University of Barisal

MediServe:
Doctor Appointment System

Course Name: Project and Thesis

Submitted By:

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Introduction

In our everyday life we face a lot of problems. Disease is one of the most common issues for a person's life. If anybody is ill and wants to visit a doctor for checkup, he or she needs to visit the hospital and waits until the doctor is available. The patient also waits in a queue while getting appointment. If the doctor cancels the appointment for some emergency reasons then the patient is not able to know about the cancelation of the appointment unless or until he or she visits the hospital. So, it's necessary to get a consultation with Doctors whenever we got affected with various diseases. As the internet and smart devices are now available for everyone therefore anyone can use the online appointment system to overcome such problems and inconvenience for the patients.

The aim of this project is to make the complete doctor patient handling management system hassle free, easier and automated that will help patients to book doctor appointment from any location and fulfil their prospects. In this system, there will be two module basically where first one is doctor appointment and live monitoring of patient meeting with doctor and another is e-prescription and generic or brand name based medicine list for doctor and pharmaceutical's person . This system manages different kinds of specialist doctors at a time and patients can search one based on doctor's name, specialist department, diseases symptom, degree of doctors and choose an expected one for booking.

The main task of project is to ensure that all the things easier, useful and user friendly. The implementation Requirement was given to me from discussion with my honorable supervisor and some of my friends. The list of implementation requirement is given below:

- User-friendly interface
- Easier and secure way to create an account
- Find Doctor based on degree, symptoms, location or department.
- Book Appointment with a partial payment through payment gateway
- Easier way to interact with doctor and admin for patient users
- Live Chamber Monitoring to get the appointment serial update
- Notification System to the patient through SMS
- Emergency patient
- Downloadable prescription easier to generation (e-Prescription)
- Emergency Helpline
- Easier to manage the total system for admin and general user

Motivation

From my experience As a patient I've faced many difficulties when me or my relatives wanted to get an appointment for a doctor in their chambers or private clinic.If people get sudden illness or emergency disease as like heart attack,stroke etc. they need to visit a doctor as a emergency for checkup and fast treatment but they have to visit doctor chambers or hospital to get appointment first then get serial and wait as a queue system. In some cases the remote area living people have to face this problem cause they don't know the actual process to take an appointment or meet doctor. It is a lengthy process and wasting people's time. Sometimes though the people visit doctor's chamber at schedule time for health check-up or medical advice but the doctor is not available some various reason. It harasses people a lot. It is a time consuming process.

Besides, sometimes after meeting for first time with the doctor the patient need to have diagnostic test but get the report after one to three days later then he or she need to consult the doctor again. It's sometimes a difficult for remote area patent to live in city for doctor's consultation. From these real life problem I've motivated myself if we have an option to get this appointment very easily from any location around the country and the diagnosis report, prescription system are online based then it will be more user friendly for the rural as well as the city people too. That's the reason named MediServe.

Since Bangladesh is an under developing country with a vast population here majority of the population are poor and lack of proper education. That's the reason the majority of these people is out of fundamental needs as like as medical treatment due to no lobbing and lack of knowledge how to have a good treatment in urban medical center and where to go to find a good doctor specially for rural area living people.

Besides it is a sector of corruption and full of broker everywhere. If everything is digitized then there will be less chance do corruption. With the development of all other sector of our country the manual treatment system of our medical sector should be digitized to provide medical support to every citizen with same priority for the betterment of citizen of our country. As nowadays government has taken different steps to make Digital Bangladesh so it is a must to turn our manual medical management system easier online based. In the technology based era young generation are engaged in internet surfing so it is high time take exertion to adopt them with the one based service with a view to keep pace with the modern world.

Background Study

Doctor appointment system is not an innovative idea to implement. There are some related system is available right now but not a large number and no one is totally similar. We have explored many websites which are related to medical health consciousness, first our attention caught in “Doctorola.com” “Doctorkoi.com” “practo.com” etc. But from the background study about this project idea I’ve found that each of them have few limitations. Though doctor appointment system is already implemented project in Bangladesh I’ve chosen this idea to implement with few new and unique features which are much needed to keep pace with the technology based era to make user’s life easier and more comfortable. The conventional doctor appointment system is time slot booking method.

Their drawback is that if somehow the doctor couldn’t attend the chamber in due time or in case the doctor is not attending the chamber or if any patient need long time to check up and another patient need short time compared to slot then the whole slot will be changed .It will be a sufferings for the patient users as like as conventional doctor appointment system.

Therefore, I’ve decided to find an alternative way to make the system more user friendly and eradicate the sufferings of user. There will be a live chamber monitoring system where the patient user can see the live update of the serial like a queue system. Besides, there will be a digital prescription named e-prescription which will be downloadable soft copy so that pharmaceutical shop executives don’t need to be bother to understand the spelling of the medicine. Even it will be easily editable so that doctor can change and update it easily.Patient can easily download his or her prescription from his or her interface. Every appointed patient will get notification of any kind of update or notice instantly.

Brief overview of the Required technologies

Front end: HTML, CSS, JavaScript

HTML: HTML is used to create and save web document to define the content of web pages

CSS: (Cascading Style Sheets) Create attractive Layout to specify the layout of web pages

JavaScript: It is a programming language, commonly use with web browsers to program the behavior of web pages.

Bootstrap: It is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites.

Back end: PHP framework (Laravel), MySQL

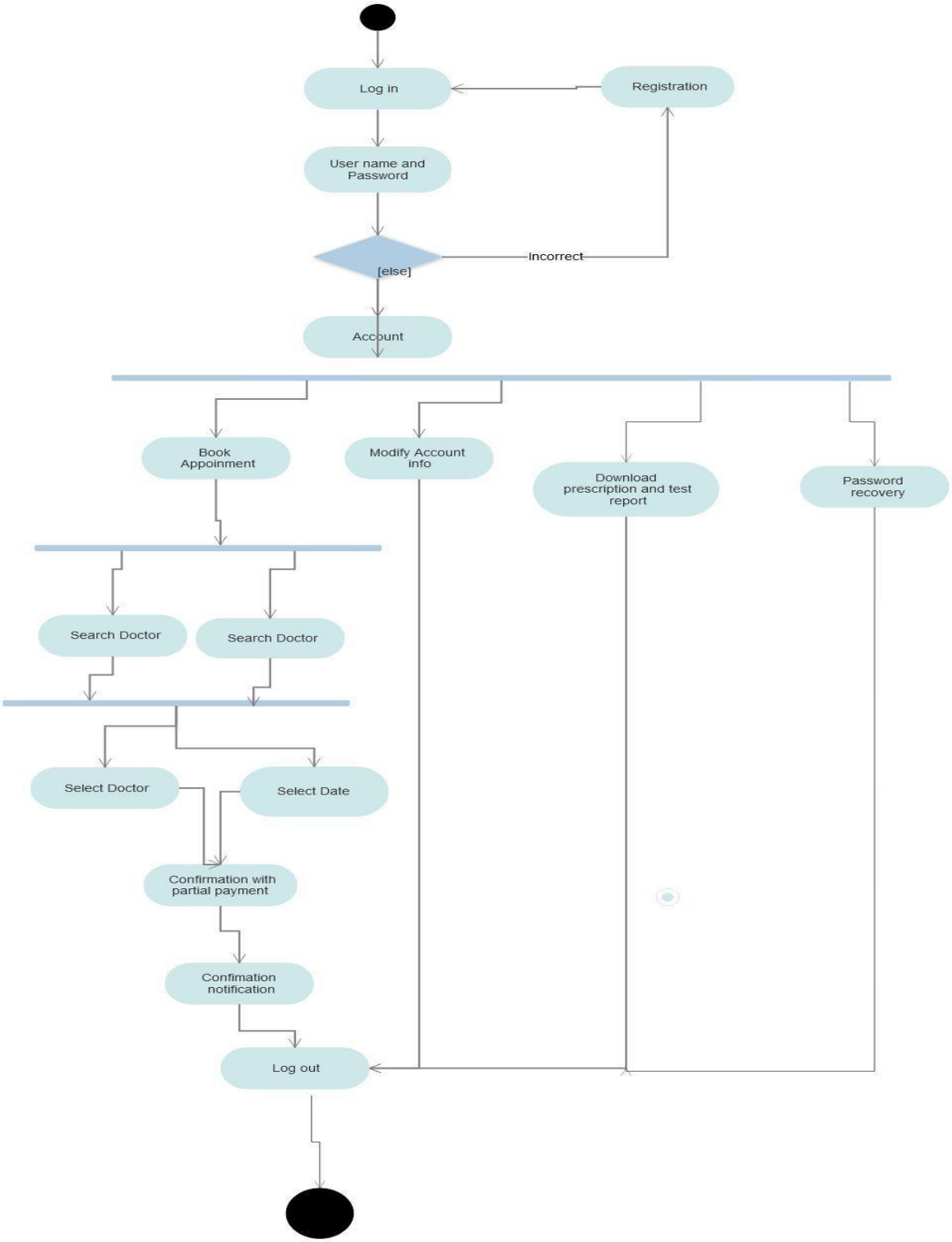
Laravel: Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.

MySQL: MySQL is a database, widely used for accessing querying, updating, and managing data in databases.

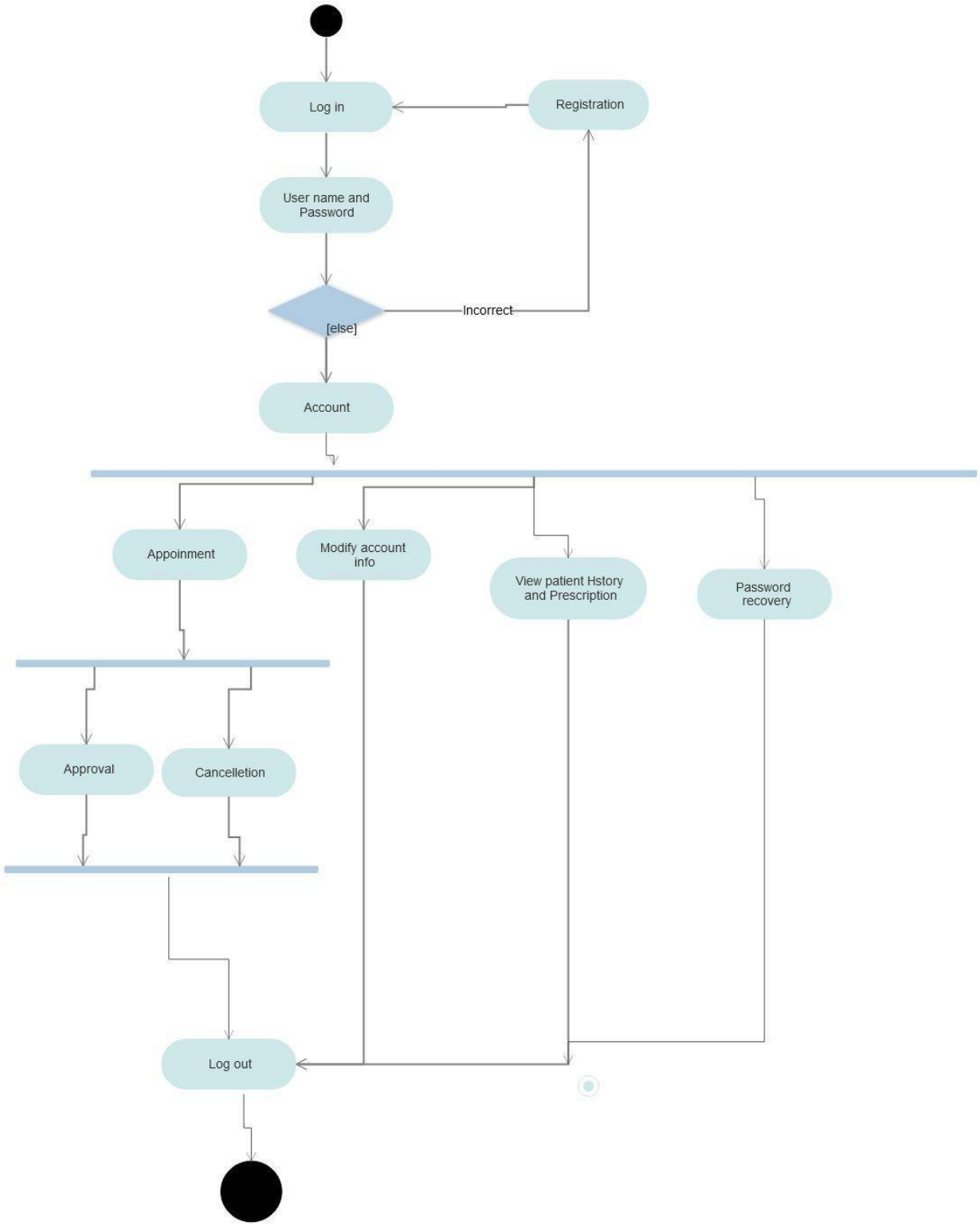
Software Requirement : XAMPP Server

Editor: Atom / Sublime text

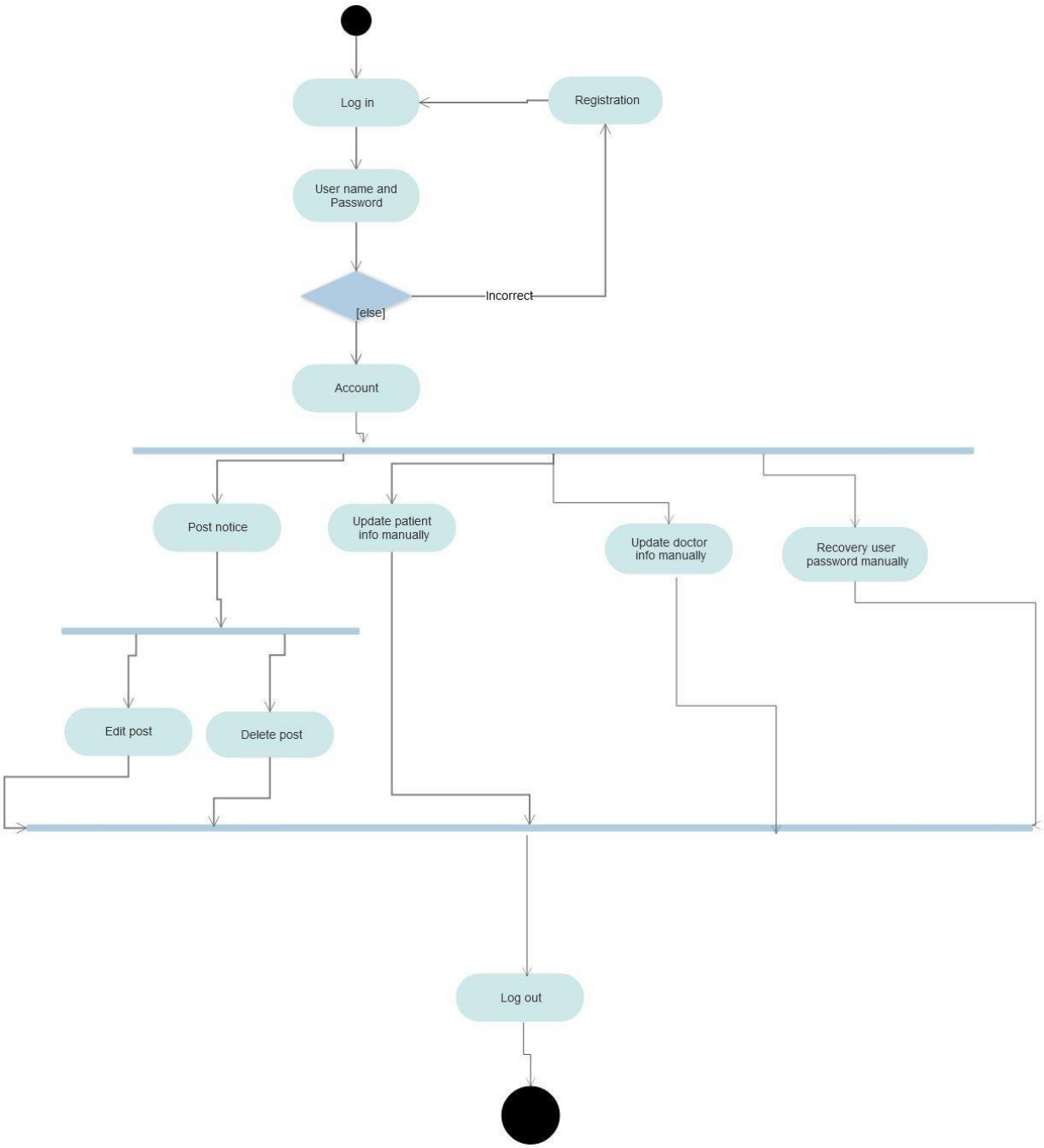
Patient Activity Diagram



Doctor Activity Diagram



Admin Activity Diagram



Conclusion

Doctor and patient appointment system is a very exciting task to work. After going through the roadmap of the project I realize that, this project has many challenging tasks. Day by day healthcare system become an important part of our country as population is increasing at high rate and to bulid our nation as Digital Bangladesh.

I've researched so many system that showed us the direction how to develop this system. I interact with my honorable supervisor, my classmate, few of my medical studying friends and senior. After all, it's an online web-based system so in real life both doctor and patient need to follow the using rules otherwise its goal will be failed. This system is will be user friendly so that a college going student can handle easily

Scope of Further Development

Online system is always a changeable system. It develops day by day, getting better and better to easier for peoples. This could be a revolutionary web application that may help bonding between doctor and patient. I believe that this system will be more advanced in future. Advance features and User interface will be updated in future. Since our medical sector is not digital enough till now, so this system will have a huge database in next few years. It can be use as a datahub which can be use as learning tool for intern doctor. The history of the patient and diseases and the treatment strategy can be a roadmap for new doctor. Using this information robot medical consultant implementation may get in new dimensions .It may be the start up of the Digitalization of the full Medical sector. Medical support may have an AI and IOT based System life saving initiave.

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Meeting with supervisor

Date	Discussion Topic	Place	Comment
22 Dec,2019	Basic discussion	Dept. of CSE	
4 june,2020	Discussion about Thesis and Research	Zoom App	
20 june,2020	Discussion Idea generation	Zoom App	
14 Nov ,2020	Project idea Requirement discussion	Zoom App	
3 Dec,2020	Big idea discussion	Zoom App	
5 Dec,2020	Idea approval	Zoom App	