



Easy Check Up: Doctor Finder - 3280 Project Proposal (Revised ERD)

Github Repository: <https://github.com/RaiyanKhalil/easy-check-up>

Youtube URL: <https://youtu.be/I0Aqh1OSkMg>

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-Tech Team-

I. Introduction and Project Overview

Problem statement: British Columbia is going through a historic shortage of qualified doctors but with increasing inflow of refugees & permanent residents in BC, patients find it difficult to connect with a family doctor and has to wait months to see a doctor.

Solution: A doctor finding application where patients can search for doctors within the range of their location. Doctor Finder acts both as a consolidated directory and as a appointment booking and management system.

Feature Comparison

Existing systems	Our system
Separate search per specialty (1)	Consolidated search for all specialties. Should you prefer one or two specialties, our system can return results depending on your keywords
Find by city only (2)	Results can be shown via range. Share exact location and we will find within that range. So even if you live in the border of Burnaby and New Westminster, all doctors in your area will be visible for you
Only contact details are shown	A booking functionality is included in our system
No appointment tracking	Appointments are tracked in your patient dashboard as well as the status

II. Model and Features

Features

Team member & feature name	Description
User Registration, Log in, and Authentication Deepak, Kumar	<p>This feature allows <i>User</i> to register and log in. We have two user types: <i>Patient</i> and <i>Doctor</i></p> <p>Registration at Sign Up</p> <p>There is a sign up page where users can input their data. All users are patients</p> <p>Authentication at Log In</p>

All users have to log in. All users have usernames and passwords that has to be authenticated.

Only logged in users can access the features: doctor finder search and appointment booking / management. You have to be a user to register as a doctor

Update User Details at Dashboard

Users are allowed to edit their data. There will be a "Register As Doctor" link from user dashboard which will lead to

* **Limitations:** Doctor registration is not in the scope of this feature (that will be in the Doctor Finder, the next discussed feature)

Doctor Finder

Shuvo, Raiyan

Display Doctors at Search

This features enables patients to search doctors by name or by location.

We are merging two lists of doctors: an external one (we will get the list of active doctors from *Health Ministry of BC* (3) and their associated Hospitals, Clinics & Chambers) & we will also have a list of our own curated list doctors who are associated with us directly. This fetches external API of doctors and has as internal table of doctors

Our application allows patients to look up doctors by **name / specialty** within a certain radius from their location and will display them in a map for an easier visual experience, we will be using free map .

Each doctor's specialty, clinic, and contact details will be shown.

Our Doctors

If the doctor metadata is coming from our internal list, it will have the the "Book Appointment" button

* **Limitations:** Doctor Finder is only available for British Columbia

Our Doctors Database

Shuvo, Raiyan

"Register as Doctor" section in the User Dashboard

Doctor's can update their details (specialty, location, etc.)

Doctor Registration Page

This feature also allows doctors to register to our system. There is Doctor Registration page. Location is included in registration

* **Limitations:** The doctor has to be registered as a user first. For now we are assuming all doctors registering are genuine as legitimacy validation is beyond time frame.

Appointment Booking and Management

Macaranas, Jennifer

If a doctor is registered with us, the patients will be able to book an appointment.

Create Booking Page

User can create, read, update, and delete bookings. Created appointments are initially set the status *Pending*. Expired appointments cannot be edited anymore

Display Appointments at Patients and Doctor's Dashboard

The appointments are displayed at the user dashboard. Appointments will be available in both patient and doctor dashboard. Expired appointments can no longer be updated and will be shown in different color

Appointment Status Management

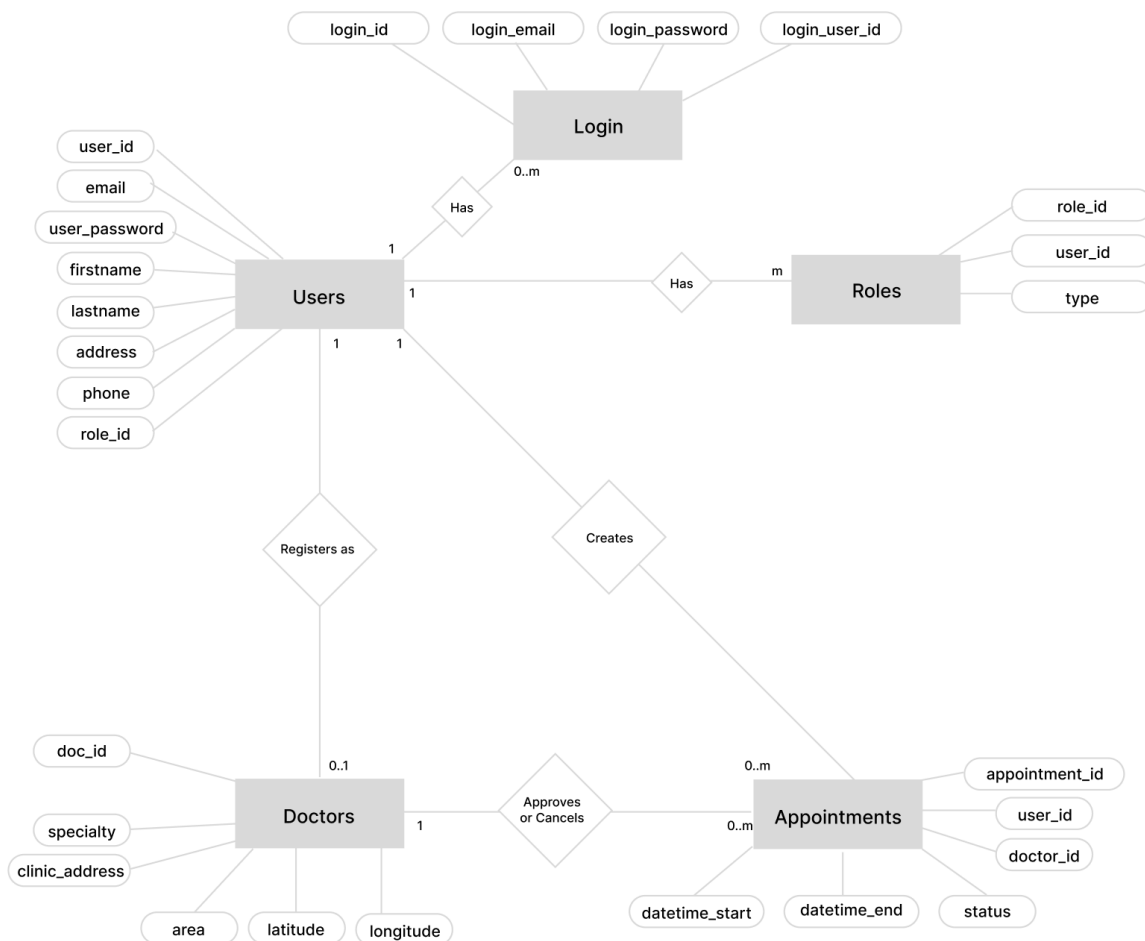
Appointment have statuses: *Pending*, *Approved*, and *Cancelled*. Both doctors and users can cancel an appointment. Only doctors have to access to approve the appointment move it from pending to approved

Update and Delete Appointment

Only patients can change booked date. Only pending appointment can be edited. Approved and cancelled appointment are final.

* **Limitations:** Time slot is general for all doctors, everyday at 9am-5pm at 50-min intervals with 10-min break. We are not handling the doctor's scheduling.

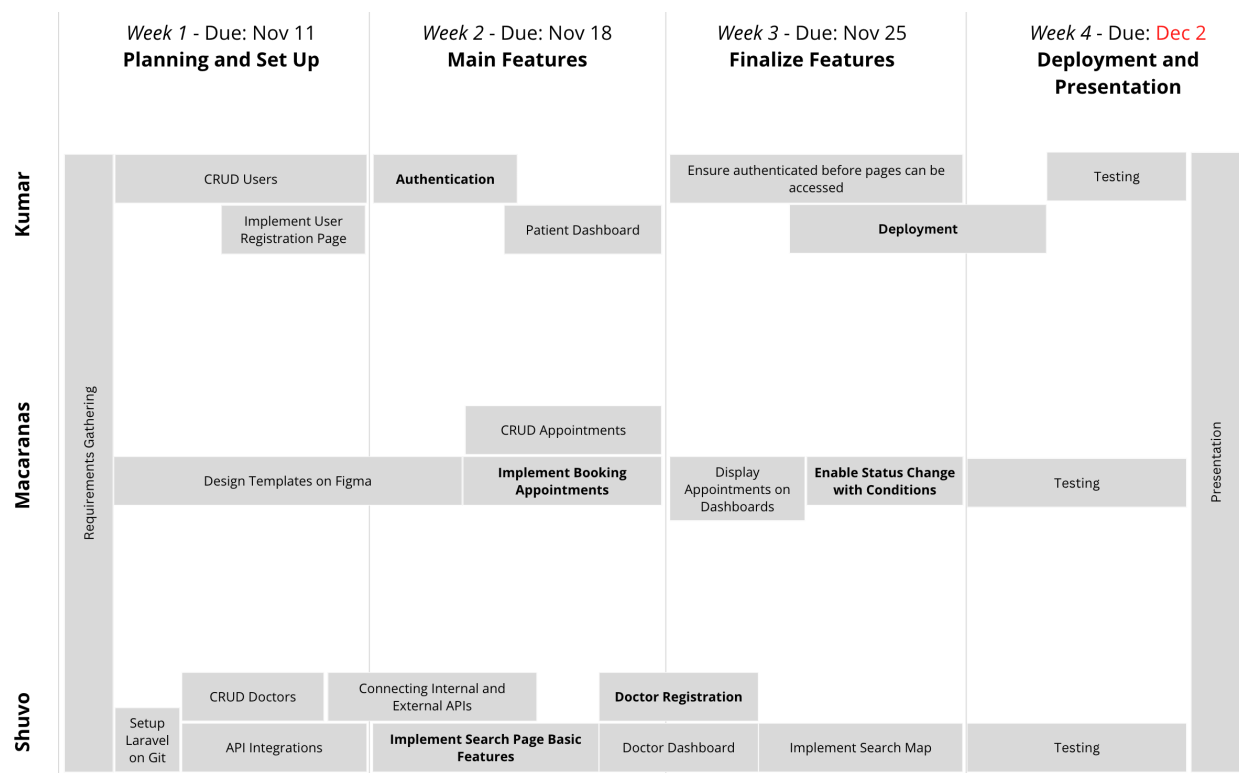
ER Diagram



III. Third Party Integration

- **OpenLayers:** Use **OpenLayers** map to display location of doctors in the application (4)
- **STRAPI:** Our external API to get the list of doctors (mock data) using **Strapi** (5)
- **NGROK:** Will deploy the application in a raspberry pi and make it available to the internet using **NGROK** services (OPTIONAL) (6)
- **STRIPE:** Implement a payment gateway for appointment confirmation using **Stripe** (OPTIONAL) (7)

IV. Gantt Chart



V. References

Market Research:

- (1) Pathways Medical Care Directory. (n.d.) *Search for care*
 Pathways Medical Care Directory
<https://pathwaysmedicalcare.ca/>
- (2) Find a Doctor BC. (n.d.). *Find Family Practitioner Clinics in your Town/City.*
 Find a Doctor BD
<https://www.findadoctorbc.ca/vancouver-island-region-text-search/>

Campaigns:

- (3) Health Ministry of BC. (2022). *Ministry of Health*
Ministry of Health
<https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/health>
- Doctors of BC. (n.d.). *Find A Doctor: How do I find a family doctor?*
Doctors of BC.
<https://www.doctorsofbc.ca/advocacy-and-policy/health-promotion-campaigns/find-doctor>
- BC College of Family Physicians. (n.d.). *Find a Family Doctor*
BC College of Family Physicians
<https://bccfp.bc.ca/for-the-public/find-a-family-doctor/>

Integrations

- (4) OpenLayers.(2022). *OpenLayers: A high-performance, feature-packed library for all your mapping needs*
OpenLayers.
<https://openlayers.org/>
- (5) Strapi. (2022). *Strapi - Open source Node.js headless CMS*
Strapi.
<https://strapi.io/>
- (6) NGROK. (2022). *NGROK - Online in one line*
NGROK
<https://ngrok.com/>
- (7) Stripe. (2022). *Stripe | Payments infrastructure for the internet*
Stripe.
<https://stripe.com/en-ca>

Implementation Tutorials:

- Piotr Jura. (Sep 2022). *Master Laravel with Vue.js Full Stack Development*
Udemy
<https://www.udemy.com/course/master-laravel-6-with-vuejs-fullstack-development>