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LAB DA-4

SRS DOCUMENT: EFFICIENT DOCTOR PATIENT PORTAL

Preface

This document represents the Software Requirements Specification for the Efficient Doctor Patient Portal. The document begins with an Introduction section that describes the purpose of the document and what is considered to be in the scope of this document as well as what is outside the scope of this document.

The next section is an Overall Description of the requirements and functions. This section includes the overall constraints that the project is working within as well as the assumptions made by the project as far as the defining the requirements is concerned.

The Specific Requirements section comes next and is the most important section of this document. This section goes into detail about each specific requirement of the Efficient Doctor Patient project. A description, use case with sequence of events, and any related requirements is given for each requirement.

The Specific Requirements section also describes the Performance Requirements that are to met by Efficient Doctor Patient Portal project. Design and Implementation Constraints are also considered in this section. Lastly, various System Attributes are discussed including Security, Performance, Maintainability and Reliability.

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1. Introduction

1.1 Purpose

The purpose is to describe all the requirements for the efficient doctor patient portal. The efficient doctor patient portal and its team members uses this document as the primary means to communicate confirmed requirements to the development team. The development team expects many face-to-face conversations that will undoubtedly be about requirements and ideas for requirements. However only the requirements that appear in this document or a future revision, will be used to define the scope of the system.

1.2 Scope

The proposed software product is the efficient doctor patient portal. The system will be used to get the information from the patients and then storing that data for future usage. The medical progress can be viewed by both doctors and patients themselves. The current system in use is a paper-based system. It is too slow and cannot provide updated lists of patients within a reasonable timeframe. The intentions of the system are to reduce over-time pay and increase the number of patients that can be treated accurately. Also, patients can see the available time doctors are free so they wont have to go back and forth from their homes just to find out that the doctor was busy with some other patient. Requirements statements in this document are both functional and non-functional.

1.3 Definitions, Acronyms, and Abbreviations

Table of Definitions, Acronyms, and Abbreviations

Definition, Acronym, or Abbreviation	Description
SRS	Software Requirements Specification

1.4 References

References	Description
Software Development Plan	The Software Development Plan from the Hospital Management System was referenced.

2. Overall Description

2.1 Product Perspective

This efficient doctor patient portal is a self-contained system that manages activities of the hospital as Patient information. Various stakeholders are involved in the hospital patient info system. The efficient doctor patient portal extends the Hospital Management System. It adds more functions, easily accessible data with shows medical progress, appointment booking as well as a separate section for organ donors information.

2.2 Product Functions

The system functions can be described as follows:

Registration: When a patient is admitted, the front-desk staff checks to see if the patient is already registered with the hospital. If he is, his/her id is entered into the computer. Otherwise a new id is given to this patient.

The patient's information such as date of birth, address, email, telephone number, etc is also entered into computer system. Patient check out: If a patient checks out, the administrative staff shall delete his id from the system.

Generation: The system generates reports on the following information: List of detailed information regarding the patient who has been admitted in the hospital, his/her medical progress. The system also shows available slots that can be booked for appointments.

2.3 Design and Implementation Constraints

Database: The system shall use the MySQL Database, which is open source and free.

Operating System: The Development environment shall be Windows, version 7 or higher or in Mac OS whichever is compatible.

Web-Based: The system shall be a Web-based application. Everything must be online.

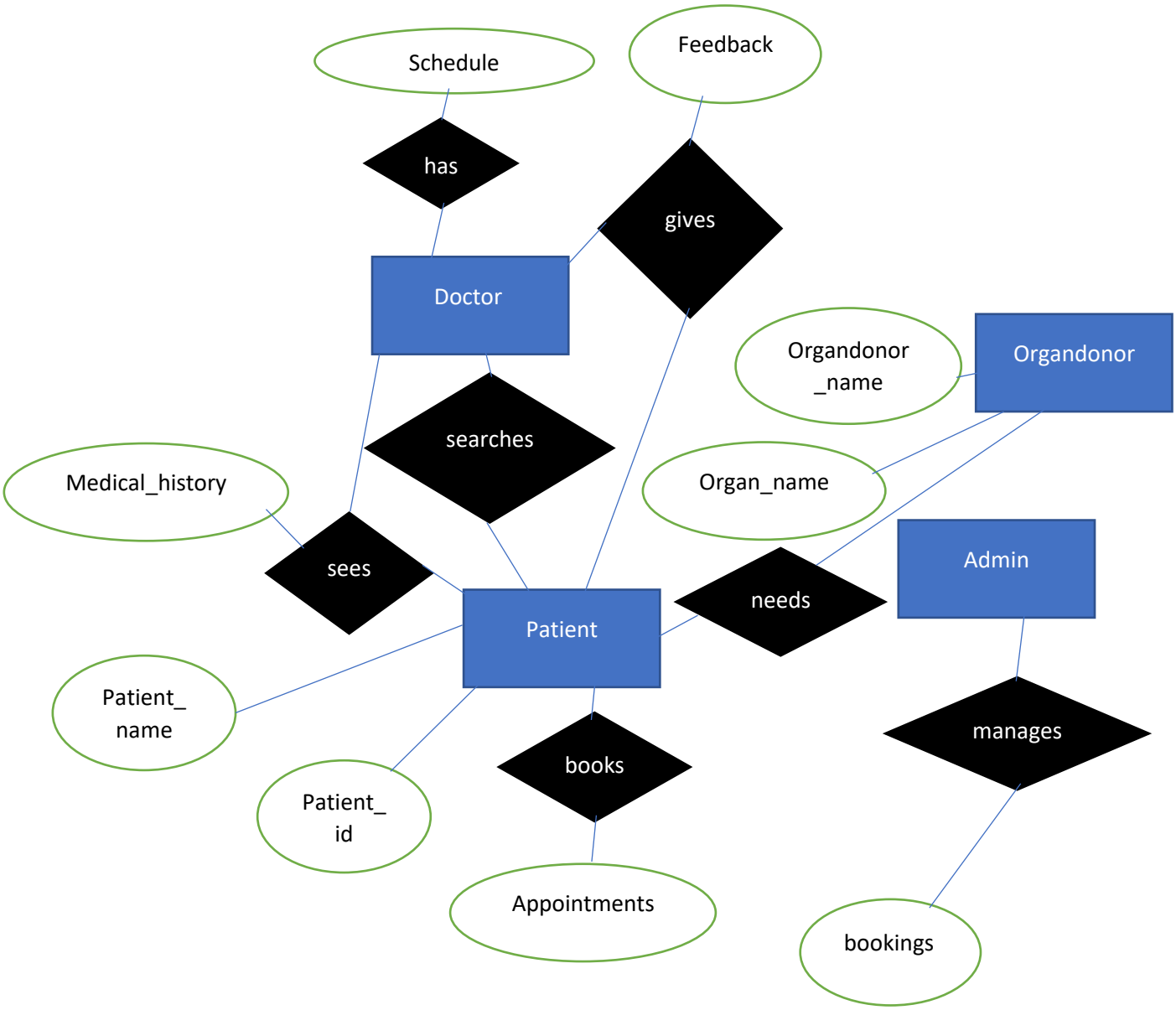
2.4 User characteristics

The following table identifies and describes the different users of the efficient doctor patient portal. The information gathered about the different users of the system helped define what the software needs to do.

User	Description
Patient	The patient is the most widely user in the system who will register and see the available time slots of the doctor to book appointment and can also view organ donor details if in need.
Doctor	The doctor is an important user too who will be able to put up his time slots for the patient to book appointments and see medical progress of patients too.
Administrator	The administrator will be responsible for handling and managing, keeping track of the system- creating account by giving id and/or deleting id.
Organ Donors	Those who wish to donate their organs can put up the details for the ones in need.

2.5 Entity Relationships

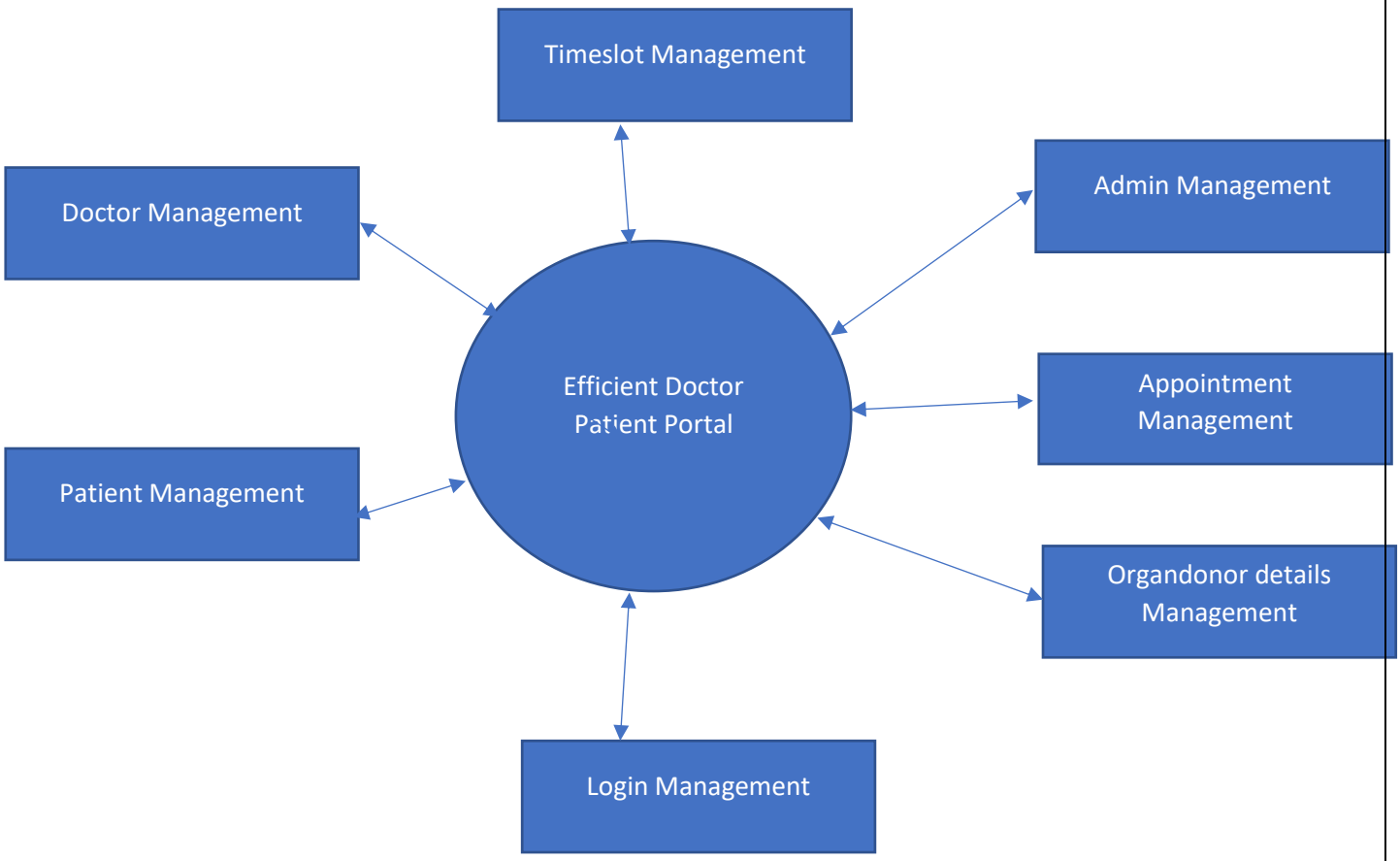
Following figure shows the entity relationships for Efficient Doctor Patient Portal.



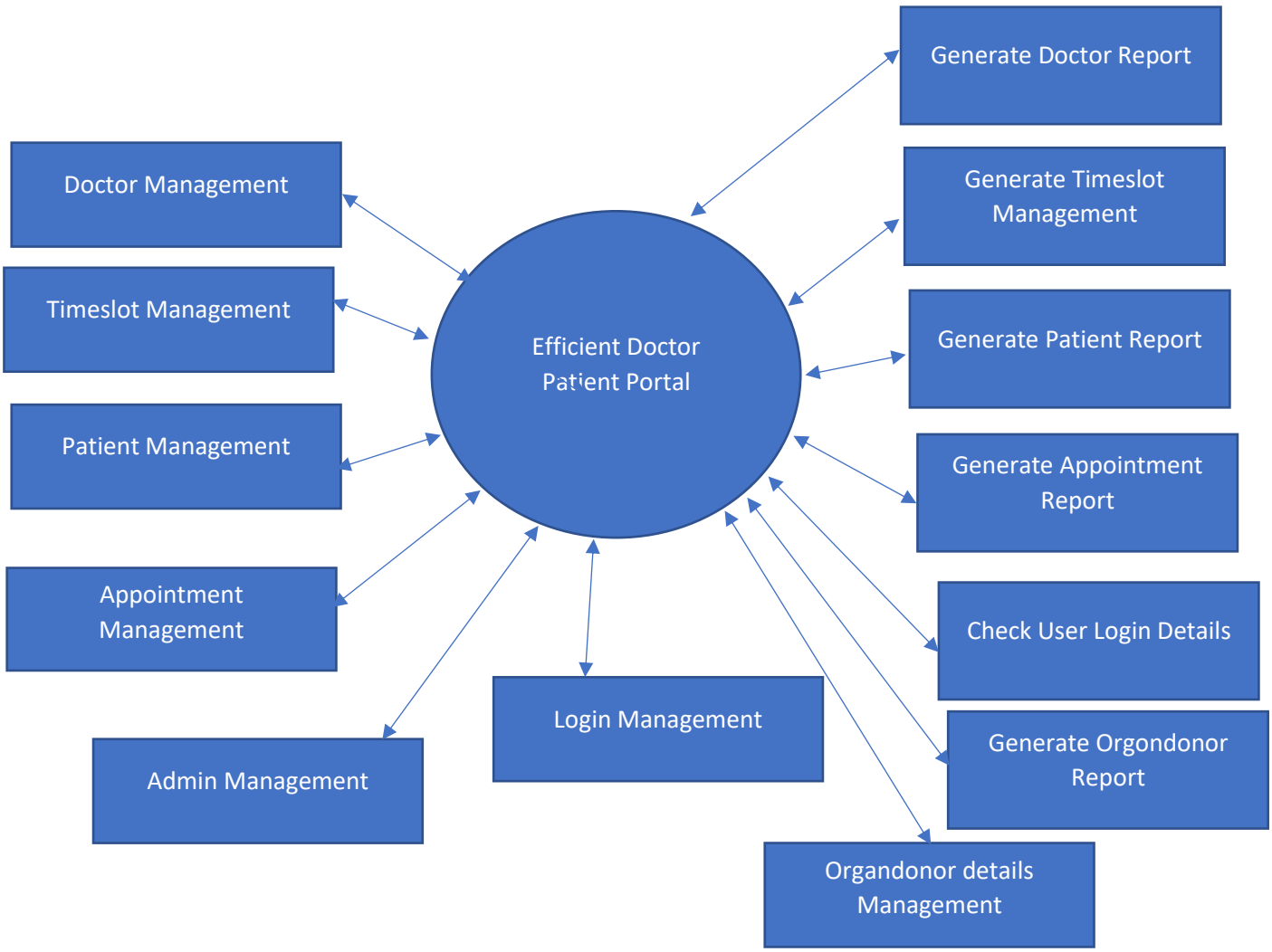
2.6 Data Flow Diagram

The following figures represent the data flow diagrams of the Efficient Doctor Patient Portal. First diagram is level 0; next diagram is a more detailed data flow diagram.

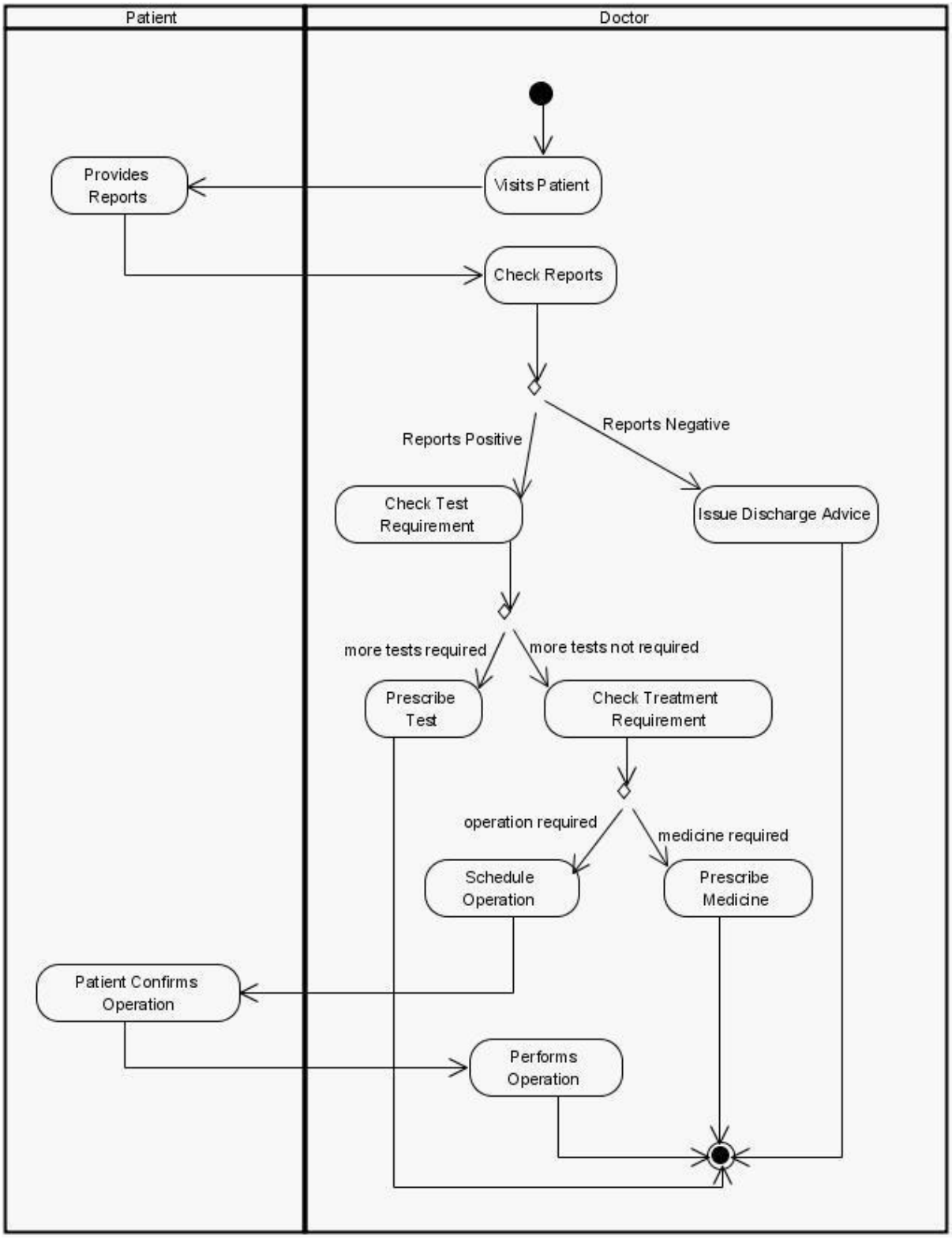
Level 0 DFD:-



Level-1 DFD:-


Generate Doctor Report
Doctor Management
Generate Timeslot Management
Timeslot Management
Efficient Doctor Patient Portal
Generate Patient Report
Patient Management
Generate Appointment Report
Appointment Management
Check User Login Details
Login Management
Generate Orgondonor Report
Admin Management
Organdonor details Management

2.7 State Transitions



2.8 Assumptions and Dependencies

Assumption	Description
Compatible computers	It is assumed that one hundred IBM compatible computers will be available before the system is installed and tested.
Capable staff	It is assumed that the Hospital will have enough trained staff to take care of the system

3. System Requirements

3.1 System Features

3.1.1 Introduction

The Efficient Doctor Patient Portal shall allow a user to register a patient to make appointments under doctor's available time slots. The doctor can view medical progress of patient. Organ donors can put up their information. The admin will manage the system. All these will be done in the system efficiently.

3.1.2 Functional Requirements

Registration

Add patients:- The efficient doctor patient portal shall allow front-desk staff to add new patients to the system.

Assign ID:- The efficient doctor patient portal shall allow front-desk staff to give each patient a ID and add it to the patient's record. This ID shall be used by the patient throughout his/her stay in hospital.

Delete Patient ID:- The administrative staff in the ward shall be allowed to delete the ID of the patient from the system when the patient checks out .

Report Generation Patient information:- The system shall contain reports on patients about the following information: patient's id, patient's name, ward name, bed number and the doctor's name which was assigned, appointment, medical progress.

Ogran donor information: Organ donors should be able to register and put up their information.

Database

Patient Mandatory Information:- Each patient shall have the following mandatory information: first name, last name, email, phone number, id, address, postal code, city, country, patient identification number.

Update Patient Information:- The system shall allow the user to update any of the patient's information.

Feedback form: In case of any bugs, the system has a feedback form, where user can provide feedback into the system.

3.1.3 Stimulus Response

A) Registration- This feature shall allow users to admit/register as a patient to perform efficient bookings, etc with the doctors.

(1) This feature shall be a screen with various inputs pertaining to the patient and their condition. There shall be text fields for the patient's information such as name, date of birth, address, email, etc.	
	(2) The user will then be provided with an id.

B) Authentication (Login)- Ensuring only authorized users gain access to system. This feature is considered a High Priority. Failure to provide this feature will likely incur legal costs.

User Actions	**System Actions**
(1) The User launches the Application.	
	(2) A Login screen appears.
(3) The User enters a username and password pair	
	(4) Authentication Module authenticates the pair. The Authentication Module returns false, the User is prompted to retry, if true, taken to home page.

C) Home Page- This will be the main page of the application. Options to view medical progress and appointment bookings under doctors' available slots.

User Actions	**System Actions**
(1) User can click on his medical history to view progress.	
(2) User can go to doctors' appointments section to book.	
	(3) System will keep updating whatever the user does to maintain consistency.

D) Doctor's side- The doctor can put his schedule, time slots in which appointments can be booked.

User Actions	System Actions
(1) The doctor will put his available time slots.	
	(2) When filled up, the system will update which all time slots are free/not free after patient books an appointment. This is done to maintain consistency.

E) Organ Donors- They can put up their information to help the ones in need.

(1) Organ donors can fill in the information about organs and details corresponding to it.	
	(2) In case of any updations/deletions, system will take care of it and modify accordingly.

3.1.4 Software System Attributes

3.1.4.1 Security:

● Logon ID: Any users who make use of the system need to hold a Logon ID and password.

No other patient can alter(inert/delete) another patient's records-appointments, etc. as it is password protected.

● Modifications: Any modifications like insert, delete, update, etc. for the database can be synchronized quickly and executed.

3.1.4.2 Performance:

● Response Time: The system provides acknowledgment in just one second once the 'patient's information is checked.

● Capacity: The system needs to support at least 1000 people at once.

● User-Interface: The user interface acknowledges within five seconds.

● Conformity: The system needs to ensure that the guidelines of the Microsoft accessibilities are followed.

3.1.4.3 Maintainability:

- Back-Up: The system offers the efficiency for data back up.
- Errors: The system will track every mistake as well as keep a log of it.

3.1.4.4 Reliability:

- Availability: The system is available all the time.