Clinical.ly : An Online Platform for Medical Solutions

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1 Introduction - Functional Specifications

The primary aim of our project is to provide an easy to use online platform to connect patients and doctors. We intend to provide separate interfaces for both the patients and the doctors.

The starting page will be the log-in/registration page for both the doctor and the patient from which they will be redirected to their respective home page.

For the patient, he would have the option to search for a doctor based on clinic/hospital location and specialization of the doctor/medical services required and further book an appointment with a doctor at the time of his convenience.

The doctor will see a list of upcoming appointments. The doctor will also be able give a prescription after an appointment which will be visible online to the patient and would be able to schedule the next appointment for the patient or mark the issue as resolved.

We are also building a chat interface for making the communication between the doctors and the patients easier.

2 The Different Roles

2.1 Doctor

In order to register as a doctor, a person has to complete a certain number of steps where he will have to fill information required to verify him as a genuine doctor.
On logging in the doctor will see his homepage where he will see a list of his most recent appointments. He has the option to add comments for each appointment and also provide some prescription to the patient after each :

- Add a prescription for the current appointment

- Add comments for each appointment

2.2 Patient

On logging in the patient will see his homepage which would have options for editing his personal information, checking the list of pending appointments and finding a doctor for a new issue. If the patient goes for the the last option he/she can specify the constraints for the search after which he/she will be presented with the list of doctors meeting the requirements. The patient can then book a appointment with a doctor according to his/her preference. Also, after the end of the issue there will be option to rate the experience of the patient with the doctor. Patient can also order medicines online using the app.

3 Deliverables

- Create account page for Patient/Doctor

- Login portal for Patient/Doctor which would redirect to different pages

- Patient page

  - Patient sees his profile information, and has the option of adding additional information apart from that provided at the time of registration which would be beneficial for medical diagnosis such as blood group, medical history, allergies, previous lab reports etc.
  - A search bar is present where the patient can search for doctors online on the basis of locality and specialization
  - A tab is present which shows the list of upcoming appointments for the patient
  - A tab for the list of current treatments that the patient is undertaking currently which would on clicking display the details for the particular treatments
  - The patient also has the option to do an online chat with a doctor to discuss further issues with his health and provide online feedback on completion of treatment
  - Another tab is present which when clicked redirects to show the list of treatments previously undergone by the patient. Clicking a particular treatment opens up the details for the treatment along with a list of appointments for that treatment and the prescriptions if any for each appointment
  - There would be an option to view the current medications required by the patient and an option to order medicines online if required

- Doctor Home Page

  - Doctor sees his profile information, and has the option of adding additional information apart from that provided at the time of registration.
  - Every Doctor would see a list of upcoming appointments which need to be attended to and can navigate to any one
  - After completing an appointment, the doctor can add an official prescription for the patient specifying the medicines required if any
  - The Doctor would also have access to the previous medical history which would be accessible through a tab. Clicking the tab would display a list of all medical treatments that the particular doctor has been a part of.
  - Navigating to any particular treatment would result in the detailed view of the treatment opening up with details about all the appointments and prescriptions corresponding to the treatment.
  - Another option to respond to patients' queries online via a chat feature

4   ER Diagram

We created the following ER diagram using Lucid Chart. To denote relations between aggregations, the broken line from a relation indicates that the relation is with an aggregation. Moreover, the additional attributes in a relation have been denoted in the diamond along with it to prevent further cluttering in the diagram. We have also added the image in the submission.

5   List Of Tables

Here is a list of database tables we would be using along with a list of their attributes :-

- **Users** (<u>userid</u>, passwd, name, gender, address[house_no, street,city, state,pin_code], phone_no, emergency_no, blood_type)

- **Patients** (<u>patient_id</u>, blood_pressure, blood_sugar, cardiac_ailment, asthma, allergies, chronic_diseases, major_surgeries, long_term_med, transf_hist)

- **Doctors** (<u>doctor_id</u>, qualifications, specialty, working_hours, slot_time, hospital, hospital_address, fees, photo, rating)

- **Treatment** (<u>treatment_id</u>, patient_id, doctor_id, start_time, end_time)

- **Appointment** (<u>appointment_id</u>, treatment_id, reason_visit, start_time, comments)

- **Medicine** (<u>medicine_id</u>, name, retailer, price_per_unit, side_effects, disease, prescription_required)

- **Prescription** (<u>appointment_id</u>, <u>medicine_id</u>,quantity)

- **Medicine_order**(<u>order_id</u>, quantity, patient_id, medicine_id)

- **Feedback** (<u>feedback_id</u>, treatment_id, stars, text)

- **Conversations** (<u>thread_id</u>, patient_id, doctor_id)
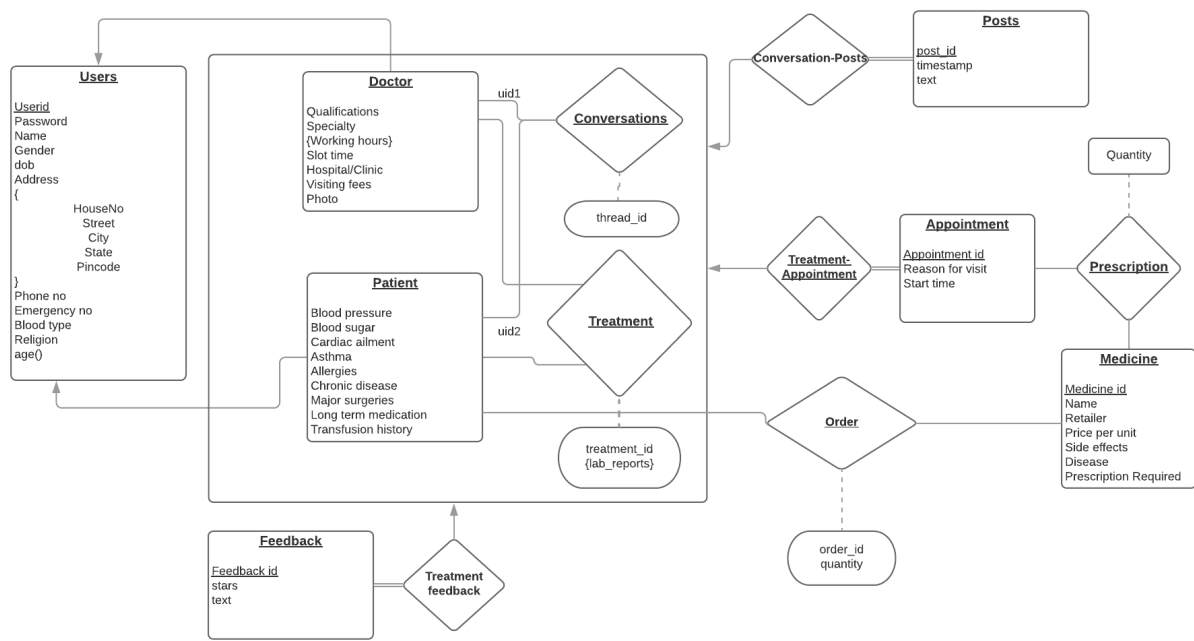
- **Posts** (<u>post_id</u>, thread_id, user_id, text)

Figure 1: Our ER Diagram