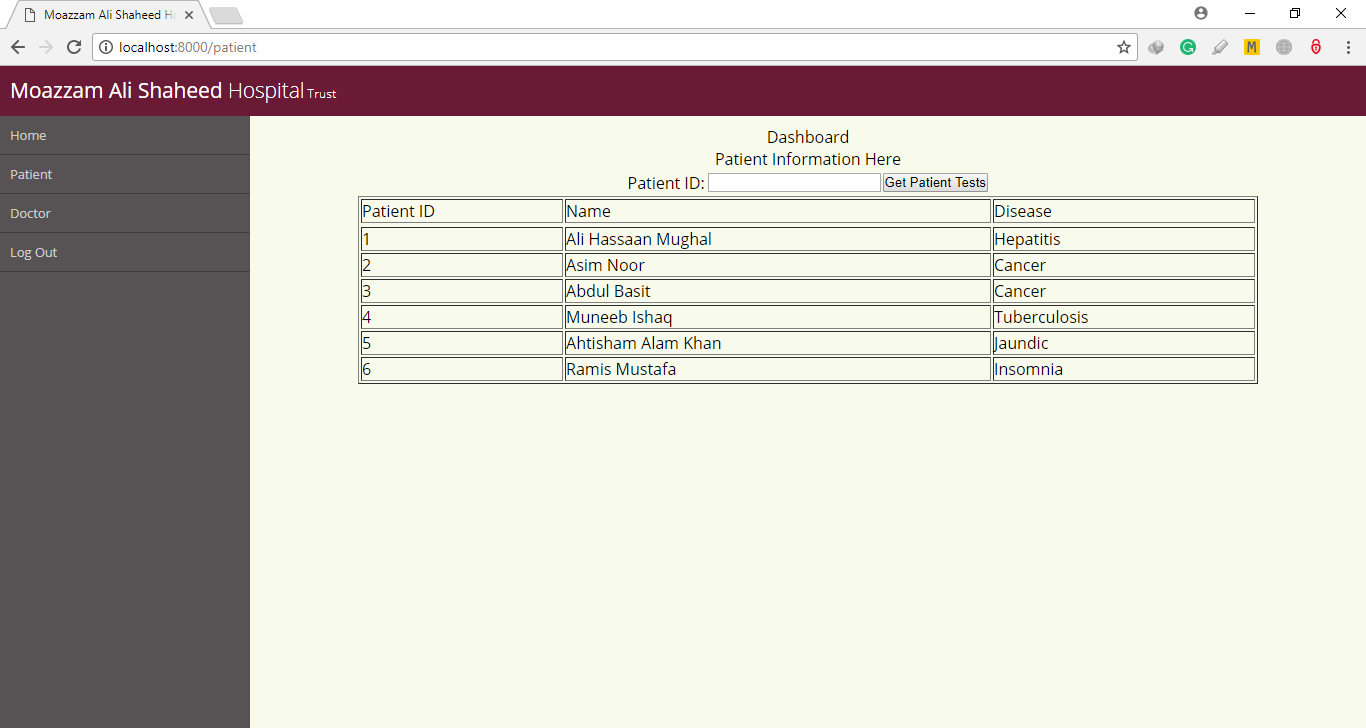




Click on one of the options on the left side, you will enter in different windows.

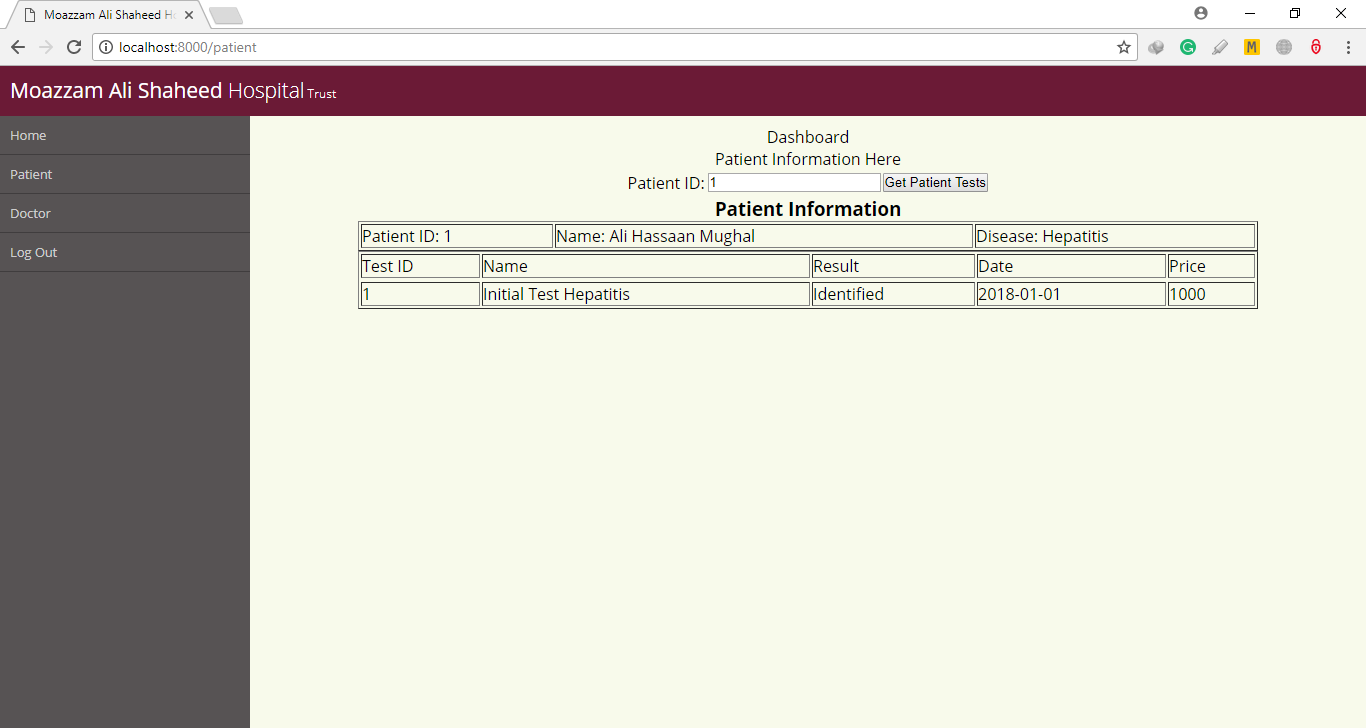
Lets start with patient, click on patient.

This window will appear



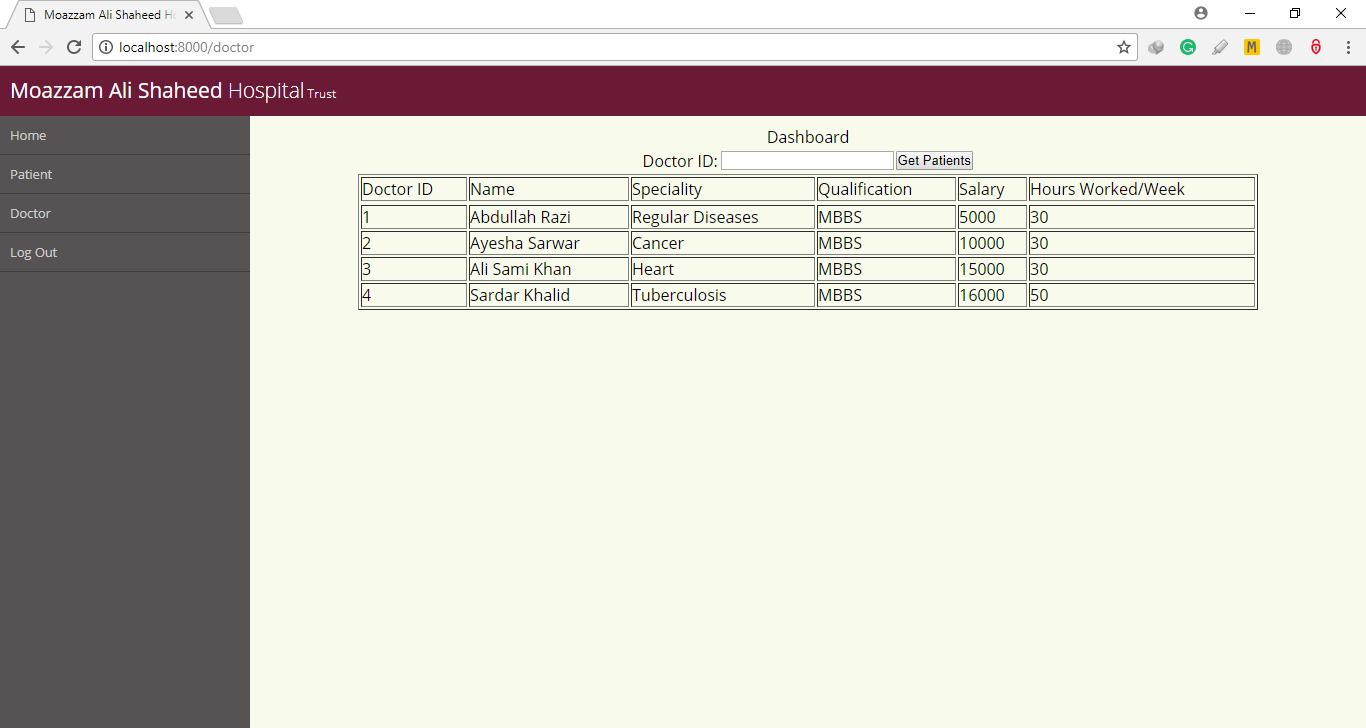
You have a list of patients along with the patient id to choose from.

Enter a patient id in the search box and press the button to get test reports

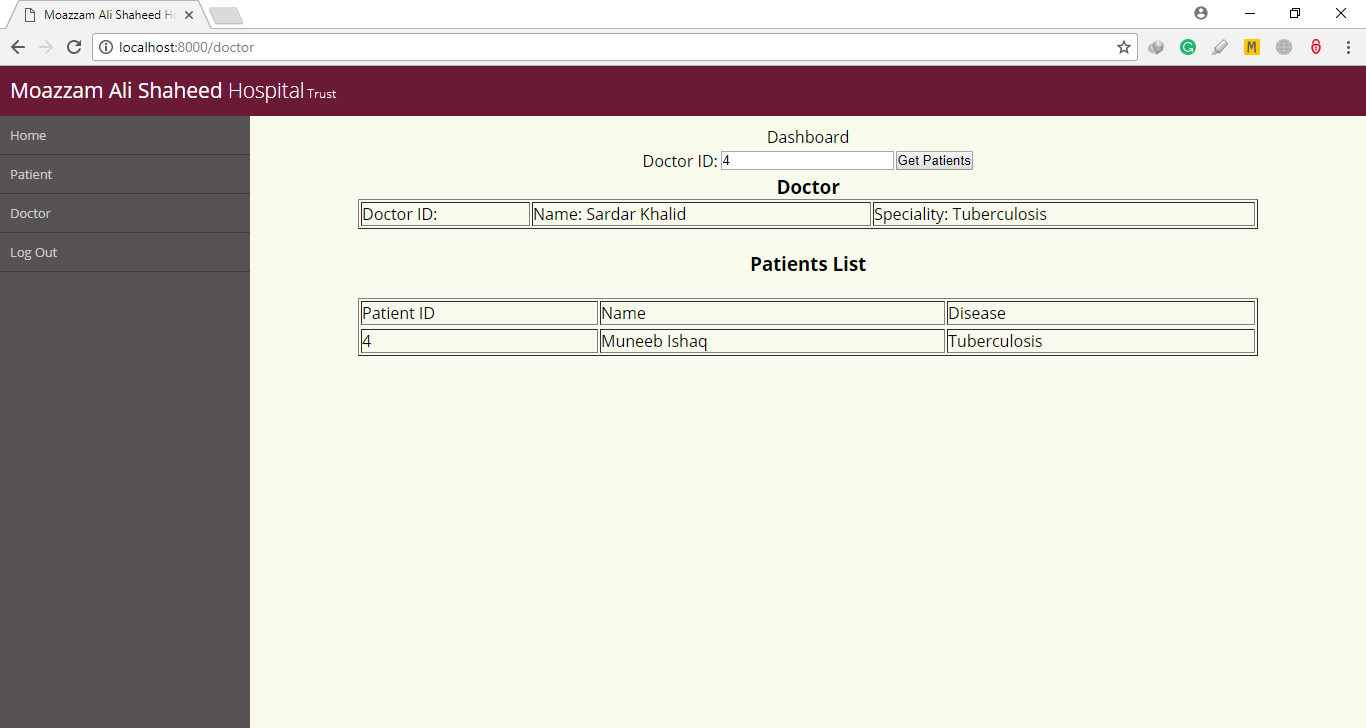


Press the doctor button to get details of doctors.

This window will appear



Same as the patient’s window this contains all the data of doctors, enter the doctor id to get the list of patients cured by this doctor

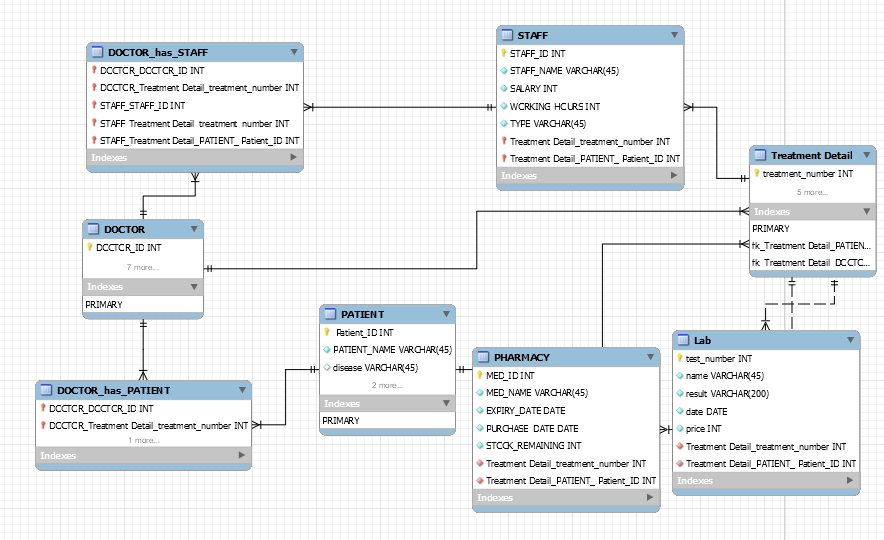


**Assumptions**

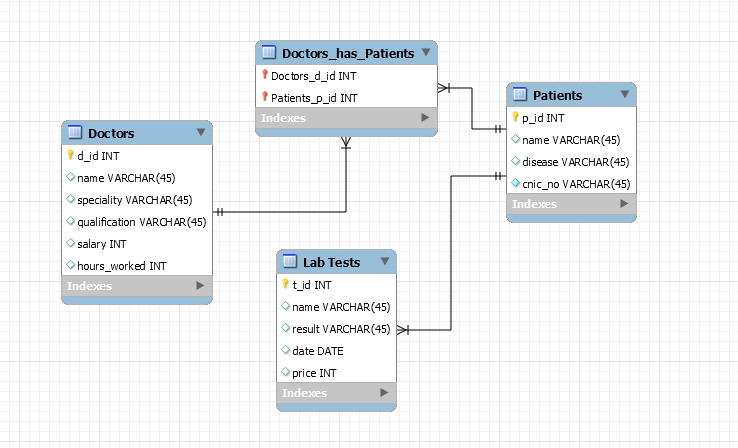
1. Doctor is connected to patient by making another table that contains the primary keys of both as a foreign key, thus by using the doctors id we can get all the details of patients that have been cured by that particular doctor
2. Doctor is having a many to many relation with the patients.
3. Patient is connected to lab by using the primary key of patient as a foreign key in lab table so by using patient’s id one can get all the details about the test conducted on him/her.
4. Patient is having a one to many relation with lab table.
5. One patient can be treated by multiple doctors
6. A single doctor can cure multiple patients
7. A single patient can undergo many different tests
8. I single test can be conducted on a single patient

**UML Diagram**

This is the UML we intended to generate in the project but due to certain limitations we had to change the UML to a much simpler version

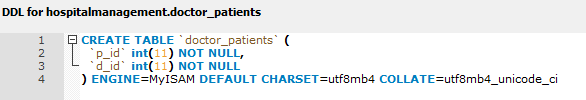
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Newer version of our UML is

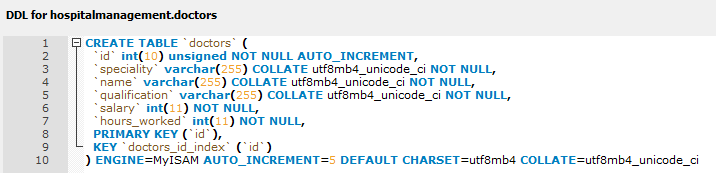
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**SQL DDL**

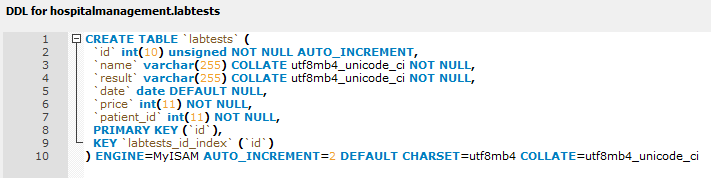
Doctor\_patients table schema



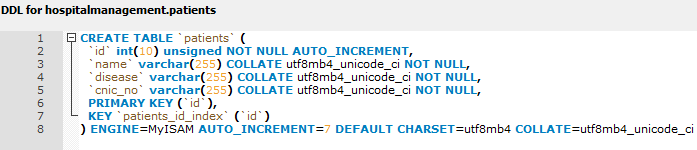
Doctor table schema



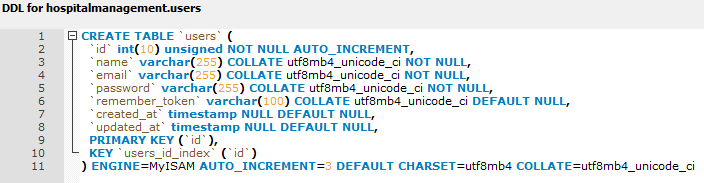
Lab tests table schema



Patient table schema



User table schema



**Conclusion**

**We learnt a lot from this project, what we learnt is listed below**

1. SQL, Complex queries, relation making.
2. ERD diagram
3. Schema writing
4. Front end production for projects
5. HTML
6. PHP
7. Laravel
8. Dreamweaver
9. Joining front end with the back end

**Some stuff we learnt besides study**

1. Team work
2. Enjoying while doing project
3. Dividing tasks into team members
4. Helping each other



**THE END**