Software Design Document

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October 21, 2019

1 Introduction

1.1 Design Overview

We are going to use an object-oriented approach towards development of various design components that allows users to avail various features like find and get information of doctors nearby, compare them based on requirements, book appointment ,book ambulance of any type, purchase medicines and get them delivered

1.2 Requirements Traceability Matrix

	Menu bar	Find Doctor	Search by location/specialist	Track delivery
Login	X			
Search Doctor			X	
Book Appointment		X	X	
Online Pharmacy	X			X
Ambulance Service	X			X
Compare Doctor	X			

2 System Architectural Design

2.1 Chosen System Architecture

We will use client-server architecture for our fitness management system as it splits the processing of application across multiple machines and allows easier sharing of resources from client to servers.

2.2 Discussion of Alternative Designs

The alternative is peer-to-peer networking where every computer is "equal" and every computer is both a client and a server but it wont serve our purpose in the first sense.

2.3 System Interface Description

The Interface will have a fixed Menu bar for navigation through any webpage on the website to make it easy and quick for the users.

3 Detailed Description of Components

3.1 Component 1

Menu bar:

It will be a navigation bar on every page,which will contain all the major functionalities of the website like Signing up or Login, go to compare doctor page, go to online pharmacy for buying any medicines as required, book any type of ambulance.

3.2 Component 2

Find doctor:

It will be used to select a doctor from the list of doctors available based on their speciality.

3.3 Component 3

Search by Location/specialist:

For the convenience of users to search a doctor profile based on their current location or based on the speciality of doctor, this option will be present

3.4 Component 4

Track Delivery:

It will be used after booking of an ambulance to get the live position ,route and the estimated time left to reach.
It will also be used after placing the order of medicines through pharmacy, which will provide the dispatching status,delivery date and time

4 User Interface Design

4.1 Description of the User Interface

1. The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

2. All the users will see the same home page when they enter in this website. This page will have Specialities of Doctors to select according to the requirement of Patient.

3. Also a Sign-up/Login page will be present to Register and later browse the website through their account.It will ask the users a username and a password.After being authenticated by correct username and password, user will be redirect to their corresponding profile where they can do various activities.

4.1.1 Screen Images

Figure 1: Home page

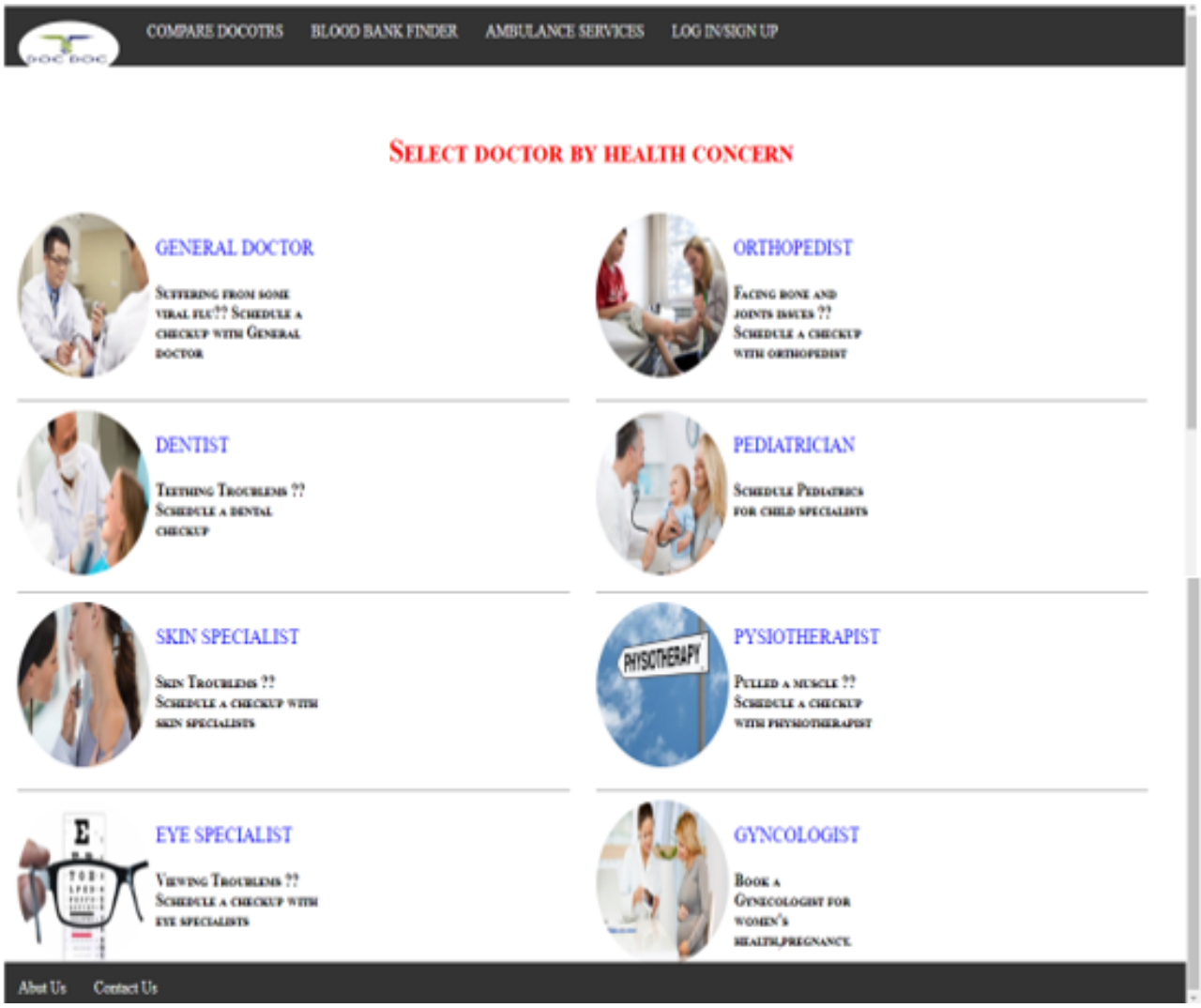

Figure 2: Select doctor by category

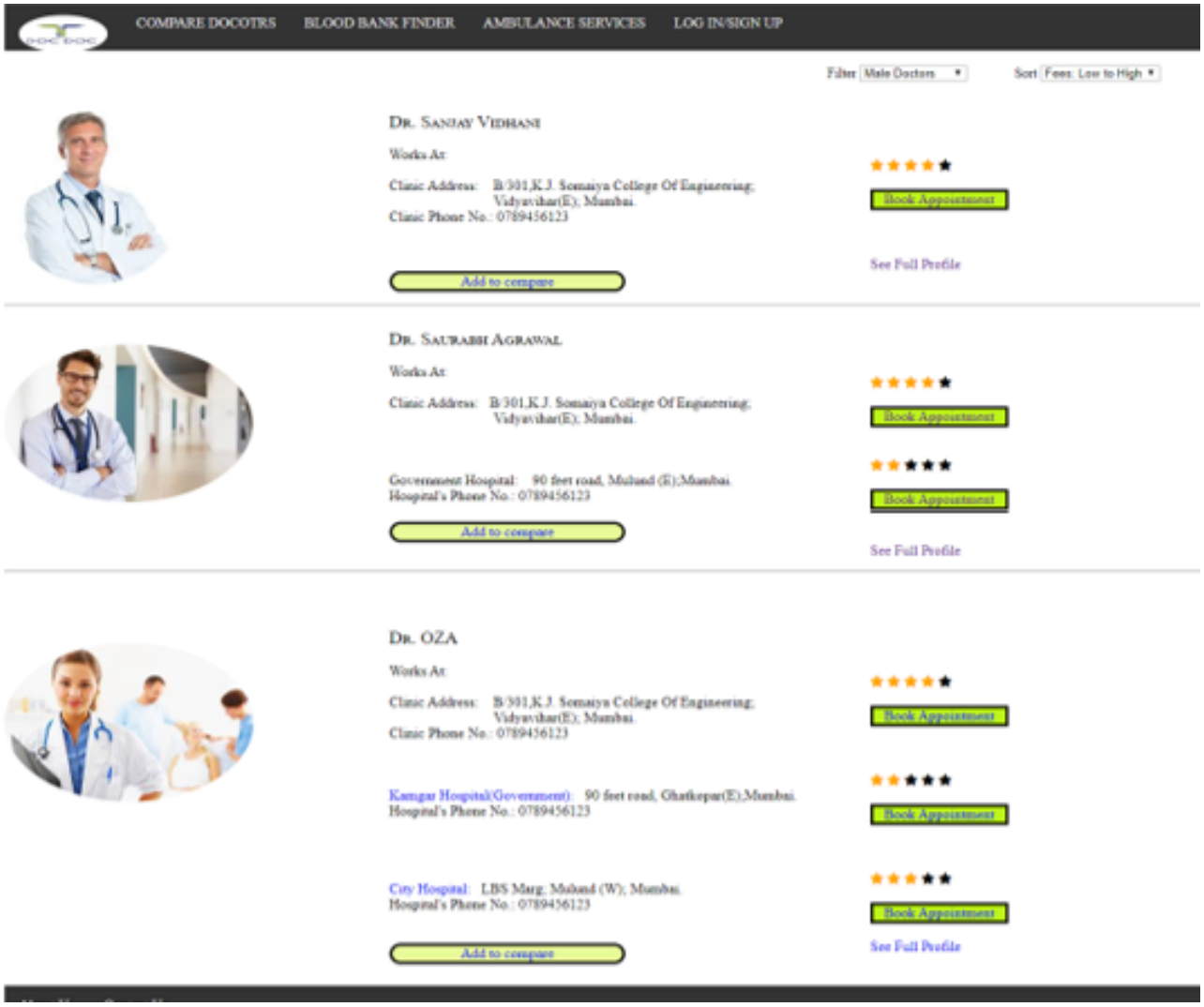

Figure 3: List of doctor/find doctor

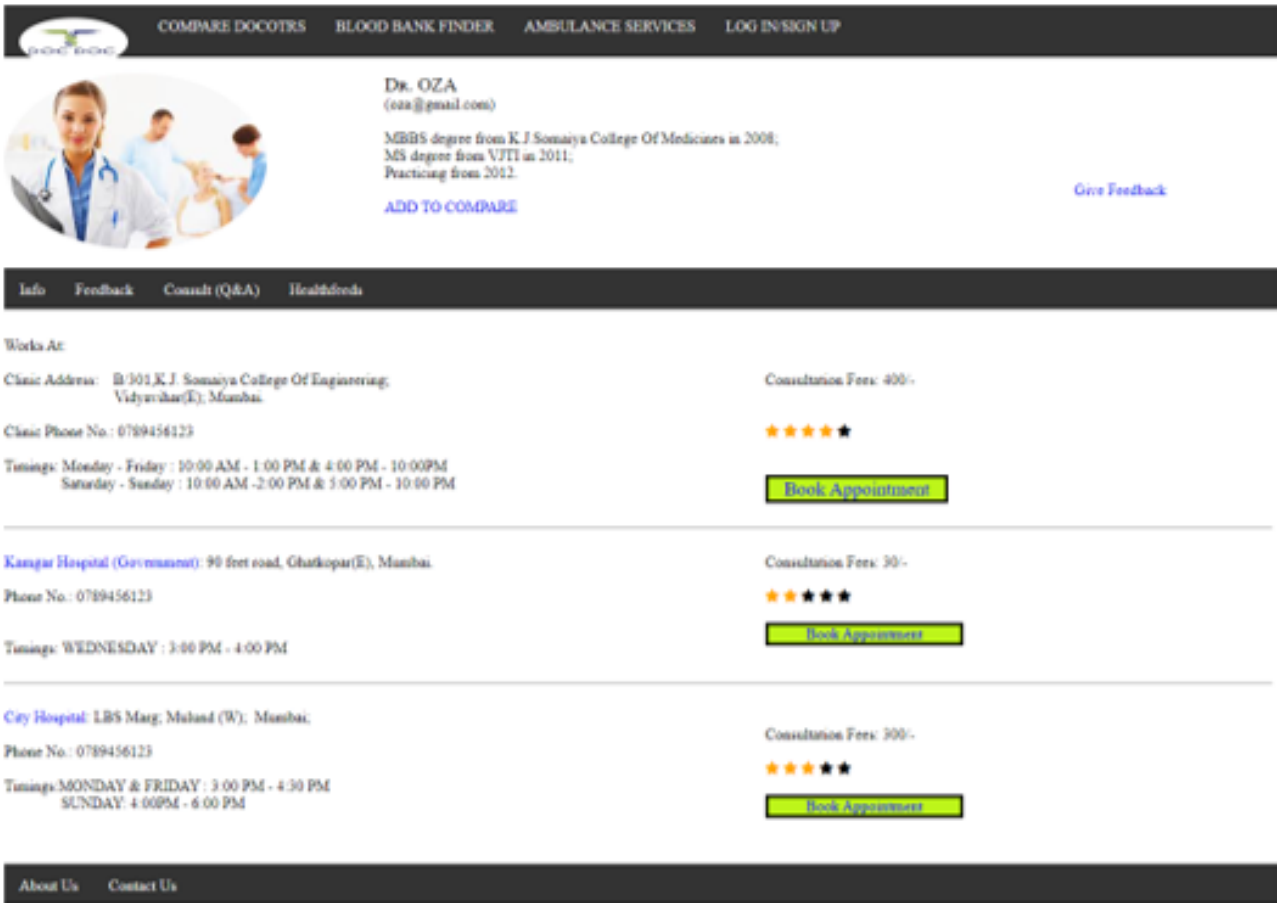

Figure 4: Doctor's Complete Profile

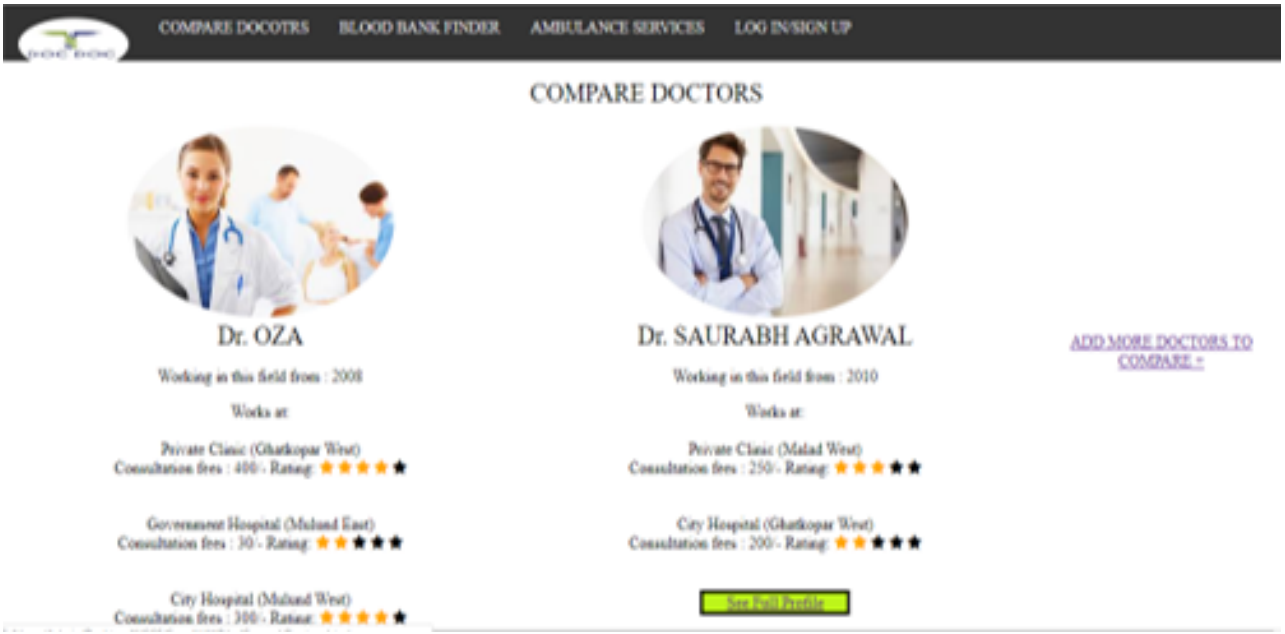

Figure 5: Doctor Comparison

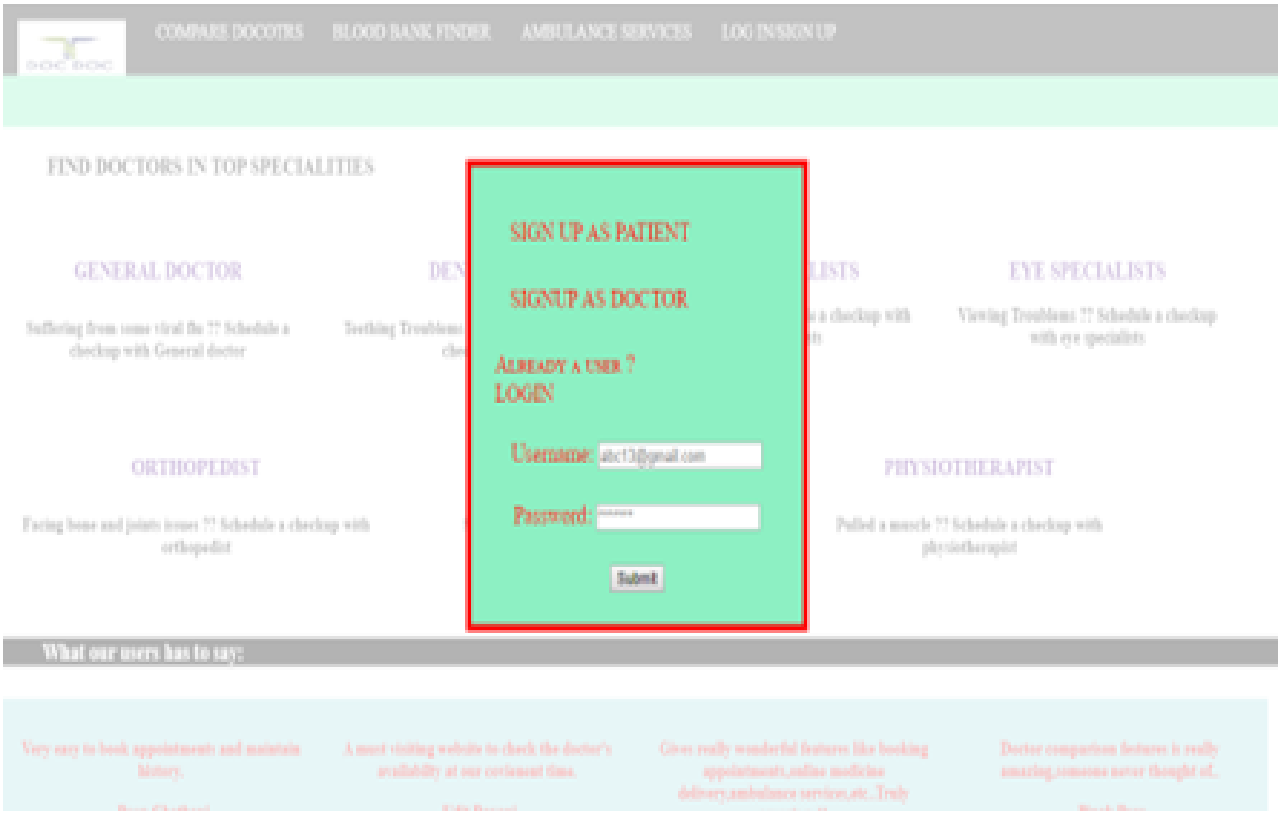

Figure 6: Login/Signup options

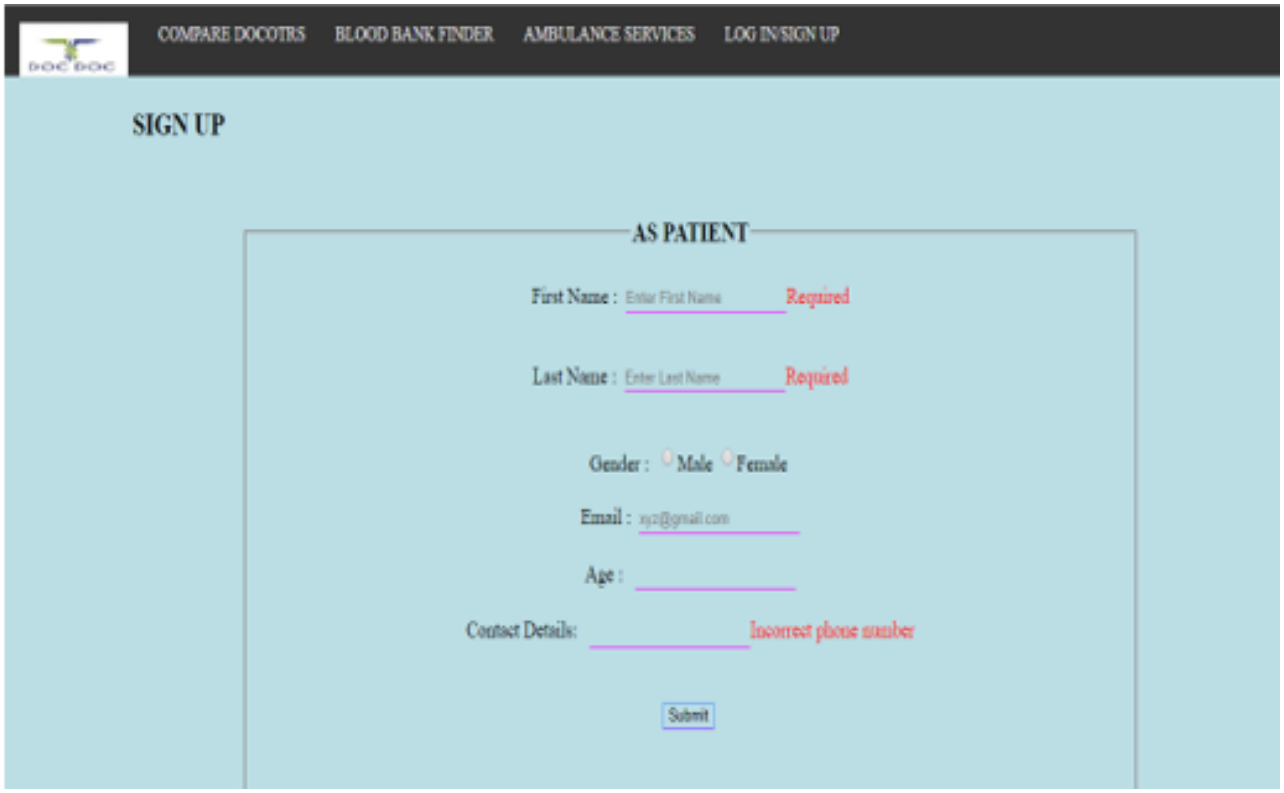

Figure 7: Sign up as patient

Figure 8: Sign up as Doctor

4.1.2 Objects and Actions

OBJECTS	ACTIONS
Log in	Opens Log IN option if already registered
Sign up as doctor/patient	If the user is new, sign up option opens form to register with the portal.
Find doctor	This button helps to find best available doctor.
Search Doctor by Location/Speciality	This helps to search the nearby doctor according to the domain the user is searching in.
Filter and Sort	Helps to re-arrange the list of doctors on the basis of fees/ratings
See Profile	Gives the option to user to view the complete profile of the doctor which includes ratings/fees/
Give Ratings/Feedback	Gives an option to the user to rate the doctor visited
Compare Doctor	It provides an option to the user to compare the doctors and select the best one for them.
Online Pharmacy	It provides an option to the user to buy the medicines online
Book Ambulances	The user can book the ambulances online quickly in case of emergency
Payment Modes	While buying medicines/booking appointments different modes of payment are available.
Patient History	Doctor can use this option to study the patient more accurately and assist their patients in a better way.

5 System Architecture

Use Case ID: 1
Use Case name: Signup/Login
Created by: SF Team
Last Updated by: SF Team
Created on: 30/08/2018
Last Updated on: 15/10/2018
Primary Actor: Patient/Doctor (User)
Secondary Actor: -
Description: This is used for registering new user into the system through Signup option or log into account through Login option if already a user.
Trigger: When user lands on the website or is logged out of system.
Preconditions: - Postconditions: A new user is registered or gets redirected to the homepage.
Normal flow:
1. User will enter the credentials. The credentials will be checked against the ones in the database
Alternative flows:
1. Signup/Login Page is displayed.
2. If wrong username-password combination is encountered, display error message.

Exceptions: -
Includes: Registration
Priority: High
Frequency of use: Medium
Special Requirements: - None
Open Issues: - None
Assumptions: - None
Notes and issues: Forgot password left for future scope.

Use Case ID: 2
Use Case name: Find Doctor
Created by: SF Team
Last Updated by: SF Team
Created on: 12/09/2018
Last Updated on: 15/10/2018
Primary Actor: User
Secondary Actor: -
Description: Used to find the list of doctors.
Trigger: User need to search the doctor according to the type of doctors.
Preconditions:
Postconditions: Cookies stores the searched results of the user for future use (if logged in).
Normal flow:
1. User can directly search various doctors even without logging in.

Alternative flows: Instead of searching by types of doctors can directly search by location or can buy medicines/ book ambulance.
Exceptions: -
Includes: -
Priority: Moderate
Frequency of use: High
Special Requirements: - None
Open Issues: - None
Assumptions: -None

Use Case ID: 3
Use Case name: Doctor Comparison
Created by: SF Team
Last Updated by: SF Team
Created on: 12/09/2018
Last Updated on: 15/10/2018
Primary Actor: User
Secondary Actor: -
Description: User will be able to compare doctors based on their ratings, feedback, consultation fees and experience.
Trigger: As the user clicks the compare doctor button the selected doctors gets compared which gives the user a better idea to select the better doctor among the ones.
Preconditions: User must be logged in.
Postconditions: The results get stored in cookies for the user for future reference.
Normal flow:
1. This option gets valid only after the user is signed in and later can compare the doctor by clicking the compare doctor button.
Alternative flows: Once the user is logged in, the user can access this option after any other flow as well.
Exceptions: -
Includes: -
Priority: Moderate
Frequency of use: Moderate
Special Requirements: - None
Open Issues: - None
Assumptions: The feedback and the ratings given by the users on which the doctors are compared are true.

Use Case ID: 4
Use Case name: Online Pharmacy
Created by: SF Team
Last Updated by: SF Team
Created on: 20/09/2018
Last Updated on: 15/10/2018
Primary Actor: User
Secondary Actor: Dealer/Chemist
Description: User will be able to buy medicines online and will get many options for payment mode.
Trigger: User clicks on online pharmacy to buy the medicines and get it delivered at their doorstep.
Preconditions: User is Logged in
Postconditions: The user can track their orders to estimate the delivery period.
Normal flow: The user logs in and buys medicines.
Alternative flows: - Once the user is logged in, the user can access this option after any other flow as well.
Exceptions: -
Includes: Login and Buying.
Priority: Moderate
Frequency of use: Moderate
Special Requirements: -
Open Issues: - None
Assumptions: - None
Notes and issues: - None

Use Case ID: 5
Use Case name: Book Ambulance
Created by: SF Team
Last Updated by: SF Team
Created on: 20/09/2018
Last Updated on: 15/10/2018
Primary Actor: User
Secondary Actor: -
Description: User will be able to book the ambulances online and will get all different types of ambulances available along with the price structure and a special option for emergency booking.
Trigger: User clicks on book ambulance to use this facility.
Preconditions: Log IN / guest user in case of emergency.
Postconditions: The user will get the option to track the ambulance booked.
Normal flow: User is Logged in and for emergency booking the login can be skipped.
Alternative flows: - Once the user is logged in, the user can access this option after any other flow as well.
Exceptions: -

Includes: Login and booking.
Priority: Moderate
Frequency of use: Moderate
Special Requirements: -
Open Issues: - None
Assumptions: - None
Notes and issues: - None

Use Case ID: 6
Use Case name: Patient History
Created by: SF Team
Last Updated by: SF Team
Created on: 20/09/2018
Last Updated on: 15/10/2018
Primary Actor: Doctor
Secondary Actor: -
Description: Doctors will be allowed to see their patients history to assist the patient in a better way.
Trigger: Doctor can click the patient history option and search the patient in the database or can simply use the face-scan option and scan the patients face and find his entire history.
Preconditions: Log IN as Doctor.
Postconditions: -
Normal flow: Doctor can login and find the patients history.
Alternative flows: - Once the doctor is logged in, he can access this option using any other flow as well.
Exceptions: -
Includes: Login and face-recognition.
Priority: Moderate
Frequency of use: Moderate
Special Requirements: -
Open Issues: - None
Assumptions: - None
Notes and issues: - None

6 Data Flow Specifications

6.1 Level 0 DFD

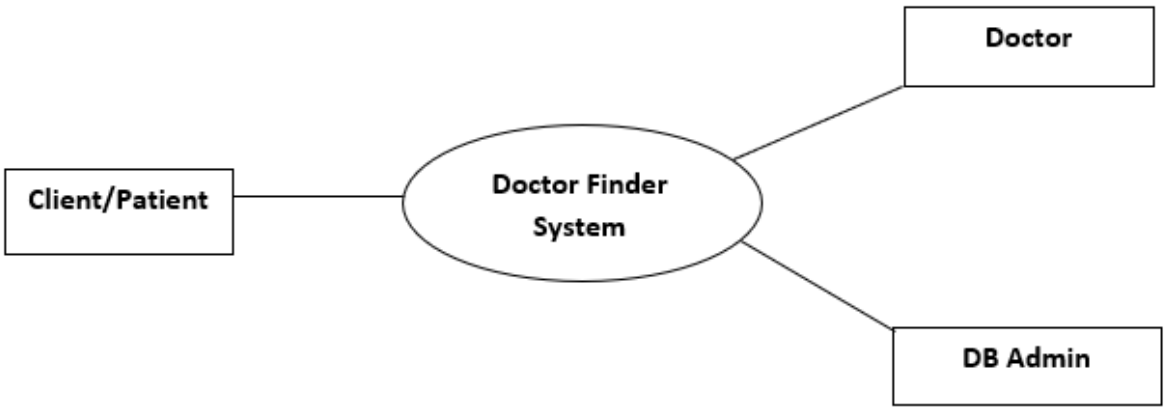

Figure 9: Level 0 DFD

The client/patient will interact with the doctor finder system,whereas Doctor will control its personal profile and DB Admin will store all the data

6.2 Level 1 DFD

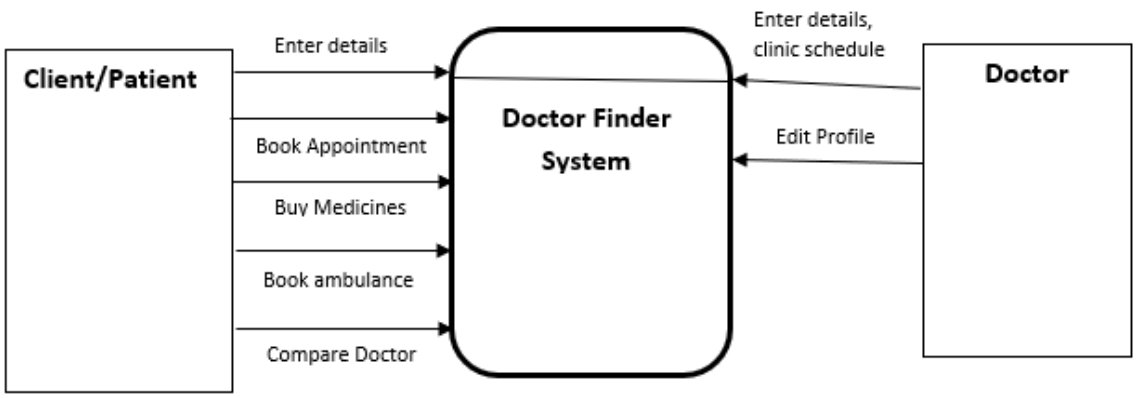

Figure 10: Level 1 DFD

The client/patient will enter all the details in the system to further perform activities like book appointment, buy medicines, book ambulance, compare doctor.
The Doctor will enter the details necessary to get own profile on the website , also the schedule ,changes required in profile will be regulated by the doctor