Best Doctor Finder Application





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FINAL APPROVAL

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Abstract

It is an android application which facilitates user to find best medical doctor of any specialization. By using this application user can view details of all hospitals near to its current location. User can select any department and can further view details (fee, timings, hospital) of any doctor from given list. He/she can select any hospital and view its route. Doctors will create their profile and verify their patient so they can rate their doctor. Admin of this application register hospitals add different departments and doctors User can view doctor profile and rate his/her doctor. On basis of user's rating application will show best doctor.

Abbreviations

BDF Best Doctor Finder

UC Use Case

SSD System Sequence Diagram

SD Sequence Diagram

TC Test Case

SRS Software Requirement Specification

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Chapter 1

Software Project Management Plan

1.1 Introduction

This chapter provides the description of software approach and associated milestones. It also covers what tools and techniques are used to develop software.

1.1.1 Product overview

It will be an android app which helps the user to find nearby hospitals and their best doctors. Admin can register hospitals and add all data about hospitals. Where each hospital have different departments and each department has different doctors. The user will have to register first. After login user can view all registered hospitals near to his/her location. User can select any hospitals to view details. User can also view route to the particular hospital. Admin will register so user will be able to view doctor's details (contact, fee etc.) so that user can find doctor according to his/her requirements. Users can rate their doctors and can view best-rated doctor on basis of their rating.

1.1.2 Project Deliverables

The project deliverables incudes:

- Software Project Management Plan (SPMP)
- Software Requirement Specifications (SRS)
- Software Design Description (SDD)
- Software Test Documentation (STD).
- Working Product

1.2 Project Organization

This section describes software process model, roles and responsibilities and tools and techniques.

1.2.1 Software Process Model

In this project incremental model will be used because it

- Generates working software quickly and early during the software life cycle.
- This model is more flexible less costly.
- It is easier to change scope and requirements.

It is generally easier to test and debug than other methods of software development because relatively smaller changes are made during each iteration.

1.2.2 Roles and Responsibilities

I am doing this project alone so all responsibilities are on me regarding this project.

1.2.3 Tools and Techniques

- Android studio with emulator (for testing)
- My SQL
- MS Office
- Argo UML
- Microsoft Visio

1.3 Project Management Plan

This section describes the project tasks, milestones and deliverables of this project.

1.3.1 Tasks

The project has the following tasks.

1.3.1.1 Problem Understanding

Description

In this task project deliverables, milestones and resources needed will be described.

Resources Needed

Nabeela Khan

Dependencies and Constraints

None

Risks and Contingencies

None

1.3.1.2 Software Project Management Plan

Description

In this task the software approach and associated milestones will be included. It describes the functional and non-functional requirements of the proposed system. It also includes a set of use cases that describe user interactions that the software must provide.

Deliverables

Software Project Management Plan

Milestones

6-5-2018

Resources Needed

Nabeela Khan

Dependencies and Constraints

Problem Understanding

Risks and Contingencies

None

1.3.1.3 Analysis and Requirement

Description

In this task analysis would be done and SRS will be included.

Deliverables

SRS

Milestones

31-5-2018

Resources Needed

Nabeela Khan

Dependencies and Constraints

Software Project Management Plan

Risks and Contingencies

None

1.3.1.4 Develop System Design

Description

In this task of software, we will meet the requirements. It also describes the logic of design decisions taken.

Deliverables

Software design description (SDD)

Milestones

15-6-2018

Resources Needed

Nabeela Khan

Dependencies and Constraints

Analysis and Requirement

Risks and Contingencies

None

1.3.1.5 Software Implementation

Description

In this task, we develop the plan how the project will be implemented.

Deliverables

Software Implementation Document (SID)

Milestones

30-7-2018

Resources Needed

Nabeela Khan

Dependencies and Constraints

Develop System Design

Risks and Contingencies

None

1.3.1.6 Software Test Documentation

Description

In this task, plan and specifications to verify and validate the software and the results will be included

Deliverables

Software Test Document (STD)

Milestones

10-8-2018

Resources Needed

Nabeela Khan

Dependencies and Constraints

Develop System Design

Risks and Contingencies

None

1.3.2 Assignments

My project is on individual basis so all the assignments are on my end

1.4 Task Schedule

This section describes the time table of the project as how the project tasks would be completed.

1.4.1 Time Table

	(3)	Name	Duration	Start	Finish	Predecessors
1	긲	Problem Understanding	1 day?	5/1/18 8:00 AM	5/1/18 5:00 PM	
2	Cil.	⊟Project Plan	5 days?	5/2/18 8:00 AM	5/6/18 5:00 PM	1
3	311	Introduction	1 day?	5/2/18 8:00 AM	5/2/18 5:00 PM	
4	ZII	Project Organization	2 days?	5/3/18 8:00 AM	5/4/18 5:00 PM	
5	44	Project Management Plan	1 day?	5/5/18 8:00 AM	5/5/18 5:00 PM	
6	Ti	Milestone: Project Plan	1 day?	5/6/18 8:00 AM	5/6/18 5:00 PM	
7	릚	⊟Analysis and Requirement	25 days?	5/7/188:00 AM	5/31/18 5:00 PM	
8	蝴	☐Requirement Analysis	10 days?	5/7/188:00 AM	5/16/18 5:00 PM	
9	引	Define Requirement	4 days?	5/7/18 8:00 AM	5/10/18 5:00 PM	1
10	류	Review case study	6 days?	5/11/18 8:00 AM	5/16/18 5:00 PM	
11	H	□Develop SRS	15 days?	5/17/18 8:00 AM	5/31/18 5:00 PM	
12	罚	Fildentify Requirement	10 days?	5/17/18 8:00 AM	5/26/18 5:00 PM	
13	型	External Interface Requirement	1 day?	5/17/18 8:00 AM	5/17/18 5:00 PM	9
14	C	Software product features	2 days?	5/18/18 8:00 AM	5/19/18 5:00 PM	
15	副	Use case diagram	4 days?	5/20/18 8:00 AM	5/23/18 5:00 PM	10
15	131	Software system attributes	2 days?	5/24/18 8:00 AM	5/25/18 5:00 PM	
17	引	Review Requirement	1 day?	5/25/18 8:00 AM	5/26/18 5:00 PM	9
18	픾	Milestone:SRS	1 day?	5/27/18 8:00 AM	5/27/18 5:00 PM	
19	罚	Deliverabe: SRS	2 days?	5/28/18 8:00 AM	5/29/18 5:00 PM	
20	翻	Dontain Model	2 days?	5/30/18 8:00 AM	5/31/18 5:00 PM	15
21	긲	⊟System Design	15 days?	6/1/18 8:00 AM	6/15/18 5:00 PM	
22	团	Create Sequence Diagram	2 days?	5/1/18 8:00 AM	6/2/18 5:00 PM	15
23	副	Create Class Diagram	2 days?	6/2/18 8:00 AM	6/3/18 5:00 PM	19
24	331	Develop Interface	10 days?	6/4/18 8:00 AM	6/13/18 5:00 PM	
25	团	Milestone:SD and DCD	1 day?	6/14/18 8:00 AM	6/14/18 5:00 PM	
26	開	Deliverable: System Design	1 day?	6/15/18 8:00 AM	6/15/18 5:00 PM	
27	亞	⊟Implementation	45 days?	6/16/18 8:00 AM	7/30/18 5:00 PM	
28	到	Create Database	5 days?	6/16/18 8:00 AM	6/20/18 5:00 PM	
29	4	Codeing	30 days?	6/21/18 8:00 AM	7/20/18 5:00 PM	
30	罚	System Integration	10 days?	7/21/18 8:03 AM	7/30/18 5:00 PM	
31	引	Filesting	11 days?	7/31/18 8:00 AM	8/10/18 5:00 PM	
32	甜	Test Plan	4 days?	7/31/18 8:00 AM	8/3/18 5:00 PM	
33	盟	Tet Cases	6 days?	8/4/18 8:00 AM	8/9/18 5:00 PM	
34	릚	Review Test Document	1 day?	8/10/18 8:00 AM	8/10/18 5:00 PM	

Figure 1.1 Time Table

1.4.2 Gantt Chart

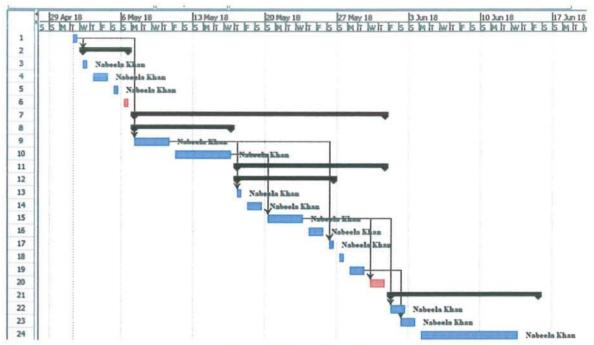


Figure 1.2 Gantt Chart (I)

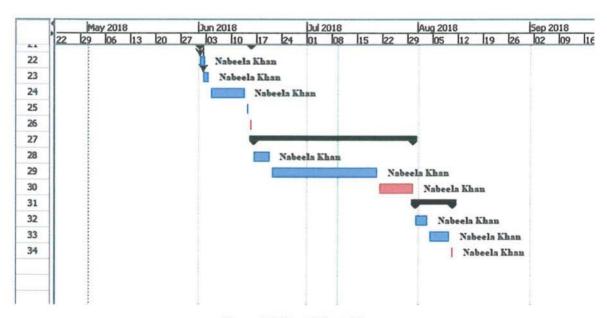


Figure 1.3 Gantt Chart (II)

Chapter 2

Software Requirement Specification

2.1 Introduction

This chapter provides an overview of Software Requirement Specifications (SRS) for the subject of "Best Doctor Finder". The "Best Doctor Finder" is an android based application. This chapter includes problem statement, motivation, related work, project overview, project scope and objectives. This chapter also describe functional and non-functional requirements of the proposed system.

2.1.1 Problem Statement

In existing environment, it is difficult to find hospitals and best doctor of particular field/specialization. User has to search each hospital explicitly through different platform or has to concern hospitals directly. After that it is also difficult to find best doctor as there is no such information or reviews of patient about doctor which help him/her to find best doctor. It is also difficult to find a doctor with specific timings and fee structure. So there is a need for a system which provides the user with a facility to find nearby hospitals and their best doctors. The system will give information about doctor timing, sitting place and fee structure.

2.1.2 Motivation

The motivation behind this proposed project is to provide user an application which provide them a facility to find nearest hospitals and their best doctors. An application which provide user a central platform where information about all hospitals and doctors is provided on single platform. User can get all information about nearest hospitals and their doctors. User can find best doctor and they can find any doctor with specific timing and fee structure etc. User can rate doctor according to his/her experience. So system will show best doctor on base of user's rating.

2.2 Product Overview

It will be an android app which helps the user to find nearby hospitals and their best doctors. Admin can register hospitals and add all data about hospitals. Where each hospital has different departments and each department has different doctors. The user will have to register first. After login user can view all registered hospitals near to his/her location. User can select any hospitals to view details. User can search any doctor on the

basis of any department so the system will show him all doctors of that particular department from all hospitals. User can also view route to the particular hospital. Admin will also create profiles of all doctors. So user will be able to view doctor's details and can rate any doctor. User can view best-rated doctor on basis of their rating.

2.2.1 Project Scope

This hospital app has three type of user

- Administrator
- User
- Doctor

2.2.1.1 Features

- User can register to use the app.
- User can search all nearby hospitals according to his/her location.
- User can change his password to log in.
- User can search doctors of any department.
- User can send treatment request to doctor.
- User can cancel treatment request.
- User can search for the best doctor of any field.
- User can view all details of a doctor.
- User can view route of any hospital.
- User can add rating in doctor profile.
- Admin can register all Hospitals.
- He can create Doctor's profile.
- He can add doctor in the hospital.
- He can delete doctor from any hospital.
- He can add new hospital.
- He can delete any hospital

2.2.1.2 Constraints

- Every user must have internet connection to use this system.
- Every user must be registered to use the system.
- User must have an android phone which have android OS version 7.0 (nougat).

2.3 Related work

Following are the related work regarding this project:

My Tabeeb:

Features:

- Search doctors and hospitals within Proximity by doctor name, Hospital, Area, Gender or Specialization
- View doctor's schedule, timings, all practice centres, qualifications, specializations and gender
- · View facilities and services provided by hospitals, clinics and diagnostic centres
- · Call to Book appointment directly from the app
- Find your way to the hospital with integrated Google Maps with directions from your current location. [1]

Marham:

Features:

- · Find doctors through speciality.
- Search doctors by name or hospitals.
- Find consultants through general diseases.
- User can post health-related questions on Marham forum and get instant help about the right doctors.
- Make informed decisions on the basis of the doctors' details like qualification, degrees, experience, and fee for appointment numbers.
- Integrated maps can help you in finding the address to physician's clinic.
- It has the ability to share doctor's information with others through any medium like Facebook, twitter, whats app and SMS. [2]

Find My Doctor:

Features:

- · Provides you with the convenience of finding the nearest doctor.
- · Can locate, compare and make appointments as per your healthcare needs.
- · Connects doctors and patients together for mutual benefit.
- Provides information such as the doctor's qualification, specialization, timings et.c
- It gives chance to book user appointment and frees them from the hassle of waiting. [3]

Tabeeb:

Features:

- Tabeeb is providing information about doctors as well as hospitals.
- We can search doctor by name and doctor's speciality.
- Search hospitals in any city and all information about relevant hospital and all the doctors in that hospital.
- Search laboratories in any region and contact detail of the laboratories.
- User can take appointment from doctor's clinic by clinic contact number from application.
- It provides health blog that aware user to all new health news and health tips.

Comparison from other applications

Table 1.1 Comparison from other Apps

Features Apps	Search Doctors	Search Hospitals	Doctor's Profile	Appointment By Call	Add reviews about doctor	Show Way to Hospital	Post Health Related Questions	Share Doctor Information	Health Blog
My Tabeeb	X	X	X	X	X	X			
Find My Doctor	X	X	X	X					
Marham	X	X	X	X	X		X	X	
Tabeeb	X	X	X	x	x				X

2.4 Specific Requirement

This section describes detail description of Interface requirement.

2.4.1 External Interface Requirement

2.4.1.1 User Interface

This application has a user friendly interface, user guide (user documentation) must be sufficient to educate the user on how to use this product without any problems or difficulties. It will be designed for an ease of user providing appropriate error messages for wrong inputs. The background will be light in color with dark colored font to enhance the contrast and visibility. Dynamics will be used to make interface more readable and interactive.

2.4.1.2 Hardware Interface

Mobile Phone (Android)

2.4.1.3 Software Interface

- Android studio
- My SQL
- Wamp server

2.4.2 Software Product Features

This application has many features. Each user has an access to the particular features according to his/her role. Some features are common that can be performed by all users.

Administrator

Administrator has following features

- Login
- Logout
- Change password
- Register Hospital
- Delete Hospital
- Add doctor
- Delete doctor

User

User has following features

- Register account
- Login
- Logout
- Change password
- Search hospitals
- View doctor's list
- View doctor's details
- Rate doctors
- Search best doctor
- View hospital's route

Doctor

Doctor has following features

- Login
- Logout
- Change password
- Add Profile
- Delete profile
- View Profile
- Verify Patient Requests

2.5 Use Case Diagram

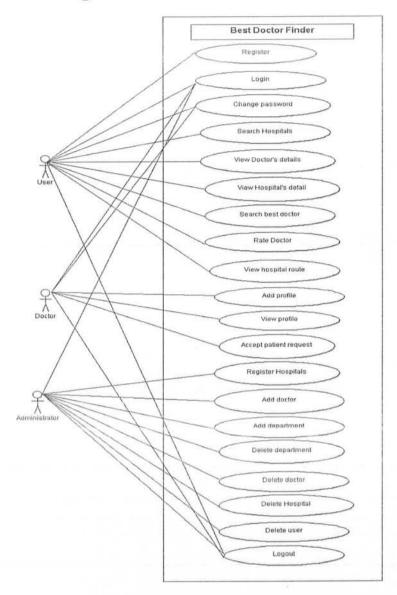


Figure 2.4 Use Case Diagram

2.7 Use Case Description:

UC 1: Register Account

Table 2.2 UC-1: Register Account

Primary Actor	User						
Stakeholders & interest	User will be able to register.						
Pre-condition	User must have an email account.						
Post-condition	User has registered successfully.						
Main success scenario	 User presses "Register account" button. User enters "first name". User enters "Last name" User enters "email". User enters "password" User enters "Retype password". User selects create account. The system will display the message. 						
Alternative scenario	7a. User selects create account without filling all required field. System will prompt the user to fill required fields.						
Special requirement	None						
Technology	Internet connection.						

UC 2: Login

Table 2.3 UC-2: Login

Primary Actor	User, Admin					
Stakeholders & interest	User will be able to log in.					
Pre-condition	User must be registered.					
Post-condition	User will login successfully.					
Main success scenario	 User press login button. Enter username. Enter password. 					
	4) User presses "OK" button.					
Alternative scenario	 2a) User enters the wrong username. System prompts the user to enter a correct username. 3a) User enters wrong password. System prompts the user to enter the correct 					
	password.					
	3a) User presses "OK" button without filling all required field.					
	System will prompt the user to fill required fields.					
Special requirement	None					
Technology	■ Internet connection.					

UC 3: Change Password

Table 2.4 UC-3: Change Password

Primary Actor	User
Stakeholders & interest	User will be able to log in.
Pre-condition	User must be logged in.
Post-condition	User Updated the password successfully.
Main success scenario	1) User selects the change password option. 2) User enters current password. 3) User enter a new password 4) User enter confirm password 5) User presses "OK" button.
Alternative scenario	User enters a wrong current password. System prompts the user that current password is wrong.
	 3a) User enters different new and confirm password. System prompts user to enter the same new and confirm password. 5a) User presses "OK" without filling all required fields. System will prompt user to fill required fields.
Special requirement	None
Technology	 Internet connection.

UC 4: Search Hospitals

Table 2.5 UC-4: Search Hospital

Primary Actor	User
Stakeholders & interest	User will be able to search all nearby hospitals.
Pre-condition	User must be logged in. User must turn on his/her GPS (location).
Post-condition	System displayed a list of all hospital.
Main success scenario	User selects the "Search Hospital" option. System displays all Hospitals on screen.
Alternative scenario	User select "Search Hospital" option without turning on the location. System prompts the user to turn on the location.
Special requirement	None
Technology	Internet connection.



UC 5: ADD Department

Table 2.6 UC-5: Add Department

Primary Actor	Admin
Stakeholders & interest	Actor will be able to add department successfully.
Pre-condition	User must be logged in.
Post-condition	System add a new department in hospital.
Main success scenario	 User selects the "Add department" option. User selects the Hospital from drop-down menu. User enters the department name. User presses the "ok" button. System will add a new department in hospital.
Alternative scenario	User select "ok button without entering the name of the department. System prompts user to enter department.
Special requirement	None
Technology	■ Internet connection.

UC 6: Delete Department

Table 2.7 UC-6: Delete Department

Primary Actor	Admin
Stakeholders & interest	Actor will be able to delete department successfully.
Pre-condition	User must be logged in.
Post-condition	System delete department from specified hospital.
Main success scenario	 User selects the "Delete department" option. User selects the Hospital from drop-down menu. User select the department name. User presses the "ok" button. System will delete selected department from hospital.
Alternative scenario	2a) Internet connection lost and information not displayed. a) configure internet connection
Special requirement	None
Technology	 Internet connection.

UC 7: View Doctor's Details

Table 2.8 UC-7: View Doctor's Details

Primary Actor	User
Stakeholders & interest	User will be able to view details of selected doctors of any department.
Pre-condition	User must be logged in. User must select particular hospital and department.
Post-condition	System will show details of selected doctor successfully.
Main success scenario	 User selects particular Doctor. User selects the "View Details" option. System shows details of selected doctor.
Alternative scenario	2a. Server is down a) User waits until server works properly
Special requirement	None
Technology	 Internet connection.

UC 8: View Hospital's Details

Table 2.9 UC-8: View Hospital Details

Primary Actor	User
Stakeholders & interest	User will be able to view details of selected hospital.
Pre-condition	User must be logged in.
	User must searched Hospital.
Post-condition	System will show the details of selected hospital successfully.
Main success scenario	 User selects the particular hospital from list. User presses view detail button. System display details of selected hospital.
Alternative scenario	User select "Search" button without selecting the Department. System prompts user to select department.
Special requirement	None
Technology	■ Internet connection.

UC 9: Find Best Doctor

Table 2.10 UC-9: Find Best Doctor

Primary Actor	User
Stakeholders & interest	User will be able to find best doctors of required department.
Pre-condition	User must be logged in.
Post-condition	System will show list of best doctors successfully.
Main success scenario	 User selects "Find Best Doctor" option. User select particular Department. User presses "OK" button. System shows all doctor with top rating.
Alternative scenario	User presses "OK" button without selecting the Department. System prompts user to select department.
Special requirement	None
Technology	■ Internet connection.



UC 10: Rate Doctor

Table 2.11 UC-10: Rate Doctor

Primary Actor	User
Stakeholders & interest	User will be able to rate particular doctor.
Pre-condition	User must be logged in.
Post-condition	User has rated particular doctor successfully.
Main success scenario	 User selects particular doctor. User presses "Rate" button. User add rating in doctor profile. Application update the doctor's rating.
Alternative scenario	Server is down and system do not show information. User waits until server works properly
Special requirement	None
Technology	 Internet connection.

UC11: View Hospitals Route

Table 2.12 UC-11: View Hospitals Route

Primary Actor	User
Stakeholders & interest	User will be able to view particular hospital's route.
Pre-condition	User must be logged in.
Post-condition	User viewed hospital's route successfully.
Main success scenario	 User selects particular hospitals. User presses "Show on Map" button. System shows route of selected hospital on map.
Alternative scenario	2a) User presses "Show on Map" button without turning on location.System prompt user to turn on location.
Special requirement	None
Technology	 Internet connection.

UC12: Register Hospitals

Table 2.13 UC-12:Register Hospital

Primary Actor	Admin
Stakeholders & interest	Admin will be able to register particular hospital in the application.
Pre-condition	Admin must be logged in.
Post-condition	Admin has registered hospital successfully.
Main success scenario	 4) User selects "Add hospital" option. 5) User add all details about hospital. 6) User presses "OK" button. 7) System generate confirmation message about hospital registration.
Alternative scenario	3a) User presses "OK" button without adding any details.System prompt user to add details.
Special requirement	None
Technology	 Internet connection.

UC13: Add Profile

Table 2.14 UC-13: Add Profile

Primary Actor	Doctor
Stakeholders & interest	Doctor will be able to add his/her profile.
Pre-condition	Doctor must be logged in.
Post-condition	Doctor has created his/her profile successfully.
Main success scenario	 User selects "Add Profile" option. User add his/her details. User presses "OK" button. System generate notification message about profile creation
Alternative scenario	3a) User presses "OK" button without adding any details. System prompt user to add details.
Special requirement	None
Technology	 Internet connection.

UC14: Accept patient Requests

Table 2.15 UC-14: Accept Patient Request

Primary Actor	Doctor
Stakeholders & interest	Doctor will be able to accept his/her patient requests
Pre-condition	Doctor must be logged in.
Post-condition	Doctor accepted his/her patient request successfully.
Main success scenario	 User selects "pending request "option from menu. User select any patient. User click "accept" button. System remove that name from list.
Alternative scenario	Internet connection lost and information not displayed. a) configure internet connection
Special requirement	None
Technology	 Internet connection.

UC15: Add doctor

Table 2.16 UC-15: Add Doctor

Primary Actor	Admin
Stakeholders & interest	Admin will be able to add any doctor in particular hospital.
Pre-condition	Admin must be logged in.
Post-condition	Admin has added doctors in particular hospital successfully.
Main success scenario	 User selects particular hospital. User selects "Add Doctor" option. User enter doctor name. User enter doctor fee details. User enter doctor's timings. User presses "OK" button. System generate notification message about doctor addition in hospital.
Alternative scenario	3a) User presses "OK" button without filling required fields.System prompt user to fill all fields.
Special requirement	None
Technology	 Internet connection.

UC16: Delete Doctor

Table 2.17 UC-16; Delete Doctor

Primary Actor	Admin
Stakeholders & interest	Admin will be able to delete any doctor in particular hospital.
Pre-condition	Admin must be logged in.
Post-condition	Admin has deleted doctors in particular hospital successfully.
Main success scenario	 User selects particular hospital. User selects particular doctor. User presses "Delete" button. System generate confirmation message about doctor deletion.
Alternative scenario	
Special requirement	None
Technology	Internet connection.

UC17: Delete Hospitals

Table 2.18 UC-17: Delete Hospitals

Primary Actor	Admin
Stakeholders & interest	Admin will be able to delete particular hospital in the application.
Pre-condition	Admin must be logged in.
Post-condition	Admin has delete hospital successfully.
Main success scenario	 User selects "Delete hospital" option. User selects particular hospital from given list. User press "Delete" button against selected hospital. System generate confirmation message about hospital deletion.
Alternative scenario	
Special requirement	None
Technology	 Internet connection.

UC18: View Profile

Table 2.19 UC-18: View Profile

Primary Actor	Doctor
Stakeholders & interest	Doctor will be able to view his/her profile.
Pre-condition	Doctor must be logged in.
Post-condition	Doctor has viewed his/her profile successfully.
Main success scenario	 User selects "view Profile" option. System display his/her profile.
Alternative scenario	Internet connection lost and information not displayed. a) configure internet connection
Special requirement	None
Technology	 Internet connection.

UC19: Delete user

Table 2.20 UC-20: Delete User

Primary Actor	Admin
Stakeholders & interest	Admin will be able to delete particular user in the application.
Pre-condition	Admin must be logged in.
Post-condition	Admin has delete user successfully.
Main success scenario	 User selects "Delete user" option. User selects particular user from given list. User press "Delete" button against selected user. System generate confirmation message about user deletion.
Alternative scenario	2a) Internet connection lost and information not displayed.a) configure internet connection
Special requirement	None
Technology	■ Internet connection.

UC20: Logout

Table 2.21 UC-18: Logout

Primary Actor	Admin and user
Stakeholders & interest	User will be able to logout account.
Pre-condition	User must be logged in.
Post-condition	User logged out successfully.
Main success scenario	 User selects "Log out". System displays logout message.
Alternative scenario	
Special requirement	None
Technology	 Internet connection.

2.8 System Sequence Diagrams

A system sequence diagram is a picture that shows, for a particular scenario of a use case, the events that external actors generate, their order, and inter-system events. All systems are treated as a black box; the emphasis of the diagram is events that cross the system boundary from actors to systems.

SSD 1: Register Account

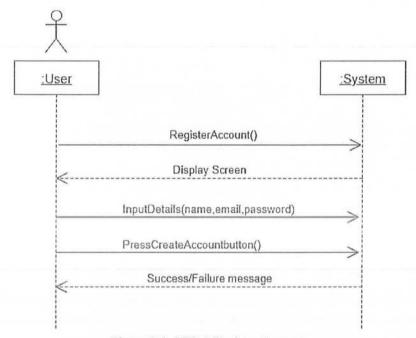


Figure 2.5: SSD-1 Register Account

SSD 2: Login

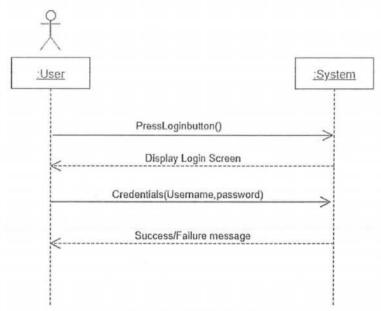


Figure 2.6: SSD-2 Login

SSD 3: Change Password

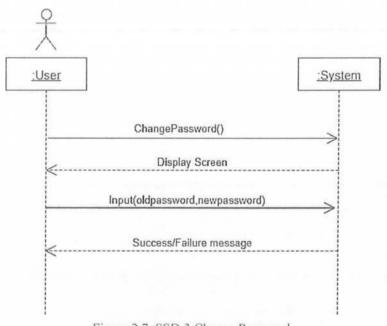


Figure 2.7: SSD-3 Change Password

SSD 4: Search Hospitals

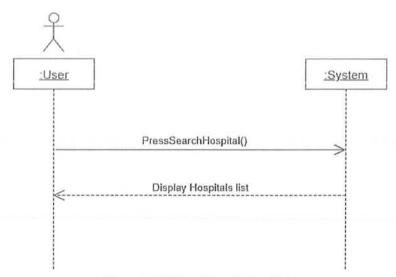


Figure 2.8: SSD-4 Search Hospitals

SSD 5: Search Doctors

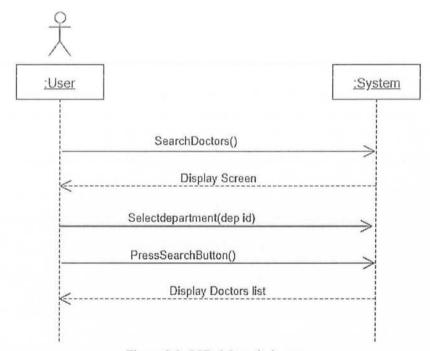


Figure 2.9: SSD-5 Search doctors

SSD 6: View Doctor's Details

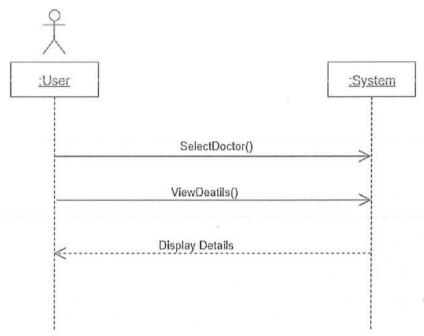


Figure 2.10: SSD-6 View Doctor's Details

SSD 7: Add Doctor

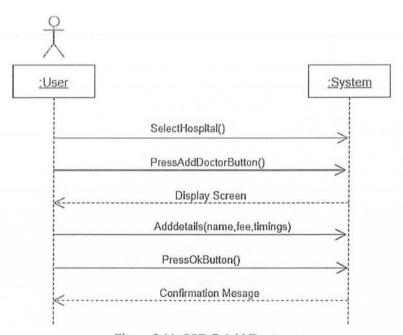


Figure 2.11: SSD-7 Add Doctor

SSD 8: Find Best Doctors

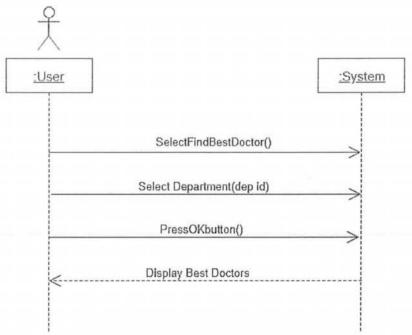


Figure 2.12: SSD-8 Find Best Doctors

SSD 9: Rate Doctors

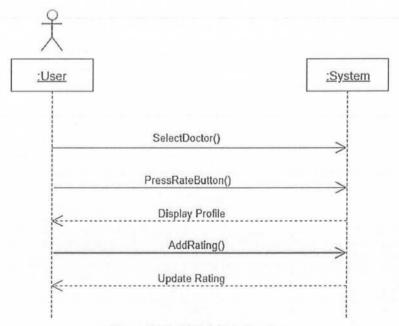


Figure 2.13: SSD-9 Rate Doctors

SSD 10: View Hospital Route

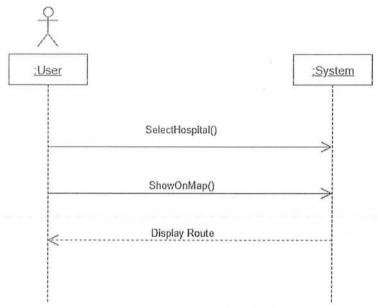


Figure 2.14: SSD-10 View Hospital Route

SSD 11: Register Hospital

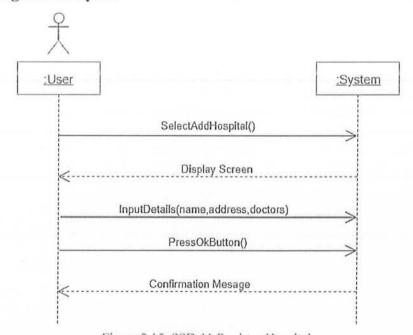


Figure 2.15: SSD-11 Register Hospital

SSD 12: Create Doctor's Profile

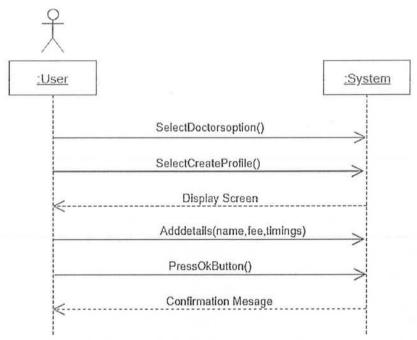


Figure 2.16: SSD-13 Create Doctor's Profile

SSD 13: View Hospital's Details

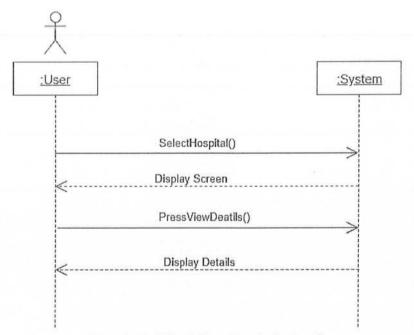


Figure 2.17: SSD-13 View Hospital's Details

SSD 14: Delete Doctor

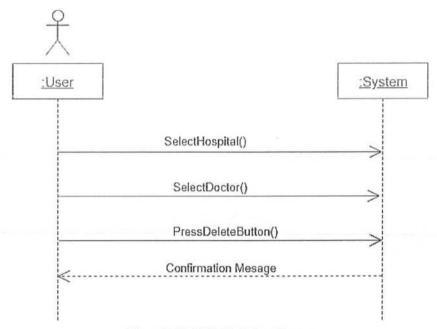


Figure 2.18:SSD-14 Delete Doctor

SSD 15: Delete Hospital

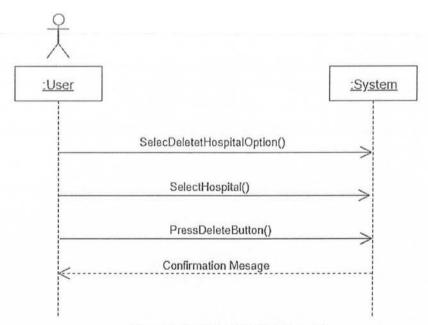
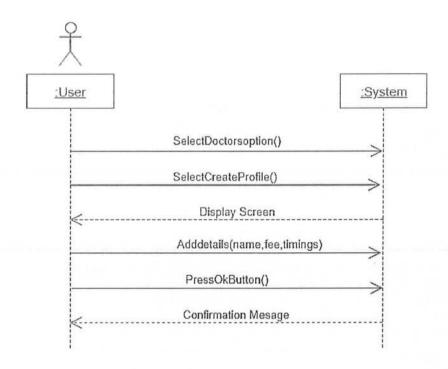
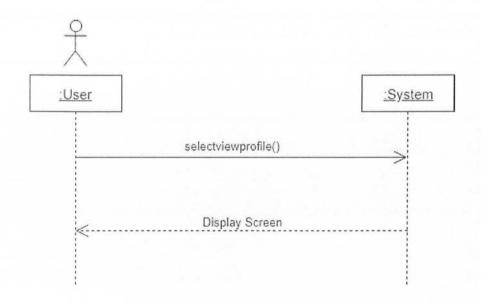


Figure 2.19: SSD-15 Delete Hospital

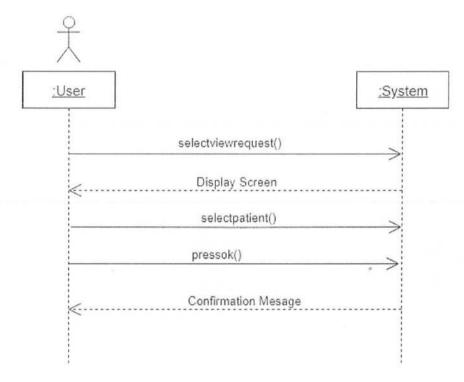
SSD 16: Add Profile



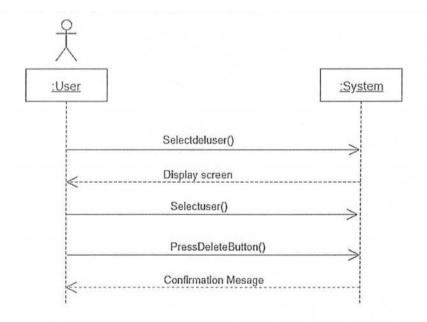
SSD 17: View profile



SSD 18: Accept Patient Request



SSD 19: Delete User



SSD 20: Logout

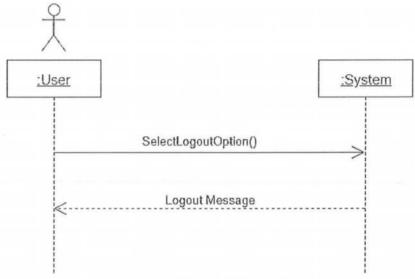


Figure 2.20: SSD-16 Logout

Domain Model

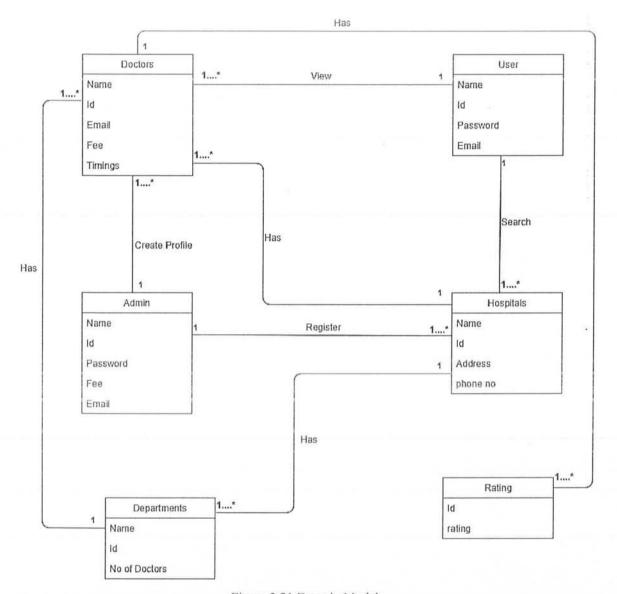


Figure 2.21 Domain Model

2.9 Software System Attributes

2.9.1 Reliability

- The probability of failure is zero.
- The system shall never crash, other than as the result of an operating system error.
- If there is any error then it will display an appropriate messages.
- Overall reliability of system is approximately more than 90-95%.

2.9.2 Availability

For availability it requires the following conditions:

- Internet connection
- Database connectivity

2.9.3 Security

- System can only be accessed by authorized user.
- If user try to login with wrong email the system will display error.
- Password send to the database for registration or login purposes will be in encrypted form.
- Each user can only access the specific functionality.

2.9.4 Portability

As this is an android based application so it ensures portability. It requires an android phone with version 7.0(nougat) to run the application.

2.9.5 Performance

- The system will take five seconds to load screen.
- Average response time will be less than 1 minute.
- The verification of log in information should not take more than five seconds.
- Queries return results should not take more than five seconds.
- User's interfaces should update quickly.

2.10 Database Requirement

MySQL database will use for this system to store all Information regarding this project. Each type of user will have its own access according to the modules.

2.11 ER Diagram

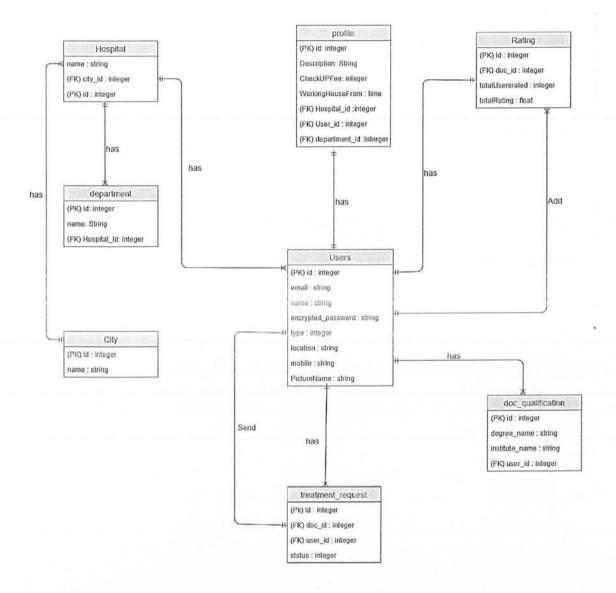


Figure 2.22 ER-Diagram

Chapter 3 Software Design Description

3.1 Introduction

The software design document provides the design detail of BDF and tracks the necessary information required to effectively define architecture and system design Product Overview. This document will help the developer to understand the inner workings of the BDF.

3.2 Design Overview

The software design document provides design details of BDF. It includes the following diagrams which will explain the design overview of the system.

- Architecture of system
- Sequence Diagrams
- Class Diagram

3.3 SYSTEM ARCHITECTURAL DESIGN

- System architecture is a conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system.
- Reason: I chose "Three Tier Architecture". Because it provides these benefits:
 - Performance
 - Scalability
 - Availability

Architecture Diagram

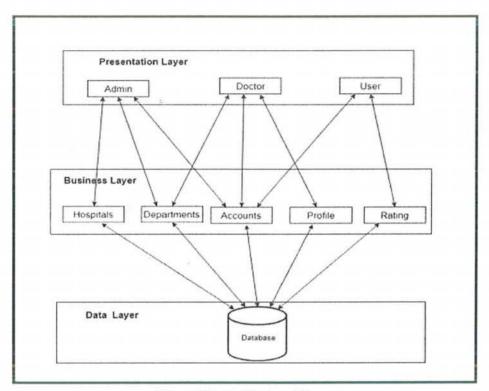
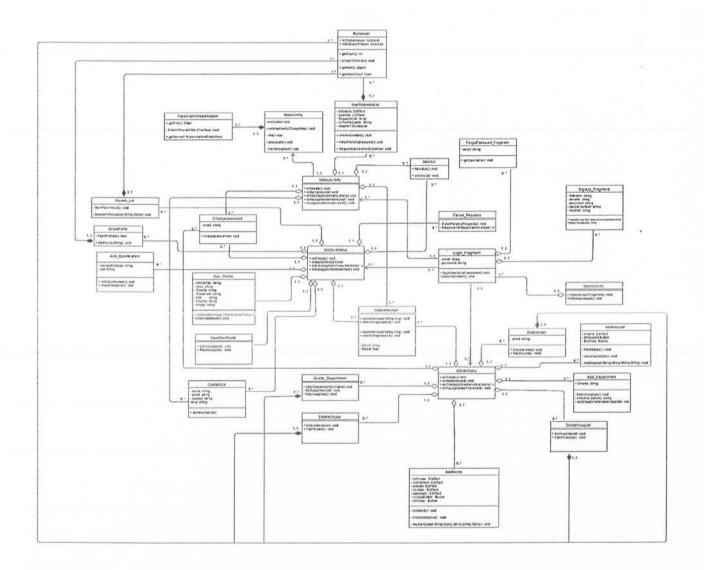


Figure 3.23 Architecture Diagram



3.4 Class Diagram

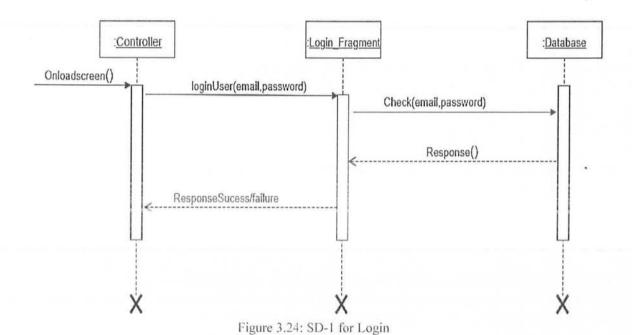
A class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.



3.5 Sequence Diagram

Sequence diagram is an interaction diagram that shows how objects operate with one another and in what order. It is a construct of a message sequence chart. A sequence diagram shows object interactions arranged in time sequence. [4]

3.5.1 Login



3.5.2 Register Account

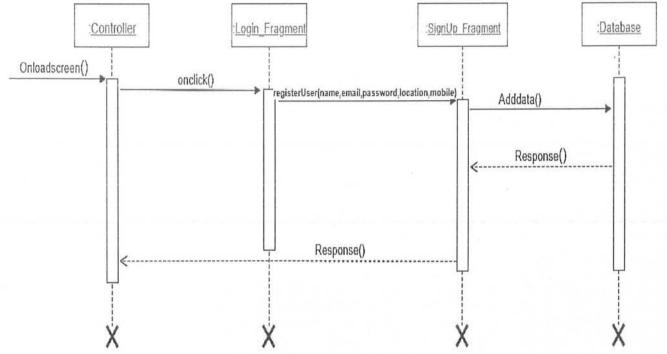
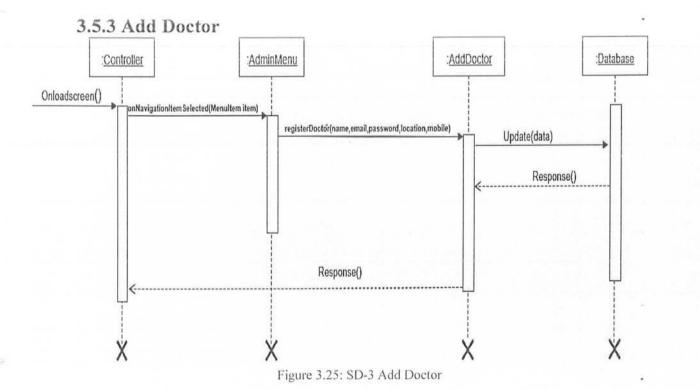


Figure 3.26: SD-2 Register Account



3.5.4 Change Password

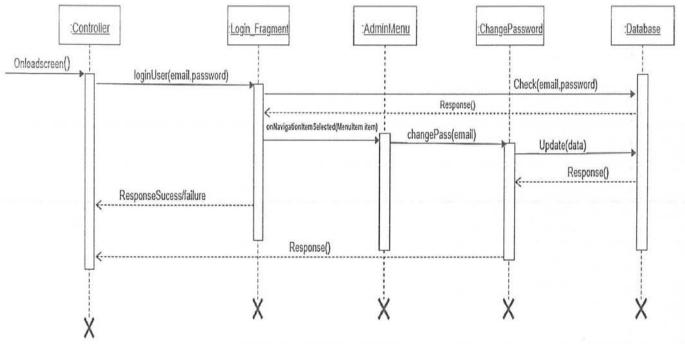
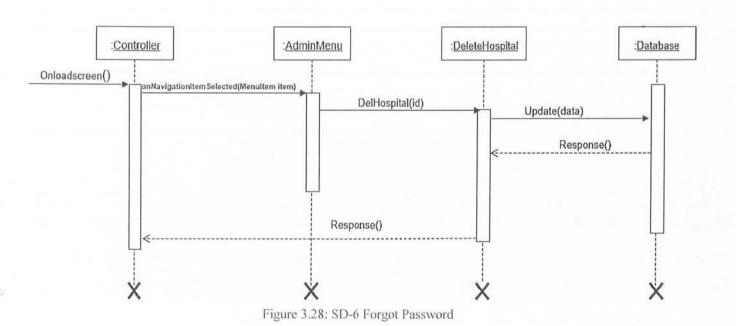


Figure 3.27: SD-4 Change password

3.5.5 Delete Hospital



3.5.6 Forgot Password

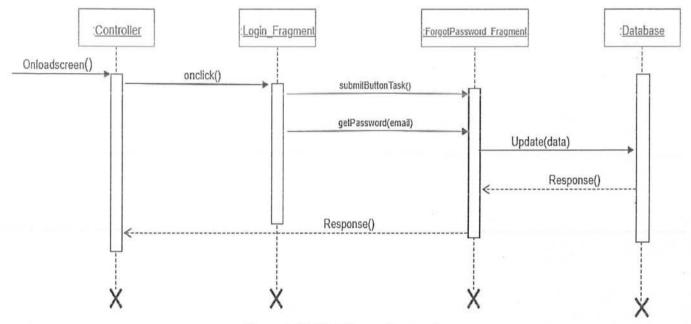
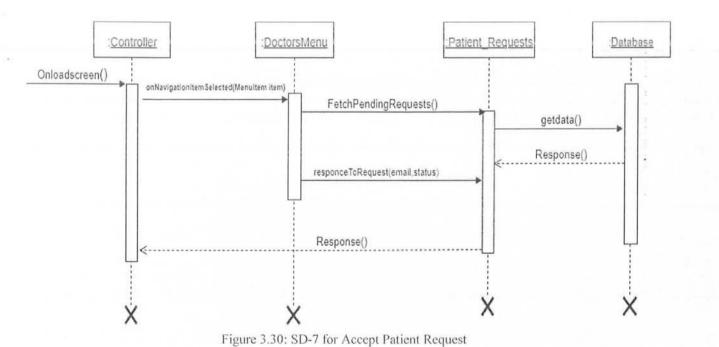
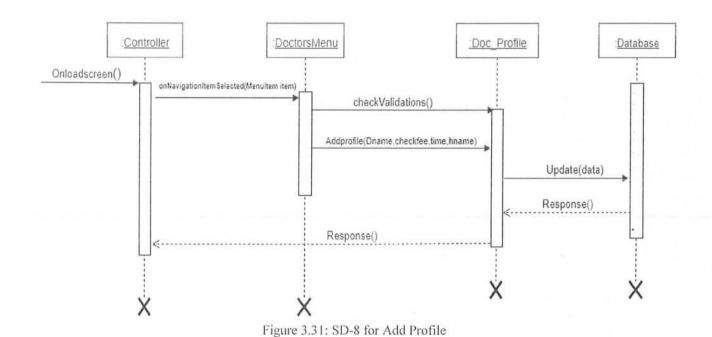


Figure 3.29: SD-6 Forgot Password

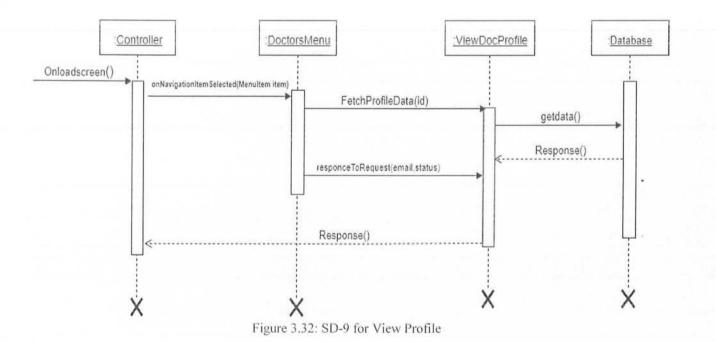
3.5.7 Accept Patient Request



3.5.8 Add Profile



3.5.9 View Profile



Chapter 4 System Implementation

4.1 Introduction

This document describes the project implementation and user manual for developing - and use of the BDF. The project implements are in PHP, MySQL and java for developing this android application.

4.2 Language selection

The project implemented in the following language.

PHP 5.6.25

Used for server-side scripting.

MySQL 5.7.14

Used for creating database.

Java

Used for developing this android application

4.3 Tools Selection

- Notepad++
- Wamp Server
- Android Studio
- MySQL

4.4 User Interface Design

User Interface design shows how the user will interact with the system to perform different task. The goal of user interface design is to make the user's interaction as simple and efficient as possible.

4.5 Description of the User Interface

User interface is the means by which a person controls a software application or hardware device. It is the space where interactions between humans and machines occur. The goal of user interface is to produce an interface which makes it easy (self-explanatory), efficient, and enjoyable (user-friendly) to operate a machine in a way which produces the desired result.

4.5.1 Screen Shots

The screen shots of the Application.

Login

This screen is used for login purpose for every user (Admin, doctor, user). User has to enter his/her email and password and then click login button to login to the system.

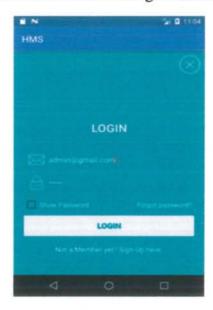


Figure 4.33: Login Screen

User Registration

This screen will appear when user click on signup button on login page.



Figure 4.34: User Registration Screen

Change Password

This Screen will display when user click change password tab in the menu.



Figure 4.35: Change Password Screen

Homepage

This is the Welcome Screen for every user (Admin, Doctor, User) when they logged in.



This is The Home Page.Choose From the Menu What you want to do



About us Page

This screen will display when user click about us tab from menu.





Figure 4.37: About us Page

Contact US

This screen will display when user will click contact us tab in the menu and this form is use to send an email to the Administration regarding some issue.



Admin Menu

This menu will appear when admin logged into system. This screen has all tasks which will performed by admin to handle database.

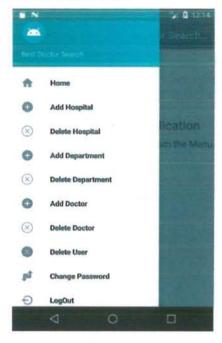


Figure 4.39: Admin Screen

Add Hospital

This screen will display when admin selects Add hospital tab from menu. By selecting city, adding name of hospital and then click submit button. Hospital will be added to database.



Figure 4.40: Add Hospital Screen

Delete Hospital

This screen will display when admin click delete hospital tab from menu. By selecting any hospital and then click delete button. Hospital will be deleted. We can search any hospital from whole list by typing hospital's name in search bar.



Confirmation!
Do You Really Want to Delete This hospital?

CANCEL OR

Figure 4.42: Delete Hospital Screen (I)

Figure 4.41: Delete Hospital Screen (II)

Add Doctor

This screen will display when admin selects Add doctor tab from menu. Admin add all detail about doctor and then click submit button so doctor will be added in database.

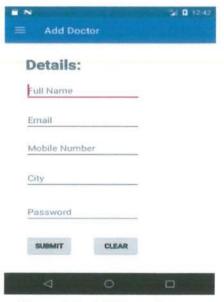


Figure 4.43: Add Doctor Screen

Delete Doctor

This screen will display when admin click delete doctor tab from menu. By selecting any doctor and then click delete button doctor will be deleted.



Figure 4.45: Delete Doctor Screen (I)

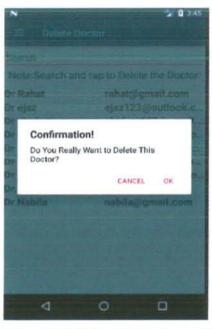
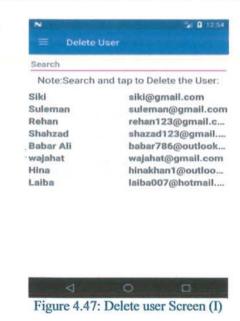


Figure 4.44: Delete Doctor Screen (II)

Delete user

This screen will display when admin click delete user tab from menu. By selecting any user and then click delete button user will be deleted.





Doctor's Menu

This menu will appear when doctor logged into system. This screen has all tasks which will performed by doctor i.e. view profile handling patient request etc.

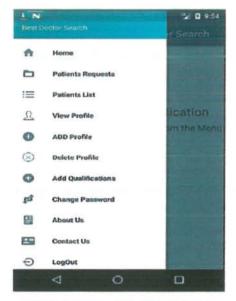


Figure 4.48: Doctor's Menu Screen

User Menu

This menu will appear when user logged into system. This screen has all tasks which will performed by user i.e. view profile, search hospitals, change password etc.

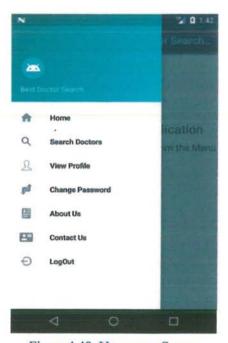


Figure 4.49: User menu Screen

Forgot Password

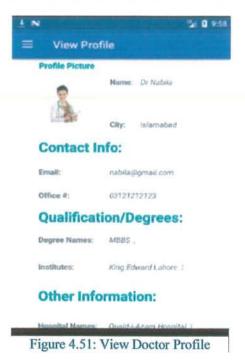
This screen will display when user click forgot password button in login screen. User will enter his/her registered email and then click submit button.



Figure 4.50: Forgot Password Screen

View Doctor's profile

This screen will appear when doctor select view profile tab from his/her menu.



Add Qualification

This screen will appear when doctor select add qualification tab from menu.

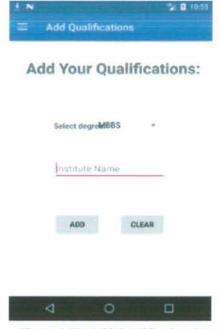


Figure 4.52: Add Qualification Screen

Patient Requests

This screen will appear when doctor selects patient requests tab from menu to verify patients.

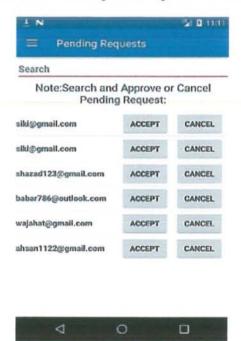


Figure 4.53: Patient Request

View Hospitals

This screen will appear when doctor select patient list from menu to check list of verified patients.



Figure 4.54: Hospital List Screen

Add Profile

This screen will appear when doctor selects add profile tab from menu.



Figure 4.55: Add Profile Screen

Doctor Rating

This screen will appear when user logged in after patient confirm his treatment completion.



Figure 4.56 Doctors Rating

View Doctors



Figure 4.57 Doctor's list

Chapter 5 Software Test Document

5.1 INTRODUCTION

The purpose of this document is to provide a structural way to test the software. Documentation for software testing helps in estimating the testing effort required. Testing is the process of evaluating a system with multiple inputs and scenarios to find whether it satisfies the specified requirements or not. This document will help the tester to find the errors when he is performing the testing of software.

5.1.1 System Overview

System overview focusing on the structural aspects of testing provides an overview of the system in terms of the components that are tested during the unit test.

5.1.2 Test Approach

A test approach is the test strategy implementation of a project, defines how testing would be carried out. I will use acceptance test approach for testing the BDF.

Acceptance test is a test conducted to determine if the requirements of a specification are met. The main purpose of this test is to evaluate the system's compliance with the business requirements and verify if it is has met the required criteria for delivery to end users.

5.2 Test Plan

A test plan outlines the strategy that will be used to test an application, the resources that will be used, and the test environment in which testing will be performed and the time which will spend on testing.

5.2.1 Features to be Tested

- Login
- Register Account
- · Forgot password
- · Change Password
- Add hospital
- Delete hospital
- Contact us
- Add doctor
- Delete Hospital

5.2.2 Features not to be Tested

- Logout
- · View Profile
- · View hospital
- · View doctor's detail
- Delete doctor
- Delete user
- Add qualification
- Add profile

5.2.3 Testing Tools and Environment

During testing phase I need android phone, server and internet connection for testing the android application.

5.3 Test Cases

Test cases involve a set of steps, conditions, and inputs that can be used while performing testing tasks. The main intent of this activity is to ensure whether a software passes or fails in terms of its functionality and other aspects.

These are the test case which will be test.

TC-1:Login

Table 5.22 TC-1: Login

Test ID	T001
Actor	Admin, Doctor, User
Test description	Login to account.
Setup	Created one account for each actor. A: email: nabila@gmail.com , Password:nabila123 B: email: laiba007@hotmail.com , Password:laiba111 C: email: admin@gmail.com , Password:admin
Instruction	
	A. 1. Actor enters email "nabila@gmail.com". 2. Enters password "nabila123".
	3. Click Login button.
	В.
	 Actor enters email "laiba007@hotmail.com". Enters password "laiba111".
	3. Click Login button.
	C. 1. Actor enters email "admin@gmail.com". 2. Enters password "admin".
	3. Click Login button.
	D. 1. Actor enters email "laiba007@gmail.com". 2. Enters password "laiba111".
	3. Click Login button.
	E. 1. Actor enters email "nabila@gmail.com". 2. Enters password "nabila122".
	3. Click Login button.
	F. 1. Actor enters email "asdf11". 2. Enters password "ghjk".
	3. Click Login button.

Expected Result	
	A. User should be logged in.
	B. User should be logged in.
	C. User should be logged in.
	D. Should get error message.
	E. Should get error message.
	F. Should get error message.
Observed Result	A. As expected.
	B. As expected.
	C. As expected.
	D. As expected.
	E. As expected.
	F. As expected.
Verdict	A. Pass
	B. Pass
	C. Pass
	D. Pass
	E. Pass
	F. Pass

TC-2: Register Account

Table 5.23 TC-2: Register Account

Test ID	T002
Actor	User
Test description	Account has been created successfully.
Setup	Actor open the application. Actor selects sign up button.
Instruction	A. Actor enters unique email, name, mobile number, city, password, confirm password.
	2. Select terms and condition.
	3. Click signup button.
	B. 1. Actor enters existing email, name, mobile number, city, password, confirm password.
	2. Select terms and condition.
	CO TRACE IN A
	3. Click signup button.
	C. 1. Actor enters unique email, name, mobile number, city and different
	password and confirm password.
	Select terms and condition.
	3. Click signup button.
	D.
	1. Actor enters unique email, name, mobile number, city, password,
	confirm password.
	2. Click signup button.
	E.
	 Actor do not fill all fields.
	2. Select terms and condition.
	3. Click signup button.
Expected Result	A. Account created successfully.
	B. Should get error message.
	C. Should get error message.
	D. Should get error message.
	E. Should get error message.

Observed Result	A. As expected.	
The Control of the Co	B. As expected.	
	C. As expected.	
1	D. As expected.	
	E. As expected.	
Verdict	A. Pass	
	B. Pass	Χ.
1	C. Pass	
1	D. Pass	
1	E. Pass	

TC-3: Delete hospital

Table 5.244 TC-3: Delete Hospital

Test ID	T007
Actor	Admin
Test description	Actor deleted the Hospital successfully.
Setup	Actor is logged into account.
Instruction	 A. 1. Actor select the delete Hospital tab from the menu. 2. Actor select specific hospital from given list. 3. Actor click ok button. B. 1. Actor select the delete Hospital tab from the menu. 2. Actor select specific hospital from given list. 3. Actor click cancel button.
Expected Result	A. Hospital deleted successfully. B. Do not delete any hospital.
Observed Result	A. As expected. B. As expected.
Verdict	A. Pass B. Pass

TC-4: Change Password

Table 5.255 TC-4: Change Password

Test ID	T004
Actor	Admin, Doctor, User
Test description	Actor has been successfully change the password
Setup	Actor is logged into account
Instruction	A.
	 Actor select the change password tab from the menu.
	Actor enter the current password in the form.
	3. Actor enter the new password in the form.
	4. Actor enter the confirm password in the form
	5. Actor click the button done.
	В.
	Actor select the change password tab from the menu.
	Actor enter the current password wrong in the form.
	3. Actor enter the new password in the form.
	4. Actor enter the confirm password in the form
	5. Actor click the button done.
	C.
	Actor select the change password tab from the menu.
	2. Actor enter the current password in the form.
	3. Actor enter the new password in the form.
	4. Actor enter the wrong confirm password in the form
	5. Actor clicks the button done.
Expected Result	A.Prompt "Your Password has been changed successfully". B. Prompt "Wrong: Current password did not match". C. Prompt "ERROR: new password and confirm password are not same".
Observed	A. As expected.
Result	B. As expected.
	C. As expected.
Verdict	A. Pass B. Pass C. Pass

TC-5: Contact us

Table 5.266 TC-5: Contact Us

Test ID	T004
Actor	Doctor, User
Test description	Actor send the message successfully.
Setup	Actor is logged into account.
Instruction	A. 1. Actor select the contact us tab from the menu. 2. Actor enter his/her name (only characters) in the form. 3. Actor enter email in the form. 4. Actor enter subject in the form 5. Actor click the send message button. B. 1. Actor select the contact us tab from the menu. 2. Actor enter his/her name (only characters) in the form. 3. Actor enter email in the form. 4. Actor enter subject containing numbers in the form.
	 Actor click the send message button. 1. Actor select the contact us tab from the menu. 2. Actor enter his/her name (only characters) in the form. 3. Actor enter email with invalid pattern in the form. 4. Actor enter subject containing numbers in the form.
	 Actor click the send message button. 1. Actor select the contact us tab from the menu. 2. Actor keep name field empty in the form. 3. Actor enter email in the form. 4. Actor enter subject in the form. 5. Actor click the send message button.
Expected Result	A. Message send successfully. B. Prompt "Enter valid subject". C. Prompt "Enter valid email". D. Prompt "Enter your name".

Observed Result	A. As expected.
	B. As expected.
	C. As expected.
	D. As expected.
Verdict	A. Pass
(MARKETER SEE	B. Pass
	C. Pass
	D. Pass

TC-6: Add Doctor

Table 5.277 TC-6: Add Doctor

Test ID	T005
Actor	Admin
Test description	Actor has been added the doctor successfully.
Setup	Actor is logged into account.
Instruction	A. 1. Actor select the Add Doctor tab from the menu. 2. Actor enter full doctor name in the form.
	3. Actor enter email in the form.
	4. Actor enter Mobile number in the form.
	5. Actor enter city in the form.
	6. Actor enter password in the form.
	7. Actor click the submit button.
	B.1. Actor select the Add Doctor tab from the menu.2. Actor enter full doctor name in the form.
	3. Actor enter email with invalid pattern in the form.
	4. Actor enter Mobile number in the form.
	5. Actor enter city in the form.
	Actor enter password in the form.
	7. Actor click the submit button.
	 Actor select the Add Doctor tab from the menu. Actor enter full doctor name in the form. Actor enter email in the form. Actor enter Mobile number in alphabets in the form.

	5. Actor enter city in the form.
	6. Actor enter password in the form.
	7. Actor click the submit button.
	D. 1. Actor select the Add Doctor tab from the menu.
	2. Actor enter full doctor name in the form.
	3. Actor enter email in the form.
	4. Actor enter Mobile number in the form.
	5. Actor keep city field empty in the form.
	6. Actor enter password in the form.
	7. Actor click the submit button.
	E.
	1. Actor select the Add Doctor tab from the menu.
	2. Actor enter full doctor name in the form.
	3. Actor enter email in the form.
	4. Actor enter Mobile number in the form.
	5. Actor keep city field empty in the form.
	Actor enter password in the form.
	7. Actor click the clear button.
Expected Result	A. doctor has added successfully.
	B. Prompt "Your email id is invalid".
	C. Prompt "mobile number must be numeric".
	D. Prompt "All fields are required".
	E. All fields became empty.
Observed Result	A. As expected.
	B. As expected.
	C. As expected.
	D. As expected.
	E. As expected
Verdict	A. Pass
	B. Pass
	C. Pass
	D. Pass
	E. Pass

TC-7: Add hospital

Table 5.288 TC-7: Add Hospital

Test ID	T006
Actor	Admin
Test description	Actor has been added the Hospital successfully.
Setup	Actor is logged into account.
Instruction	A. 1. Actor select the Add Hospital tab from the menu. 2. Actor select the city from menu. 3. Actor enter hospital name. 4. Actor click the submit button. B. 1. Actor select the Add Hospital tab from the menu. 2. Actor select the city from menu. 3. Actor keep the name field empty. 4. Actor click the submit button. C. 1. Actor select the Add Hospital tab from the menu. 2. Actor select the Add Hospital tab from the menu. 3. Actor select the city from menu. 4. Actor click the clear button.
Expected Result	A. Hospital successfully added. B. Prompt "All fields are required". C. All fields became empty.
Observed Result	A. As expected. B. As expected. C. As expected.
Verdict	A. Pass B. Pass C. Pass

TC-8: Forgot password

Table 5.299 TC-8: Forgot password

Test ID	T008
Actor	Admin, Doctor, User
Test description	Actor got new password successfully
Setup	Actor registered with unique email in application.
Instruction	 A. 1. Actor select forgot password from login screen. 2. Actor enters existing email id. 3. Actor click submit button.
	B. 1. Actor select forgot password from login screen.
	2. Actor enters non-existing email id.
	3. Actor click submit button.
	C. 1. Actor select forgot password from login screen. 2. Actor keep email id field empty.
	3. Actor click submit button.
	D 1. Actor select forgot password from login screen.
	Actor enter email id with invalid pattern.
	3. Actor click submit button.
Expected Result	A. User get new password.
	B. Prompt "Email id does not exist".
	C. Prompt "Please enter your email id".
	D. Prompt "your email id is invalid".
Observed Result	A. As expected.
	B. As expected.
	C. As expected
	D. As expected
Verdict	A. Pass
	B. Pass
	C. Pass
	D. pass

Chapter 6

Conclusion and Future Enhancement

6.1 Introduction

This document describes the project summary, conclusion and future enhancements.

6.2 Summary

Best Doctor Finder is an android base application that allow user to find best doctor.

This application will facilitate user to find all nearby hospitals and their doctors. User can view all details of doctor of any department. Any patient can rate their doctor so this application will help user to find best doctor. User can view any doctor's profile and their rating so this will help them to select best doctor on base of their ratings.

Admin will be able to add any hospital and its data in application where each hospital has certain departments and then each department has many doctors. Admin will register doctor and can delete any doctor. He can also delete any user.

All doctors registered by admin can add their profile. They can also verify their patients so that only those patients which are verified by doctor have option to rate that doctor. Patients of that doctor can rate them. Each doctor's rating is stored in system.

6.3 Conclusions

Now through this application user can first search nearby hospitals then he can view all details of hospitals. He/she can view all details of doctor about their qualification, contact and fee details so that he/she can select any doctor on the bases of nearest hospital or affordable fee criteria. And finally can find best doctor on the bases of their rating. After treatment user can rate his doctor.

6.4 Future Enhancement

In future application can be enhanced by

- · Booking appointment through app.
- Patient and doctor can communicate through app.
- Adding feature to share doctor's information with others through any medium like Facebook, twitter, what's app and SMS.
- Post health-related questions forum and get instant help about the right doctors

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