Project Proposal

INDEPENDENT UNIVERSITY, BANGLADESH
Project Name: Hospital Management System

Name: Rakibul Hasan Rajib
ID: 1921834

Name: Sumyia Afnan Mukta
ID: 1810668

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Section: 3

Submitted to: Sanzar Adnan Alam

Project Proposal

Introduction

Project Objectives

This proposal includes estimated features, goals, development process, frontend and backend structure and functionality of the hospital management system for Lifeline Hospital, Dhaka. For CSE309 final project, we are proposing to create a dynamic, responsive and interactive website for Lifeline Hospital, Bashundhara, Dhaka, Bangladesh.

We will be working with state of the art technologies to design and develop the website. The website will consist of different sections to cater the need for different users of the website. All the concerned parties will be consulted before deploying the final version online.
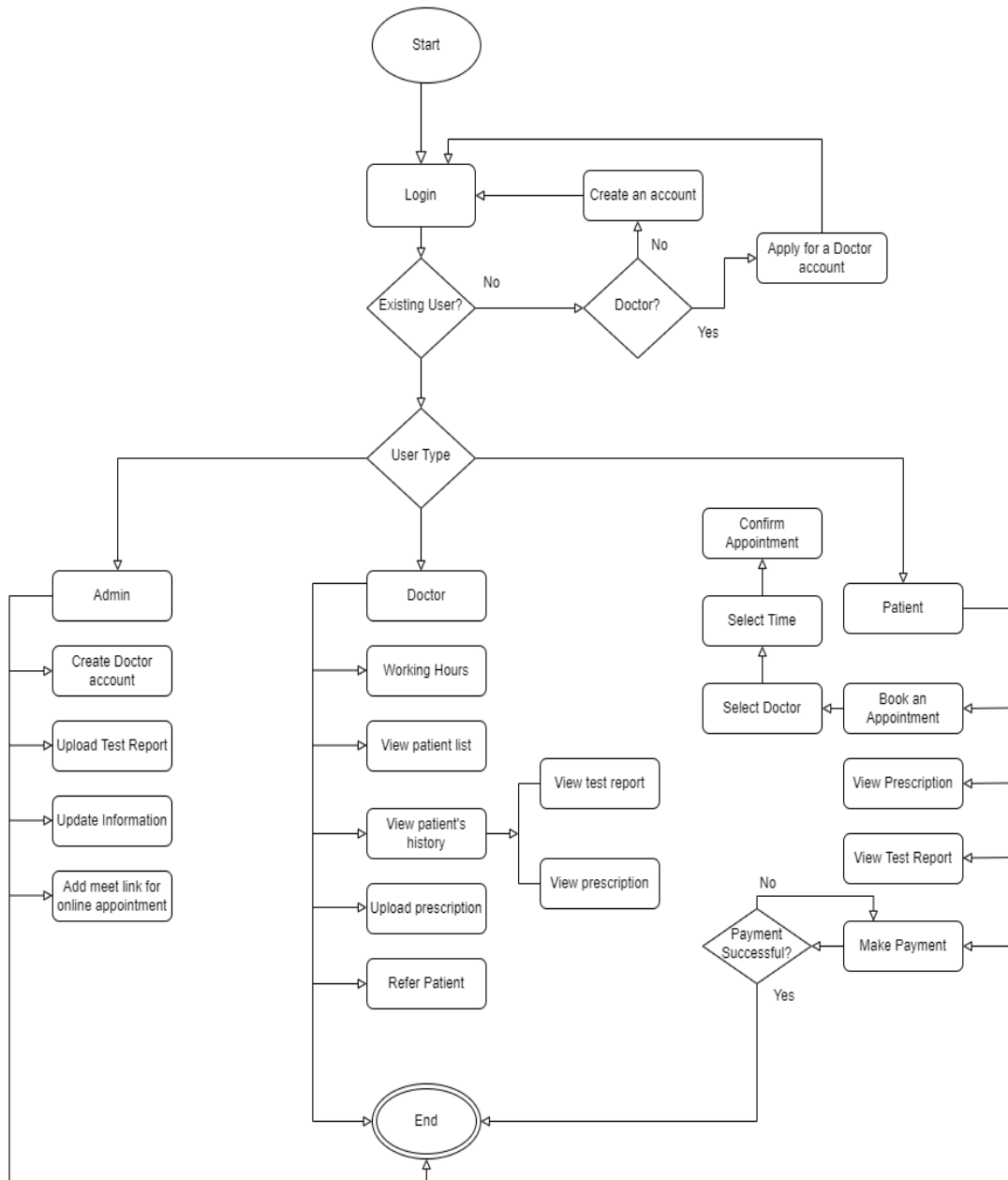
Our proposed website will help Lifeline Hospital to:
- Establish online presence to make it easier for their patients to avail their services.
- Make it easier for doctors to provide better and improved consultation to their patients.
- Offer information on their service and health package charges to their valuable patients.
- Inform people about their specialized treatment procedure and modern equipment.
- Promote health awareness among the public.
- Get feedback from the patients about their services.
- Make available information about their highly experienced and qualified doctors to the public.
- Make it easier for doctors to attend patients online.
- Increase convenience for patients by allowing them to access their test reports and prescriptions anytime they need.
- Improve the payment system for patients by allowing them to pay online.
- Make it easier for job aspirants by providing them information about vacancy in the hospital.

Section 1 – Initial Development

Website Development Process

Flowchart

Goals Identified: Goal of this project is to create an online presence of Lifeline Hospital which will make easier to manage Hospital activities go smoothly. For that purpose, we have identified model users of the system and activities that model users will be able to perform through the systems are given below:

Global

1. Create an account.

2. Log in

Admin

1. Create a doctor profile and account for doctors.

2. Upload test reports of patients.

3. Upload and update **Home** page.

4. Upload and update **About Us** page.

5. Upload and update **Our Services** page.

6. Upload and update **For Patients** page.

7. Update **Doctors** page.

8. Upload and update **Branches** info.

9. Upload and update **Media & News** page.

10. Upload and update Career related information in the **Career** page. For example, recruitment for specialist doctor, nurse, internship, ambulance driver, cleaner, receptionist etc.

11. Manage inquiries of the **Contact Us** page and contact information.

12. Update **Blood Bank** info.

13. Upload and Update **Heath Packages** info.

14. Upload and Update **Test and Service** Charge.

15. Provide a meet link for online patients/consultants.

Patient

1. Find a consultant.

2. Make an appointment.

3. To make an appointment fill up a form (Patient's Full Name,Date of Birth, Gender, Mobile no, Email, weight, any allergy, Specialty for consultation, Doctor.

4. Choose date_time & appointment type: online or offline.

5. Select payment method. e.g.: VISA card, Master Card, bKash, Nagod, MTB bank, DBBL NEXUS.

6. Test Report. View Test Report and download pdf.

7. Prescription. View Prescription and download pdf.

Doctor

1. View patient list from Schedule.

2. Upload prescription.

3. View patients' test results.

4. View patient history using patient ID. Such as the previous report, prescription etc.

5. Set & see working hours.

6. Refer a patient to another doctor.

7. Attend patients online, using a meet link.

Major Assumptions

- First, we will Collect all the required data.
- We will store all data, information and/or visual content digitally. Such as photographs, diagrams, etc.) included in the site.
- We will keep the styling and color scheme of the reference website intact. We might add some more styling if required.
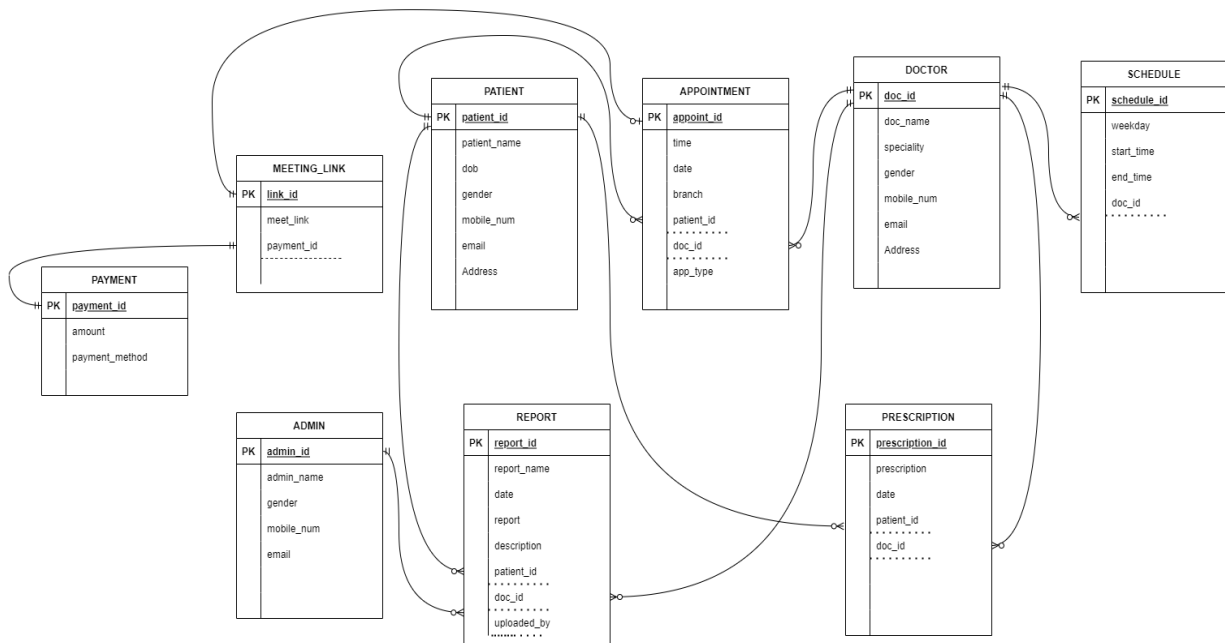- Provide a short tutorial in the Help and support area.

Lifeline will be expected to:

● Provide hospital related materials such as pictures of medical equipment, hospital logo, and other related photographs, that can be used while designing.
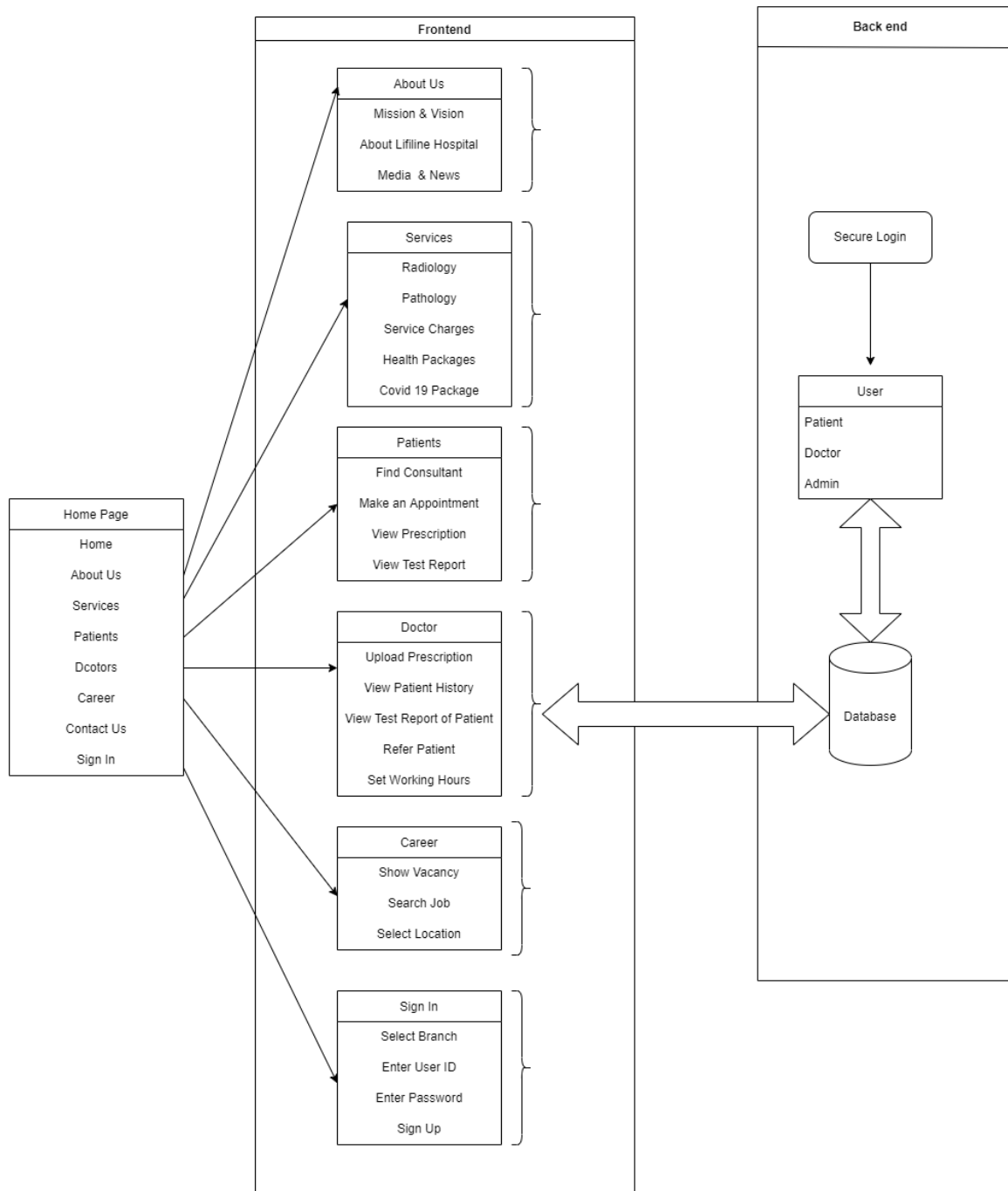● Give feedback regularly after completing each step of the task.

Section 2 – Proposed Website Structure

Website Structure Flowchart Details

ERD:

Proposed Website Structure (Front-End)

Frontend

About Us
Mission & Vision

About Lifiline Hospital

Media & News

Services
Radiology

Pathology

Service Charges

Health Packages

Covid 19 Package

Patients
Find Consultant

Make an Appointment

View Prescription

View Test Report

Doctor
Upload Prescription

View Patient History

View Test Report of Patient

Refer Patient

Set Working Hours

Career
Show Vacancy

Search Job

Select Location

Sign In
Select Branch

Enter User ID

Enter Password

Sign Up

Home Page
Home

About Us

Services

Patients

Dcotors

Career

Contact Us

Sign In

Back end

Secure Login

User
Patient

Doctor

Admin

Database

Proposed Website Structure (Front-End)

Web Page Structure: The website will consist of frameset. Frameset allows efficient navigation around the website and updating pages also becomes easier. A cascading style sheet is used to design elements on the pages. Third party content such as Google maps can also be included into the website. Laravel, an open source PHP web framework, will be used to implement the backend of the system. Laravel allows robust and quick development of websites with model-view-controller(mvc) design patterns. This website will be mobile friendly and responsive which will attract more visitors to come to Lifeline Hospital for treatment.

Home Page: Header of Home page contains a navigation bar. Below the nav bar there exist some animation, welcome speech, site design, graphics. The footer of this page consists of a navigation bar, which contains basic contact information (such as address,phone number, email address), branch information, important link(such as Pharmacy, Management team etc) – the back-end (Town Manager) is not visible or available to the public visitor.

About us: This area consists of Mission and vision, About Lifeline Hospital, Media and news. Admin will have the access to upload and update that information. And other users will only have the access to view the information. They will not have any edit permission.

Services: Services of the Lifeline hospital will be discussed here. Anyone who wants to know about the services of Lifeline Hospital can visit this section to gather knowledge about their desired services. Information about services such as blood bank information, health packages, imaging, pathology, Covid-19 packages etc are available in this section. Going through the test and service charges section, visitors can get an idea about the cost of services. Admins are responsible for uploading and updating the information in this page. And other users will only have the access to view the information.

Patient: This section is intended for patients who visit the website to learn about the services of Lifeline Hospital. Registered patients can view their previous test reports and prescriptions by logging into the system. Patients can search for doctors by speciality, name and available time and they will be able to see details about any doctors who work in Lifeline Hospital . They can book appointments with their desired doctors and appointment details will be stored in the database. Patients who book online appointments will be able to make their payment and the transaction information will be stored in the database.

Doctors: Doctors area is designated for the doctors who work in Lifeline Hospital. Each doctor has an account created by an admin. With the credentials provided by admin, they will be able to log into the system. This will allow them to track their appointments, working hours and patient list. They can look up any patient's previous history such as test reports, prescriptions which will make it easier for them to provide right consultation to patients. They can upload prescriptions of

the registered patients in the system which makes it easier for patients to access their prescriptions anytime they want.

Career: This section will contain Career related information. Such as recruitment for specialist doctor, nurse, internship, ambulance driver, cleaner, receptionist etc. Anyone can view this information and get benefited. Admin will upload these information similarly and other users will not have any edit permissions over here.

Contact Us: This area includes form, contact us information etc. Here anyone can send his/her own feedback, complain or any message etc. Admin will view those feedback and take necessary action accordingly.

Search: Search is the section where users can get what they are looking for easily and efficiently . This feature makes user life easier. Thus it creates a positive experience for the user. When visitors have a positive experience on your website, they feel more comfortable..

Sign in: This section will be used by the registered users of the system to log into the system. Anyone who wants to consult a doctor from Lifeline Hospital is allowed to create a patient account and book their appointment through a specific section in the website. Each doctor of Lifeline Hospital has an account and thus log into the system.

Help & Support: This section is critical, because they are the one of the last places a website users will look before deciding to give up and search for another website that will fulfill their requirements. Therefore, help and support can be crucial in retaining a user's needs.
For example if a patient is looking for a doctor and wants to book an appointment. He/she can go to help and support , then "How to book an appointment" area to know the procedure. Similarly admin can get help from Help and support areas about data entry and many more.

Links: This page would include a list of related links and would be updated from a links management page in the back-end management interface

Proposed Website Structure (Back End)

Database: A database system is needed to store information for the website. For that purpose, MySQL server will be housed on the website server. This will allow the users to store appointment details, test reports, prescriptions etc. Users will be able to access the information stored in the database whenever they need. Laravel, a PHP web framework, will be used to implement the backend of the system.

Section 3 - Functionality

1. Admin can create doctor profiles and employee id.
2. Admin can upload patient test reports.
3. Admin can upload and update various information related to Lifeline Hospital.
4. Patients can find a doctor by speciality and book appointments.
5. Patients can access their test report and prescriptions.
6. Patients can make payment for online appointments and services.
7. Doctors can set and view schedules of working hours.
8. Doctors can attend patients online.
9. Doctors can access patients' history such as previous reports and prescriptions.
10. Doctors can upload prescriptions.