

SUPERIOR UNIVERSITY LAHORE



Faculty of Computer Science & IT
Final Year Project
PROJECT REPORT (Part-II)

[COSMOS HEALTH SERVICES SYSTEM]

Project ID: [004]

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Project Report

[COSMOS^{HEALTH} CARE SYSTEM]

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HEAD OF THE DEPARTMENT

Comments: _____

Date: _____ Signature: _____

Dedication

We would like to dedicate our work to our parents, our teachers and specially our kind and affectionate supervisor Sir.Mumtaz Ali because their prayers, support and motivation made us able to complete this project.

Acknowledgement

We are thankful to all those people who participated in this activity by any means. To our rector Dr. sumaira for providing us the environment which is unmatched. To final year project advisors Sir.Mumtaz Ali , To entire computer science faculty who gave us strength and to all our friends who helped us in all thick and thin. We dedicate this research to our parents who made us see the silver lining in every darkest cloud

Executive Summary

Cosmos Health Care System provides the benefits of streamlined operations, enhanced administration & control, superior patient care, strict cost control and improved profitability. "Cosmos HCS" is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals as well as for patients. Patients can see his/her prescription like medicine diet plan etc. For ease of the patients and doctors we also developing an android app, using that app they can access records easily any time just using their smartphones over the internet. Patients can take appointment or can also check the availability of the doctor. It covers all the required modules right from Patient Registration, Medicine details, Doctor, Wards, , Admin, Store, Patient appointment, bill payment, record modification, discharge details etc.

The project 'Hospital Management System' is based on the database, object oriented programming. As there are many areas where we keep the records in database for which we are using MY SQL software which is one of the best and the easiest software to keep our information. This project uses Html as the front-end software and for the back-end we are using PHP "Codeginter framework" which is an Object Oriented Programming and has connectivity with MY SQL.

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Chapter 1

Introduction

Chapter 1: Introduction

The COSMOS HEALTH SERVICES SYSTEM includes registration of patients, stores their information, additionally generate computerized asking within the pharmacy and labs. The code facilitate by giving a singular id for each patient then stores the small print of data of each patient and the workers mechanically. It contains search facility to see the availability of wards.

Patient will search availableness of a doctor and therefore the secretarial assistant will check details of a patient exploitation the Id. The mobile application is for the doctor and patient solely. The patient login it and may read the list of accessible doctors, their medical record, and their reports and may fix the appointment of their desired doctor. Our product is extremely user friendly, as each non-experienced person will perceive a way to use it simply. The most visual of our product is as:

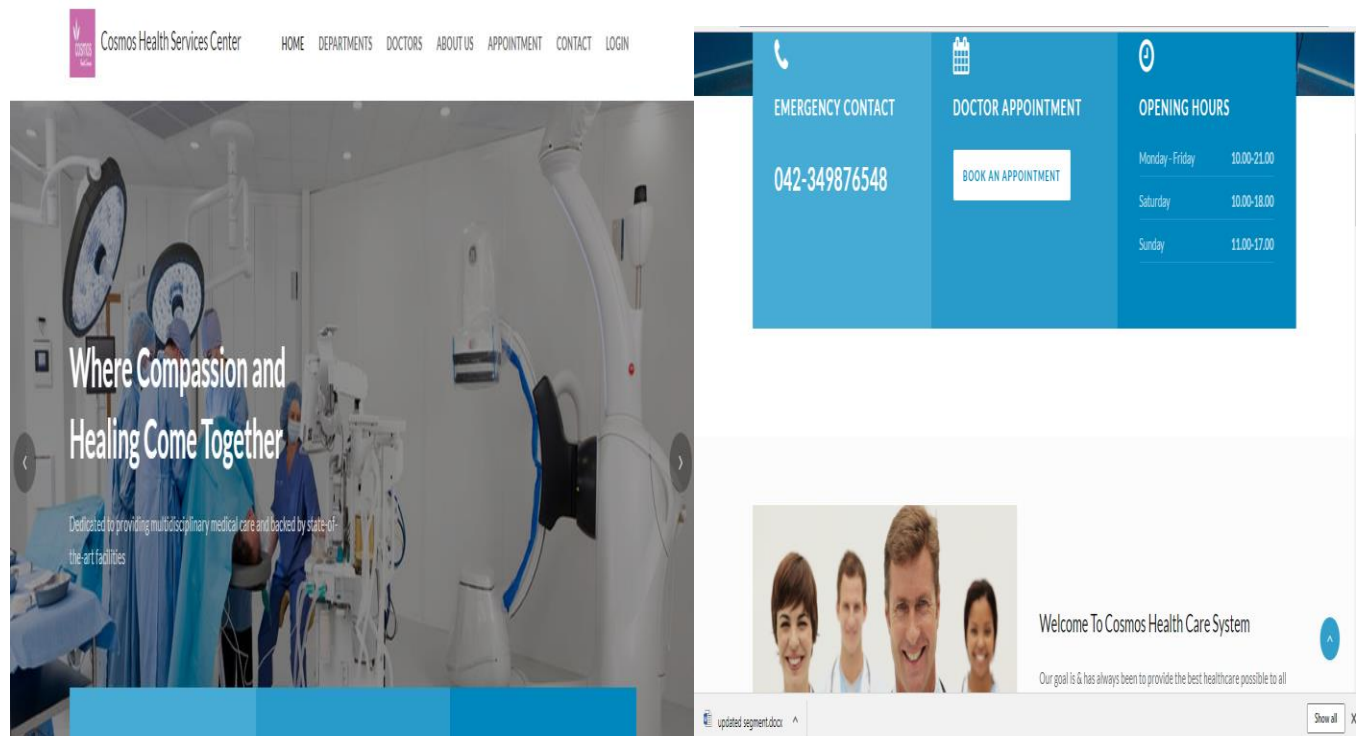


Figure1.1 (front end screenshot)

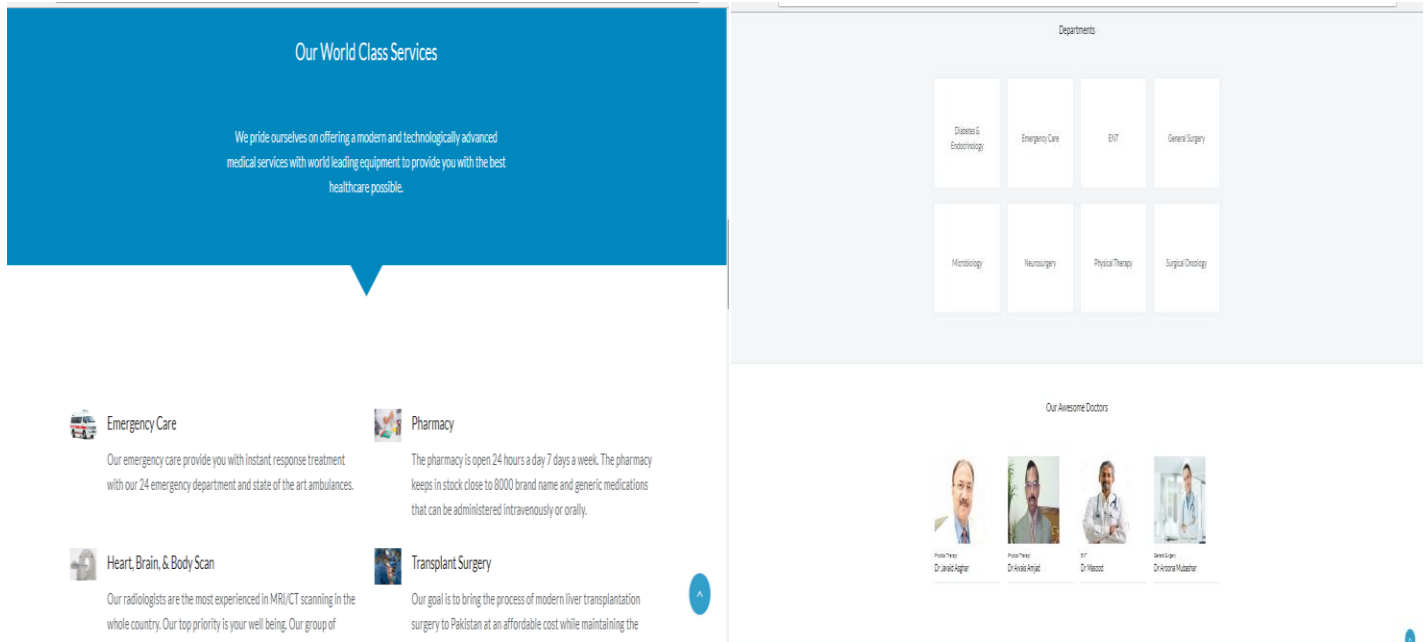


Figure 1.2 (front end screenshot)

1.1. Background

Our community has many hospitals from a very long time but now a days they want to improve their system for the convenience of their patients and doctors but still they have not very efficient system. They just have manual record system for which they need an extra person to hire for the management of the record.

In this competitive market there are many a lot of system available but they are giving the same features like patients appointment, doctor availability, billing invoice but we are providing some extra and unique features like mobile app for the patients or doctor both and also patient can check his/her report online. Doctor can enter new record of the patient and also access the previous record of the patient if the patient were already registered.

1.2. Motivations and Challenges

Motivations

In building our system we are motivated by many things but we faced many hardships.

Basically we are motivated by the hardships and problems of patients and doctors and hospital staff whenever there is a small mistake is done by anyone then whole system would be disturbed in hospital and patients survive for these problems as they already very tensed then they have to face such kind of problems, sometimes they need information about any facility of hospital and regarding doctors then they would have to visit hospital specially just for information so we noticed that it is quite time taking and hectic problems for so much busy people. So, we designed our product to overcome these all kinds of problems and to facilitate the people as well as hospital staff.

Challenges

While implementing our idea we survived many problems regarding our technology and practices. Due to lack of practice of new technology we are very slow in building and meeting the deadlines of the project but we need to move it fast so we struggled very hard and overcome our this weakness. The biggest challenge for us was the development of two tools combined with each other to form a one platform by using the different tools and technologies. For this the main challenge was the sources.

But we survived all these for our perfect working product otherwise there was a chance that we could lose.

1.3. Goals and Objectives

The objectives of this system are as following:

- Keeping the record of patients and doctors with a mobile application.
- Recording information about the Patients online with application.
- Manage the Online Admission on Simple Click
- Minimize the operational time and make the operational activity easy
- Keep track of details so manage the work easily.
- Complete Report view to patient side and doctor side.
- Easy to view all detail of everything.

- Keeping record of the protection provided to children/patients.
- Keeping information regarding numerous diseases and medicines obtainable to cure them.
- To provide the facility to new patient to register online.
- To provide the facility to admin to manage forms online instead of manual entry.
- To provide the facility to admin staff to manage records.
- To provide the facility to manage attendance.

1.4. Literature Review/Existing Solutions

In this competitive market there are many a lot of system available but they are giving the same features like patients appointment, doctor availability, billing invoice but we are providing some extra and unique features like mobile app for the patients or doctor both and also patient can check his/her report online. Doctor can enter new record of the patient and also access the previous record of the patient if the patient were already registered.

1.5. Proposed Solution

- Information regarding Patients needs simply Patient's name, age and gender. Whenever the Patient comes up his info is kept anytime.
- Generate bills by recording worth for every facility provided to patient.
- Diagnosis Data of patients is usually recorded on the document. It might be destroyed when you want to decrease the amount of paper load within the workplace therefore we store it in an efficient system for the very long time.
- Vaccination records of every patient is maintained in pre-formatted sheets, that are unbroken in an exceedingly file
- Information regarding numerous diseases isn't unbroken as any document rather Doctors ought to continue their mind by memorizing numerous medicines.
- All this work is completed manually by the secretary and different operational employees and heap of papers area unit required to be handled and brought care of patients. Doctors have to keep in mind numerous medicines in the market for diagnosing and generally miss higher alternatives as they can't keep in mind them at that point.

1.6. Project Plan

1.6.1. Work Breakdown Structure

1.6.2. Roles & Responsibility Matrix

WBS #	WBS Deliverable	Activity #	Activity to Complete the Deliverable	Duration (# of Days)	Responsible Team Member(s) & Role(s)
1.	Requirements gathering/ Analysis	I.	Direct communication with client	1 week	H.Usman/aroona mubasher
2.	Documentation	II.	Elaboration of project in written form	1 week	Aroona mubasher
3.	Software requirement specification	III.	Defining the requirements	1 week	M.Arslan
4.	Literature Market Survey	IV.	Questionnaire/interviews	3 Days	Taimoor Munawar
5.	System Design/model design	V.	Exploring the design for project	5 Days	H.usman
6.	Implementation	VI.	Physical implementation of design	2 weeks	Taimoor munawar
7.	Front end implementation	VII.	Front view for users	1 week	H.usman
8.	Backend implementation	VIII.	Back working handling	1 week	Taimoor & Arslan

9.	Database handling	IX.	Data handling of all patients/doctors/staff	1 week	M.Arslan
10.	Testing & Performance Evaluation	X.	Testing of product	1 week	Aroona mubasher
11.	Maintenance	XI.	Making changes and removal of errors	1 week	Taimoor munawer
12.	End User Documentation	XII.	Documentation for users	2 weeks	Aroona mubasher

Table 1.1 (responsibility chart)

1.6.3. Gantt chart

Description	Start Date	Duration	End Date
Requirement & Analysis	8/22/2017	8	8/30/2017
Product Model	8/30/2017	27	9/27/2017
Mock UP	9/27/2017	29	10/26/2017
Design	10/26/2017	20	10/26/2017
Cost Analysis	11/15/2017	47	1/1/2018
Front End	1/1/2018	15	1/17/2018
Back End	1/17/2018	20	2/16/2018
Testing	2/6/2018	15	2/6/2018
Pricing	2/22/2018	5	2/28/2018
Project Report	2/28/2018	7	3/23/2018

Table 1.2 (Gantt chart)

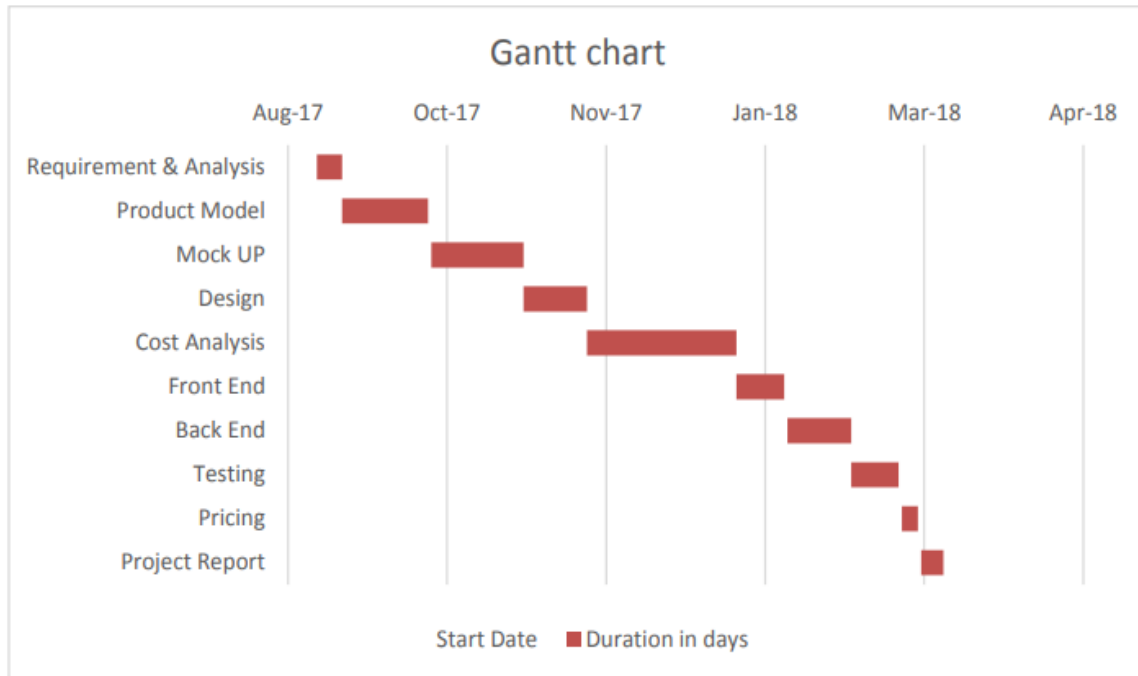


Figure 1.3 (Gantt chart)

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.1. Introduction

2.1.1. Purpose

All pc software system desires bound hardware elements or different software system resources to be bent on a pc. These pre-requisite square measure referred to as (computer) system necessities associate degree square measure usually used as a suggestion as against an absolute rule. Most software system defines 2 teams of system requirements: Functional and non-functional. With growing demand for higher process power and resources in newer versions of software system, system necessities tend to vary over time. Business analysts recommend that this trend plays a much bigger half in driving enhancements to existing pc systems than technological advancements

2.1.2. Document Conventions

This document of SRS contains different requirements for the product. We consider all requirements are important to fulfill and have same priority.

2.1.3. Intended Audience and Reading Suggestions

This document is basically for the understanding of product nature that what kind of product is required for client? What he wants in what sequence and nature?

It is helpful in such a time when any employee suddenly quit his job so if it is not made then new person never knows exactly what to do. So it helps him to resume the work accordingly. It helps developer to understand what to implement. It explains everything about the product to project manager, testers, designers and implementers.

2.1.4. Product Scope

Our product has huge scope in the market there are large numbers of hospitals in Pakistan which are running manually. There are few hospital that have management system but they provide limited features that's why we are giving the fully computerized hospital management system with mobile app for the ease of patients and doctors.

2.2. Overall Description

2.2.1. Product Perspective

The IT system has revolutionized the sphere of drugs. During this fast world of drugs, it's a frightening task to manage a multi-specialty hospital. A hospital management system may be a pc or internet primarily based system that facilitates managing the functioning of the hospital or any medical established and facilitates the patients. They will read their relevant doctor on their mobile/laptop screen whereas sitting at their home, they no got to visit specially hospital for simply obtaining the information regarding the concerning doctor like his handiness, appointment date and vacancy and designation specialty etc. This system or package can facilitate in creating the total functioning paperless. It integrates all the knowledge concerning patients, doctors, staff, hospital body details etc. into two-in-one package named as COSMOS HEALTH SERVICES SYSTEM. Its sections for varied professionals that form up a hospital and sections for patients.

There are many systems available in the market for hospital management but they are just for hospital management not for patients. We are giving a management system along with a mobile application that keeps the record of doctors their appointment date and time. It also keeps the previous record of patients like their medical history and medication record.

2.2.2. Product Functions

- Admin add, delete and edit record, new entry of any employee and doctors
- Can generate reports
- Can generates payment voucher
- Confirms the appointments
- View the history of patients
- Patients can view the doctors availability, time and place
- Patients can select relevant doctor
- Patient can confirms appointment with doctor
- Patient can view his previous reports and medication
- Doctor can also review the history, reports and medication of the patients
- Doctor can confirms/rejects the patients appointment

Accountant can generate bills

- Accountant can clear the payment status
- Lab Technician can update the status of blood donation
- Lab technician can generate the reports of tests
- Nurses can view the details of patients like their bed number, ward number and name
- Pharmacist can view the medicine category
- Receptionist can view the appointment list
- Receptionist can view the patient name and appointment id
- Receptionist can fix the appointment

2.2.3. User Classes and Characteristics

- Admin class
- Patient class
- Doctor class
- Nurse class
- Pharmacist class
- Lab Technician class
- Accountant class

2.2.3.1. Admin class:

- Manage department of hospitals, user, doctor, nurse, pharmacist, lab Technician accounts.
- View appointment of doctors
- View transaction reports of patient payment
- Bed, ward, cabin status
- View blood bank report
- View medicine status of hospital stock
- View operation report
- View birth/death report
- View diagnosis report

2.2.3.2. Patient class:

- View appointment list and status with doctors on their mobile application
- View prescription details on their mobile application
- View doctor list on their mobile application
- View blood bank status on their mobile application
- View operation history on their mobile application
- View admit history. Like bed, ward ICU etc. on their mobile application
- Manage own profile on their mobile application

2.2.3.3. Doctor class:

- Login to account
- Manage appointment with patient
- Create prescription for patient
- Provide medication for patients
- Issue for operation of patients and creates operation report
- Manage own profile

2.2.3.4. Nurse class:

- Manage patient. Account opening and updating
- Allot bed, ward and cabin for patients
- Provide medication according to patient prescription
- Manage own profile

2.2.3.5. Pharmacist class:

- Keep records of hospitals stock medicines and status
- View prescription of patient
- Provide medication to prescriptions
- Manage own profile

2.2.3.6. Lab Technician class:

- View tests prescribed list
- Upload diagnostic report
- Preview of report files. Like x-ray images, CT scan, muri reports
- Manage own profile

2.2.3.7. Accountant class:

- Create invoice for payment
- Issue invoice to patient
- Take cash payment
- View payment history of patients
- Manage own profile

2.2.4. Operating Environment

Operating environment for our system is as listed below.

- distributed database
- client/server system
- Operating system: Windows8/8.1/10etc.
- database: sql+ database
- platform: HTML/PHP/Java/Bootstrap
- Android studio

2.2.5. Design and Implementation Constraints

Proposed Approach, we are mainly concentrating on the data flow within the **COSMOS HEALTH SERVICES SYSTEM**. At first data comes to the organization from the outside world using internet. That data is the patient information who wants to check-up by the doctor. Patient can get the service from the system using the application. When the doctor wants to check-up the patient he/she can get all the detail of the patient and give the medicine using Doctor portal and all the internal activity is control by Administrator.

Login and password is used for identification of user and there is no facility for guest.

- GUI in English
- The two different things are very difficult to connect with each other it's totally a new concept for our practice to implement.
- Very difficult to manage a very large scale of database record to record everything for perfection.

2.2.6. User Documentation

We are providing two manual pamphlets for all our users because they are unaware of the technology and the usage of our system as it is quite different from all other existing systems in the market. Our pamphlets are for administrator, doctor and patient.

- The administrator manual guides the administrator that how he should operate it and in what sequence and priorities with what details for different perspectives.
- The doctor manual guides the doctor user how he must use the application and how he can register himself, accept/cancel the patient's request for appointment, how he can view the history and reports of his patients and how he can keep all records of his all patients.
- The patient manual will guide the patient that how he can search for doctor, how he can register himself, how he can view his reports, and how he can request for appointment.

2.2.7. Assumptions and Dependencies

Let us assume that this is a distributed Hospital management system along with the mobile application for doctors and the patients and it is used for the following purposes:

- It is assumed that one hundred compatible computers will be available before the system is installed and tested.
- It is assumed that Hospital will have enough trained staff to take care of the system.
- On the patient end he can view his reports, his medication history and the doctor's data like his time and availability along with checkup fee. Also can make request for a doctor's appointment from any place.

- As like patient doctor can also view the data of patient like his medication and history and all reports and may accept or reject the appointment request from patient
- Administrator manages the all other record of adding new employee, doctors and any staff and manages the time table of doctors and workers etc.

2.3. External Interface Requirements

2.3.1. User Interfaces

Input from the user will be via keyboard input, touch screen and mouse point and click. The user will navigate through the software by clicking on icons and links. The icons will give appropriate responses to the given input.

- Front-end software: HTML/CSS and PHP version/Java/Bootstrap/android studio
- Back-end : SQL

2.3.2. Hardware Interfaces

- Windows.
- A browser which supports PHP, HTML/css & Javascript/Bootstrap.
- RAM 4GB or above
- Disk space: 200GB or above

2.3.3. Software Interfaces

- These are the minimum software interfaces-
- Technologies: HTML/CSS and PHP/Java/Bootstrap/
- Database: SQL server (standard edition).
- Operating system: Windows XP or above

2.3.4. Communications Interfaces

This project can compatible with all platforms. Connections to the system will be over TCP/IP connection, project supports all types of web browsers. I have used database so my system can work offline.

- Window

2.4. System Features

- Admin add, delete and edit record, new entry of any employee and doctors
- Can generate reports
- Can change their profiles
- Can generates payment voucher
- Confirms the appointments
- View the history of patients
- Patients can view the doctors availability, time and place
- Patients can select relevant doctor
- Patient can confirms appointment with doctor
- Patient can view his previous reports and medication
- Doctor can also review the history, reports and medication of the patients
- Doctor can confirms/rejects the patients appointment
- Accountant can generate bills
- Accountant can clear the payment status
- Lab Technician can update the status of blood donation
- Lab technician can generate the reports of tests
- Nurses can view the details of patients like their bed number, ward number and name
- Pharmacist can view the medicine category
- Receptionist can view the appointment list
- Receptionist can view the patient name and appointment id
- Receptionist can fix the appointment

2.5. Functional Requirements

These requirements include the features that are to be covered by proposed system.

FR-01	System should be able to make Login for all staff including doctors, nurses and administrator.
FR-02	System should be able to change the profile
FR-03	System should be able to add the new staff update their data, delete their data manages the duties of all staffs and patients visits.
FR-04	System should be able to show the relevant data of staff only they can't access others data at any cost.
FR-05	The system shall validate the authorization of the user whether he is doctor, patient, nurse or admin.
FR-06	The main role of system is to keep the information of each registered patients and staff.
FR-07	System should be able to add/delete staff.
FR-08	The Administrator will have complete information about all users of the system.
FR-09	The system should be able to register individual profiles of each user.
FR-10	The system ought to manage and show list of registered user.
FR-11	System should saves the data concerning each user.

2.5.1. Mobile application setup.

Description

The **COSMOS HEALTH SERVICES SYSTEM** maintains information on nurses, doctors, lab Technician, pharmacist, patients and reports but there is one more thing attached with it and it is a mobile application for doctors and the patients. Doctor can view the patient's data his/her history and medication reports and he may change his profile while he must have his login first, while on the other side the patient can view and search for the relevant doctor and his timings for appointment and can request for the appointment and later he may cancel the request. The doctor may can accept or reject the request. Of course, this project has a high priority because it is very difficult to manage the correct and all records of all staff as well as patients that can be displayed on patient side also and it also makes the patient/visitor's life easy to get all information at their one touch on their mobile screens.

2.5.1.1. Functional Requirements

These requirements include the features that are to be covered by proposed system.

FR-2.5.1.1.1	System should be able to search for doctors on patient side
FR-2.5.1.1.2	System should be able to displays a detailed list of available doctors and their appointment timings.
FR-2.5.1.1.3	System should be able to make request for appointment or can cancel the appointment.
FR-2.5.1.1.4	System should be Login for the doctor/patient to access their portal only relevant to them.
FR-2.5.1.1.5	System should make the doctor to accept/reject the request of appointment.
FR-2.5.1.1.6	System should be able to display the history, medication and the reports of patients to doctor.
FR-2.5.1.1.7	The system should require authentic id and password for the login access.
FR-2.5.1.1.8	The system shall validate the authorization of the user whether he is doctor or a patient or any other staff.
FR-2.5.1.1.9	The main role of system is to keep the information of each registered patients and availability of doctors.
FR-2.5.1.1.10	System is able to update their profiles.
FR-2.5.1.1.11	This system will provide separate portals for patients, admin, nurse, pharmacist, lab

2.6. Other Nonfunctional Requirements

2.6.1. Performance Requirements

The performance of our software is at its best when the following are regularly done:

- Password Management
- Regular Database Archiving
- Virus Protection

2.6.2. Safety Requirements

Human mistakes will cause errors, however the negative effects of common errors ought to be restricted. E.g. users ought to notice that a given command can delete information, and be asked to substantiate their intent or have the likelihood to undo.

2.6.3. Security Requirements

Each member is required to enter an individual Username & password when accessing the software. Administrators have the option of increasing the level of password security their members must use. The data in the database is secured through multiple layers of Protection. One of those security layers involves member passwords. For maximum Security of your software, each member must protect their password

2.6.4. Software Quality Attributes

2.5.4.1 Reliability

The system shall, upon implementation, be operational for 99% of any given one-month span, to allow for possible maintenance or unpredictable circumstances.

2.5.4.2 Availability

The system shall be available for active use for 60,000 concurrent user sessions, meaning users that have logged into the system.

2.5.4.3 Security

A privacy policy will be immediately obvious and accessible to all users of the system, directly reflecting requirements included in this section and its subsections.

2.5.4.4 Use of user data

Account information provided by students, and administrators will not be shared with or sold to any third party, except for acceptable use as described in this section and its subsections.

2.5.4.5 Maintainability

All system data describing listings and accounts for students, and administrators must be maintainable via a web interface by the administrator.

2.7. Other Requirements

These requirements include the features that are to be covered by proposed system.

- The system shall validate the authorization of the user whether he is doctor, patient, nurse or admin.
- The main role of cosmos health care system is to keep the information of each registered patients and staff.
- Administrators can add/delete faculty user.
- Administrator will have complete information about all users of the system.
- Application will provide separate dashboards for patients, doctors, nurse and admin.
- Cosmos health care system will register individual profile of each user.

Chapter 3

Use Case Analysis

Chapter 3: System Analysis

3.1. Use Case Model

3.1.1. Use-case (Generic):

(A) Use-Case: Admin Login:

Name: LogIn

Secondary Actor: Admin (cosmos health Services system)

Description:

This use-case of our system activates once anyone actor of Cosmos Health services system desires to login. The system needs actor's E-mail ID and password. System will verifies the given data and after verification give access to Cosmos Health services system.

Preconditions:

Actor must have his E-mail ID for the login.

Typical Course of Events

Actor Action	System Response
1.This use-case of our system activates whenever any actor of Cosmos Health services system desires to login	2. System requires the actor's valid E-mail ID and password
3. The actor will have to govern his valid E-mail ID, password	4. Then system will verifies the given actor's E-mail ID and password
	5. The system will govern the access

Alternative Course:

- Line3: incorrect password, User name; System require the correct one.

(B) Use-Case: Create User:**Name:** Create User**Secondary Actor:** User (Admin)**Description:**

This one use-case of our system activates when Admin desires to create a new user. The system requires the data and updated repository.

Precondition:

The admin must logged in and has access and rights of creation.

Typical Course of Events

Actor Action	System Response
1. This one use-case of our system whenever Admin desires to Add a new Staff Member	2. System asks for user name and other information in details.
3. Then The Admin will govern the data	4. The system verifies the information.
	5. The system will create new user
	4.The system will store the given data of user and modernize profile
	6. The system will modernize the prevailing member's profile and show the data of recently created.

Alternative Course:

Line4:when the user previously survives, identify the inaccuracy, and request for another name

(C) Use-Case: Notice Board Management (Administration)**Name:** Notice Board Management (Administrative)**Secondary Actor:** Admin**Description:**

This use-case of our system activates when admin desires to update or add fresh Notice Board. Then the system enquires for the data and stores the rationalized data.

Precondition:

The Administrator must log in and consumes privileges of managing, updating and delete.

Main Section:**Typical Course of Events**

Actor Action	System Response
1. This use-case of our system activates whenever user desires to update or delete	2. System enquires regarding the Group which he/she desires to update/delete
3. The User will govern the data or select the User he desires to update	4. Then the system will show the choices of updating
5. User will choose any choice • If want to Add-notice, look on the segment Create notice. • If want to modify-notice Board-Event, look on the section modify notice board event • If desires to create notice board event, see section create notice board event	
	6. Save the provided information
	7. Update repository

Section: Create Notice Board Event**Typical Course of Events**

Actor Action	System Response
1.This use-case activates whenever the Admin wants to create an Notice-Board event	2. System asks for event details like title, start date, end date, Description etc.
3. Admin give the information	4. system update the calendar and will show on Dash Board of each staff member

Alternative Course:

- Line3: The provided date previously expired; point out error; enquire to re-enter

Section: Modify Notice Board Event**Typical Course of Events**

Actor Action	System Response
1.This use-case of our system activates when Admin wants to modify-event	2. System asks for alterations
3. Admin provide Alterations	4. System update-event and protect the data.
5.Admin confirms the event's alteration	6. update-event on calendar

Alternative Course:

- Line3: The given date previously expired; point out error; enquire to enter the correct one.

(D) Use-Case: Members Login:**Name:** Login**Primary Actor:** Members (Cosmos Health services system)**Description:**

This use-case activates whenever an actor of Cosmos Health services system desires to login. The system enquires for actor's valid E-mail ID and password. The actor will govern the relevant data. System will then verifies the given data and after authentication allow access to Cosmos Health services system.

Preconditions:

The actor must have a valid E-mail ID

Typical Course of Events

Actor Action	System Response
1.This use-case activates whenever actor of Cosmos Health services system wants to login	2.Then the System enquires valid E-mail ID and password
3.The actor will give a valid E-mail ID, password	4.The system will verifies the E-mail ID, password
	5.The system will govern the admittance license of actor
	6.The system will allow actor with determined license level

Alternative Course:

- Line3: incorrect User name, password; System enquires to give the correct one.

(E) Use Case: Manage Member (administrative)**Name:** Manage Member (administrative)**Secondary Actor:** admin**Description:**

This use-case activates whenever admin desires to accomplish member. Then the system shows the managing choices and protect the changes.

Precondition:

The admin must logged in and has rights of managing.

Section Main:**Typical Course of Events**

Actor Action	System Response
1.This use-case activates whenever admin desires to accomplish a member	2.System asks for management-event
3.Admin choose the choice Whether he desires to manage a profile or he wants to add new.	4.keep the data in database
	5. Update member-Profile
	6. Update repository

(F) Use Case: Maintain Member Profile (Member):**Name:** Maintain Member Profile**Primary Actor:** Member**Description:**

This use-case activates whenever member desire to maintain personal profile. Then the system enquires for the relevant data and keep the updated data.

Precondition:

The member must logged-in.

Typical Course of Event

Actor Action	System Response
1. This use-case activates whenever member, want to update personal profile.	2. The system asks for information
3.The admin provides the information	4.The system will update the Profile of member
	5.Update the data in database
	6.Broadcast alterations on user profile
	7.Store in database

Alternative Course:

- Line 2: error in Picture or document.

3.2. Use Cases

3.2.1. Administrator

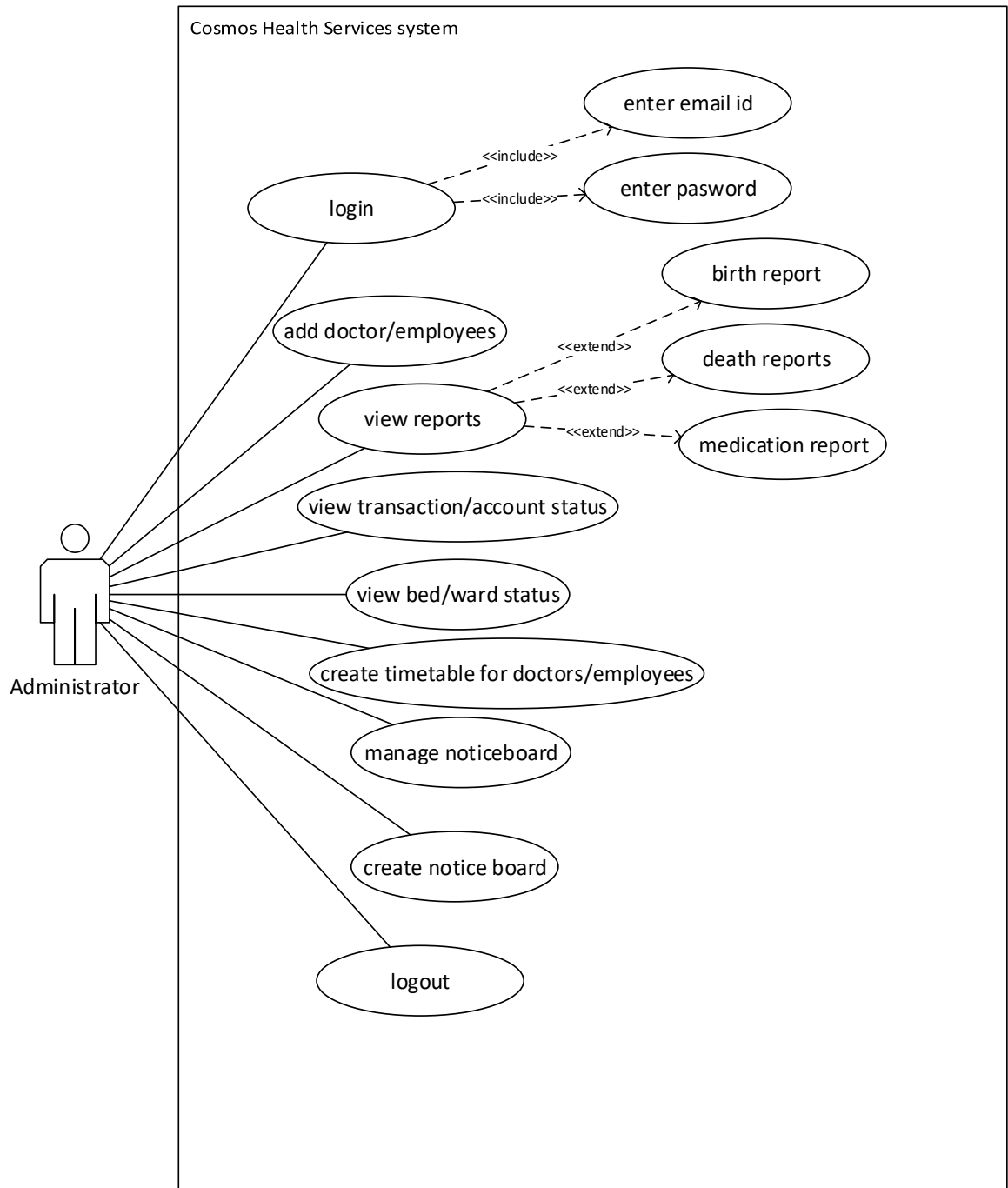


Figure 3.1 (Admin use-case diagram)

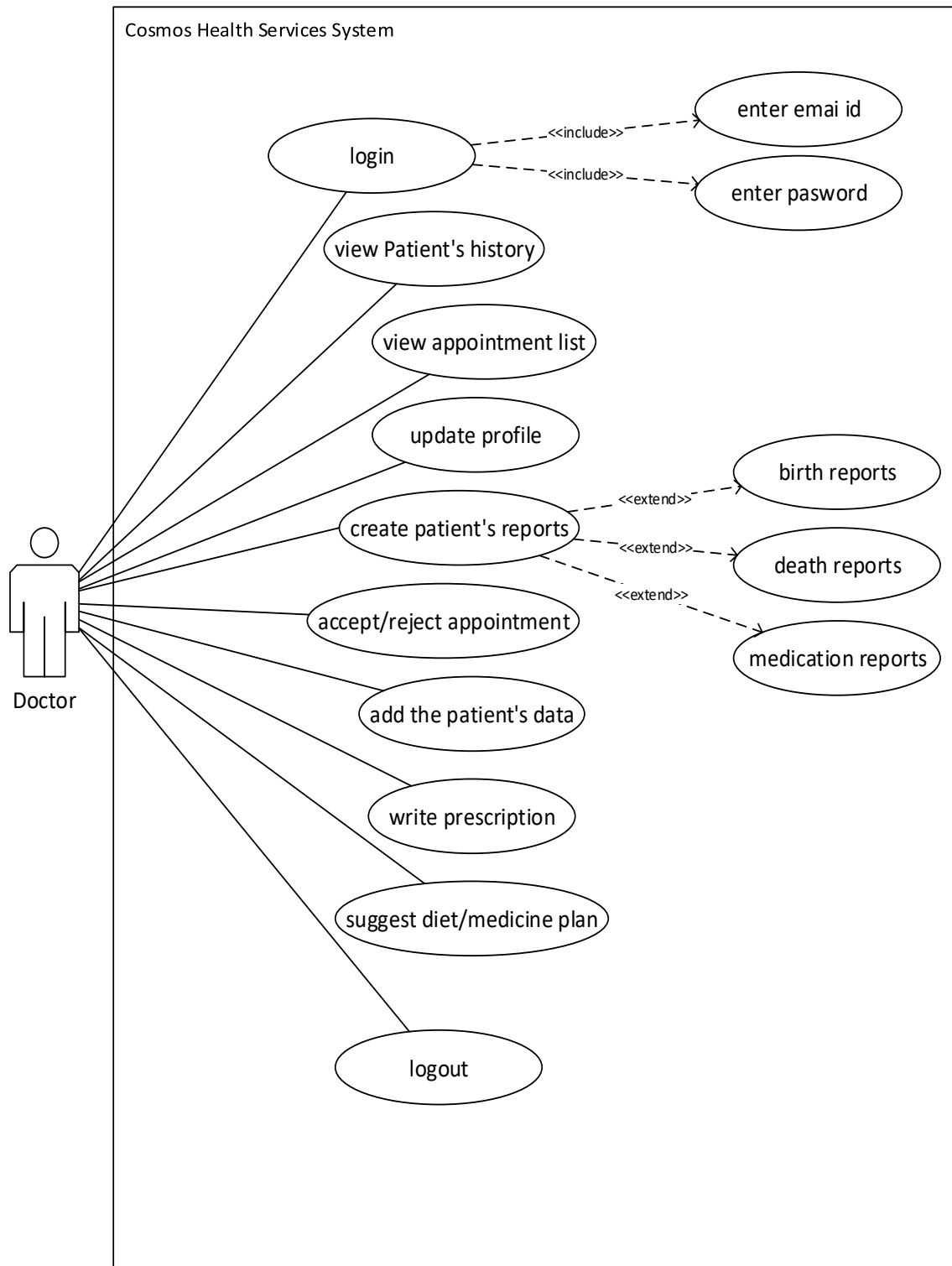
3.2.2. Doctor

Figure 3.2 (Doctor use-case diagram)

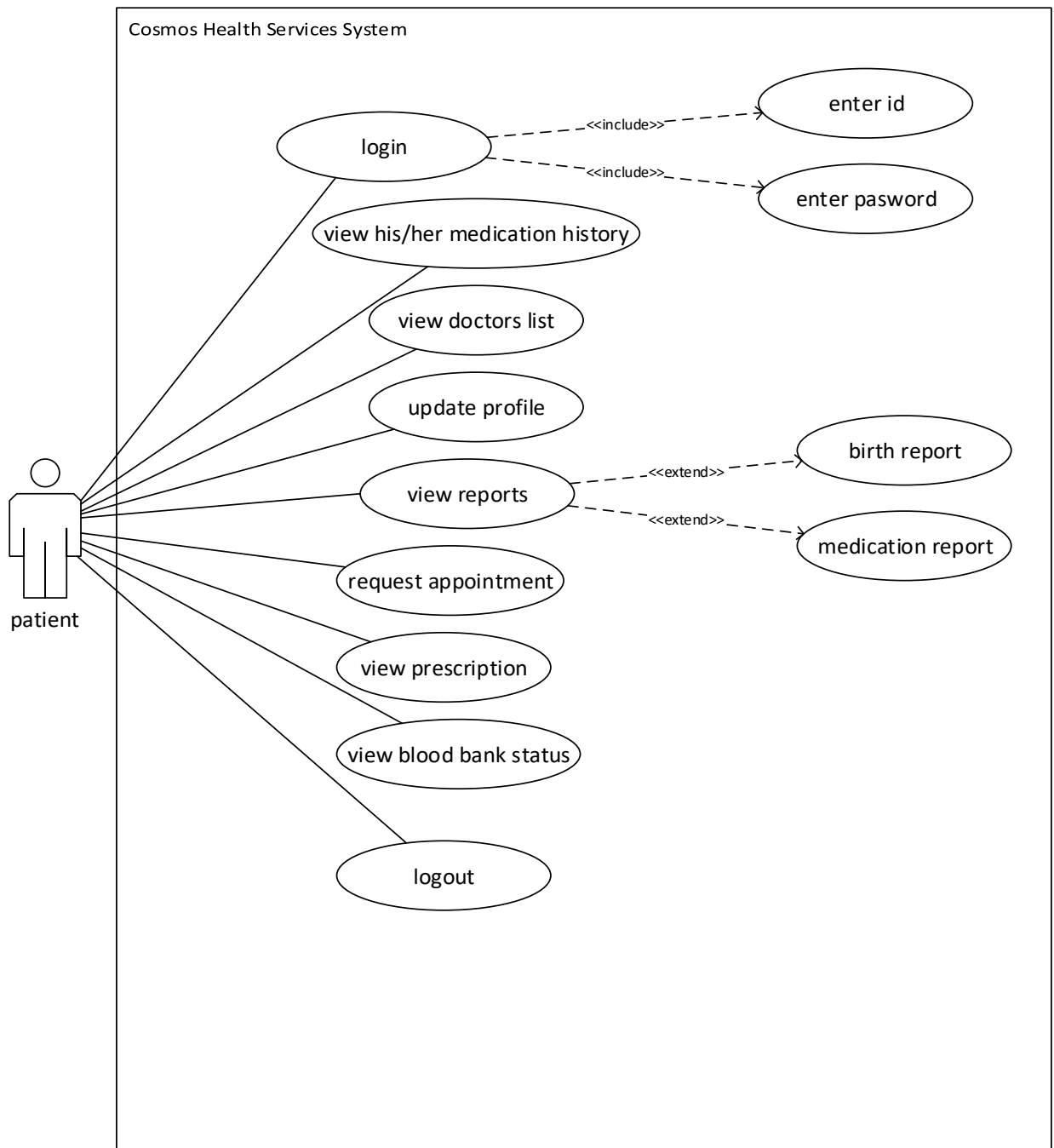
3.2.3. Patient

Figure 3.3 (patient use-case diagram)

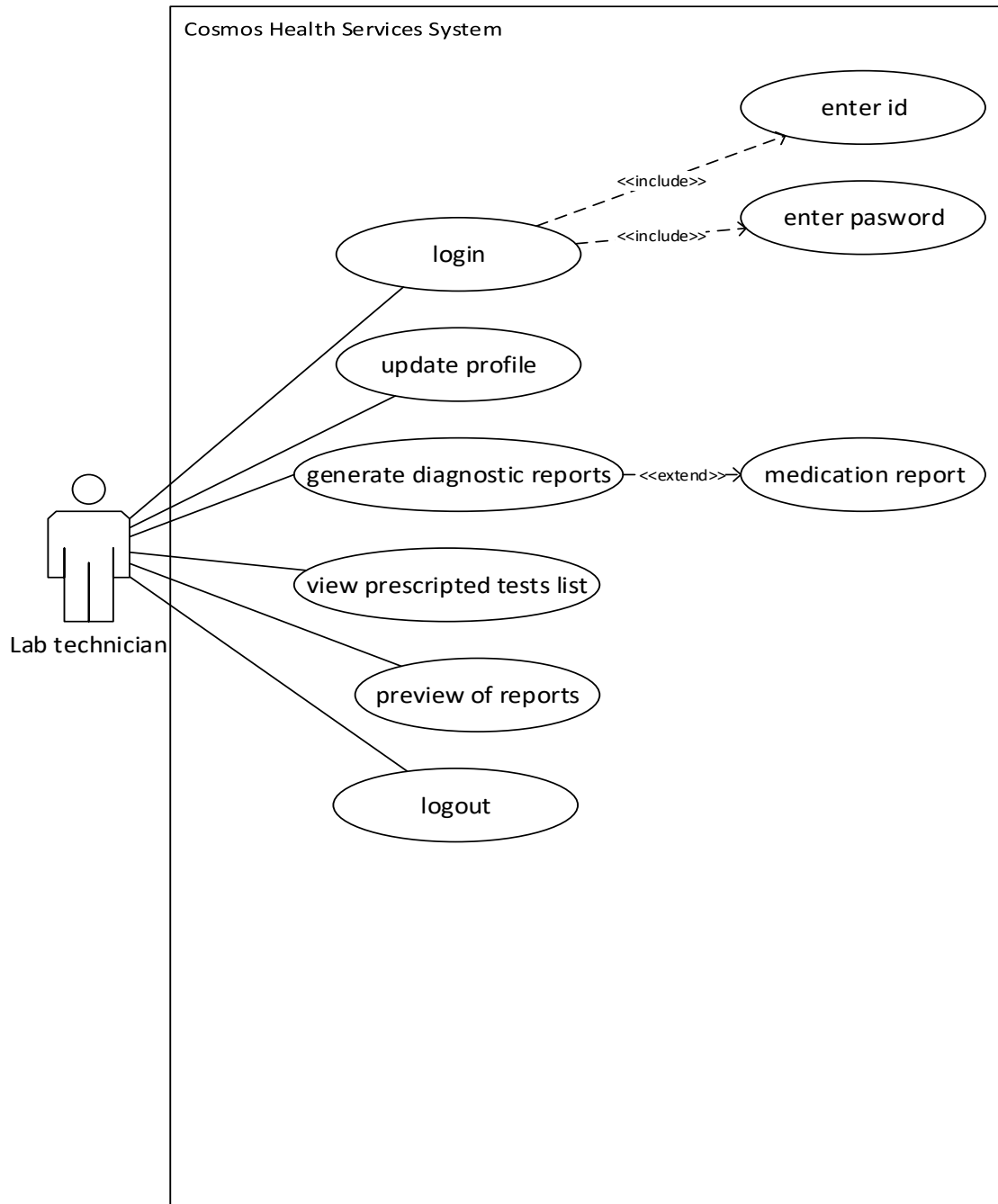
3.2.4. Lab technician

Figure 3.4 (lab-technician use-case)

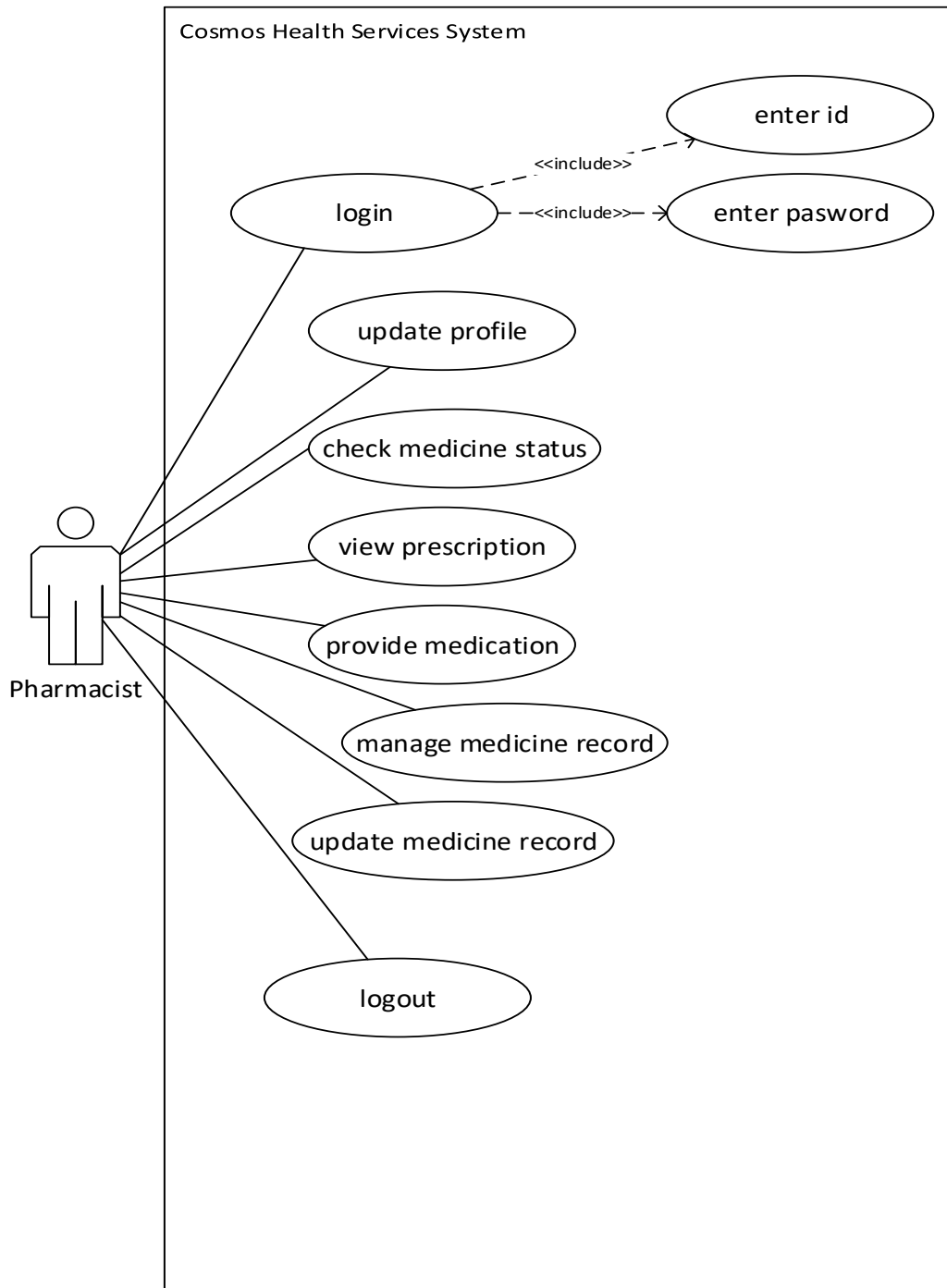
3.2.5. Pharmacist

Figure 3.5 (pharmacist use-case diagram)

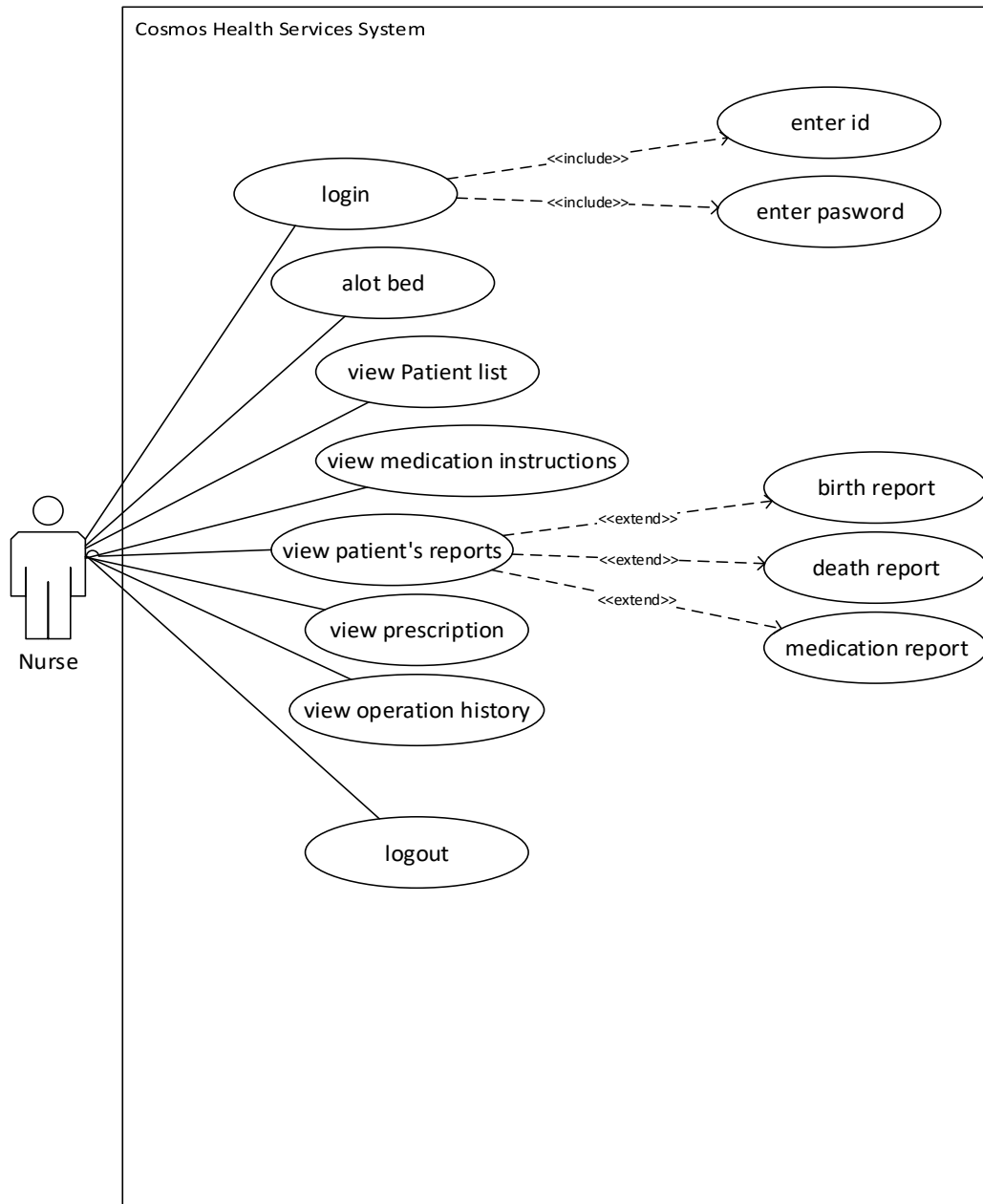
3.2.6. Nurses

Figure 3.6 (nurse use-case diagram)

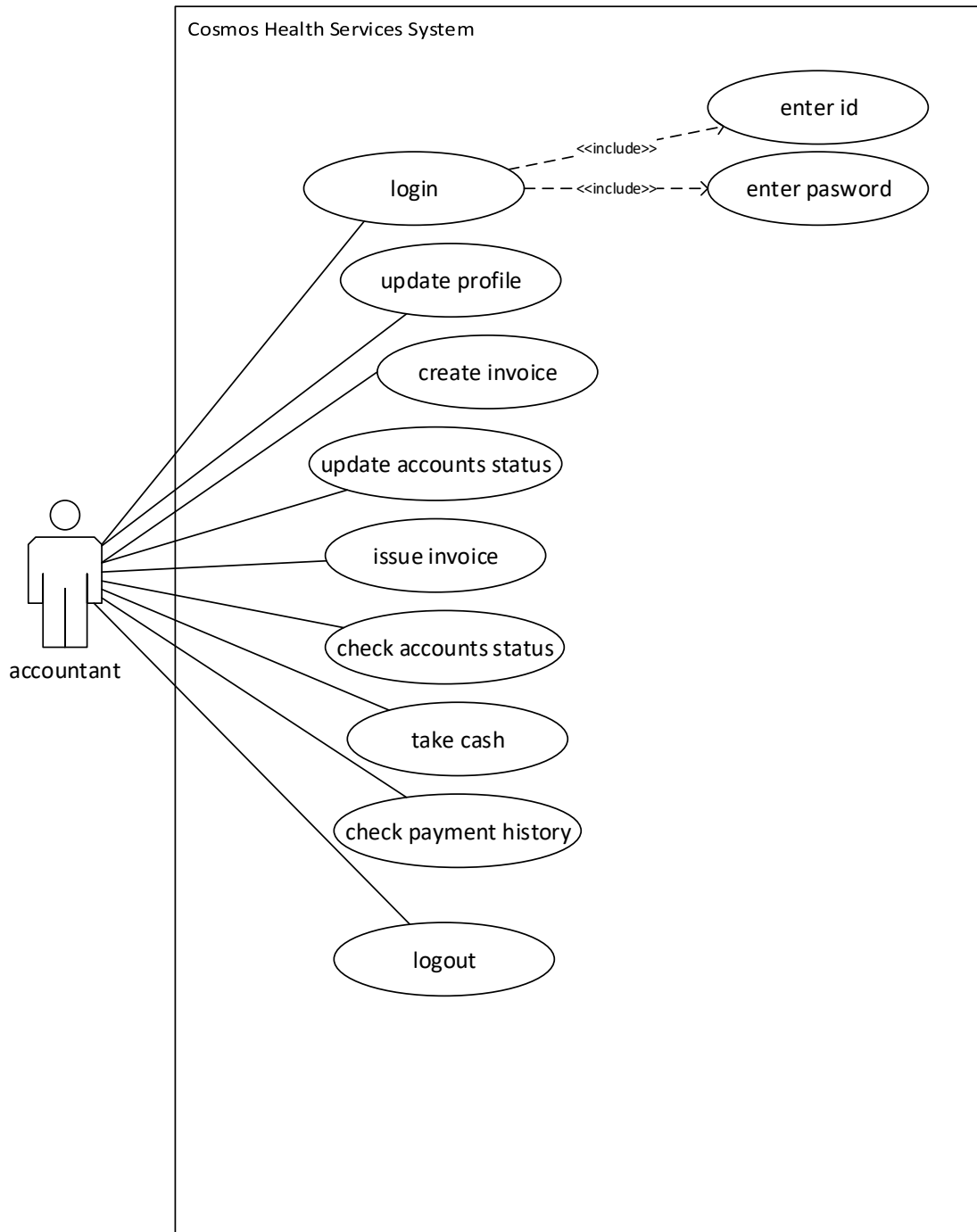
3.2.7. Accountant

Figure 3.7 (Accountant use-case diagram)

Full system use case

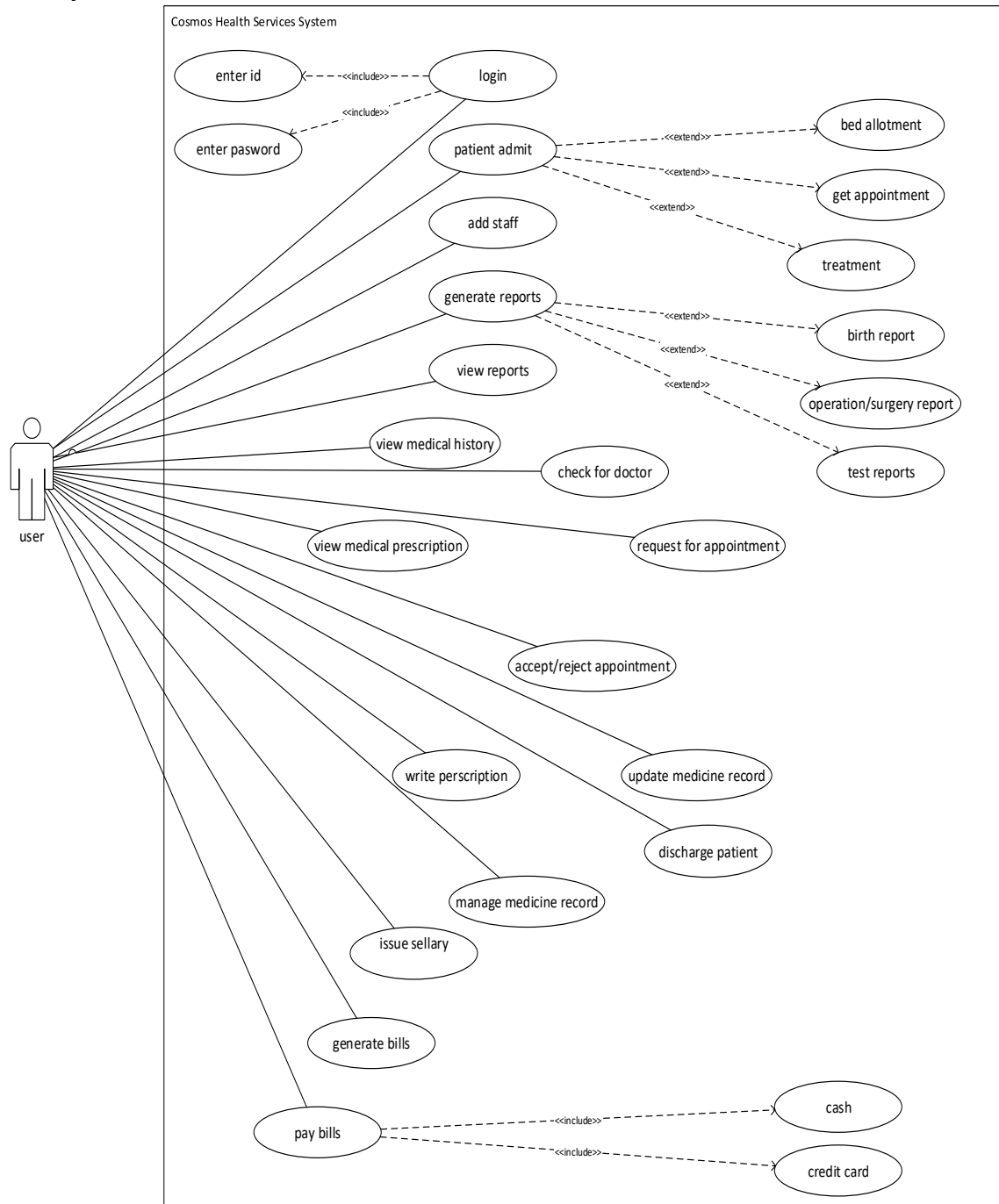


Figure 3.8 (Fully dress use-case diagram)

Chapter 4

System Design

Chapter 4: System Design

The design is the most important phase of the product development that defines that what kind of product we are going to develop.

4.1. Architecture Diagram

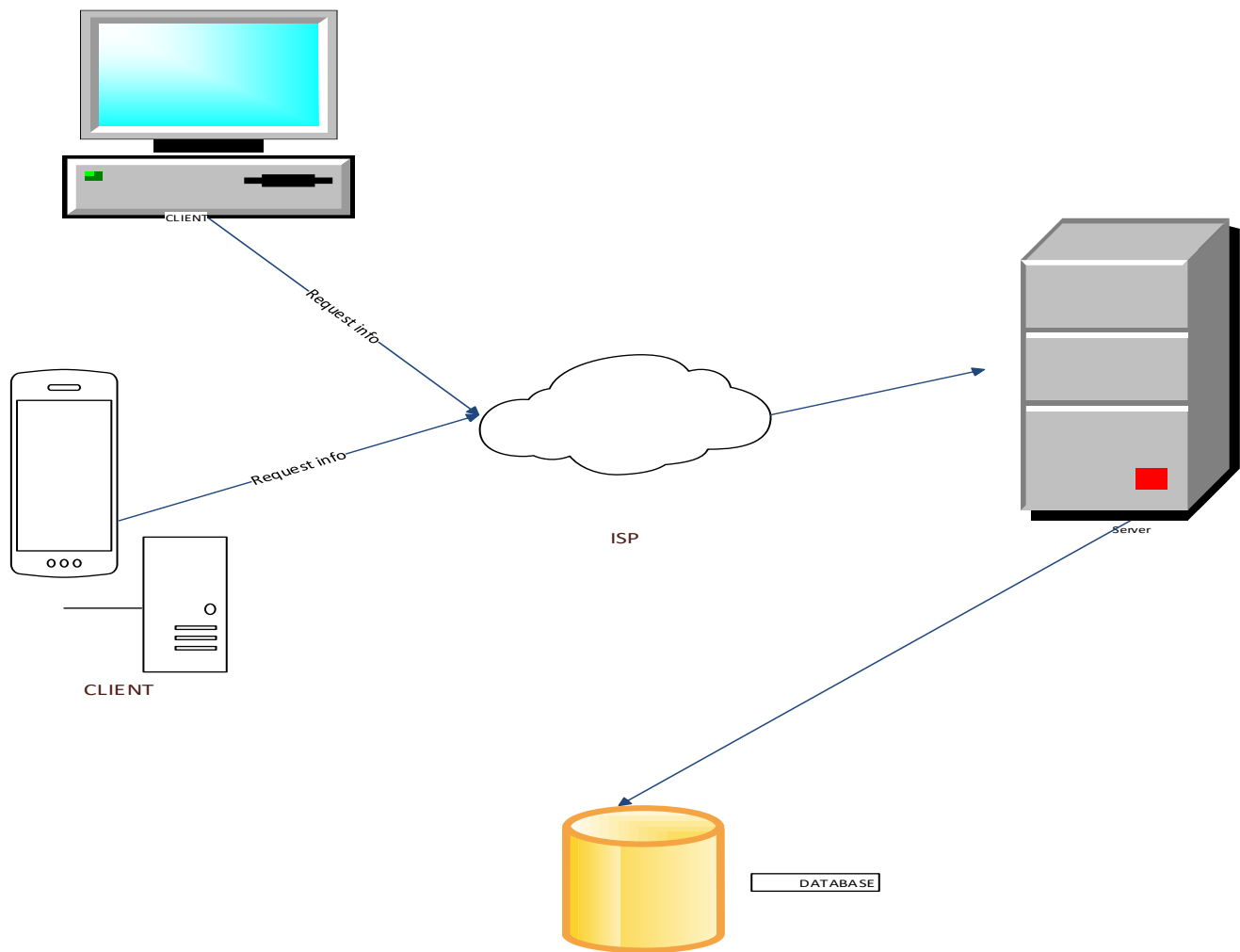


Figure 4.1 (Architecture Diagram)

4.2. Domain model

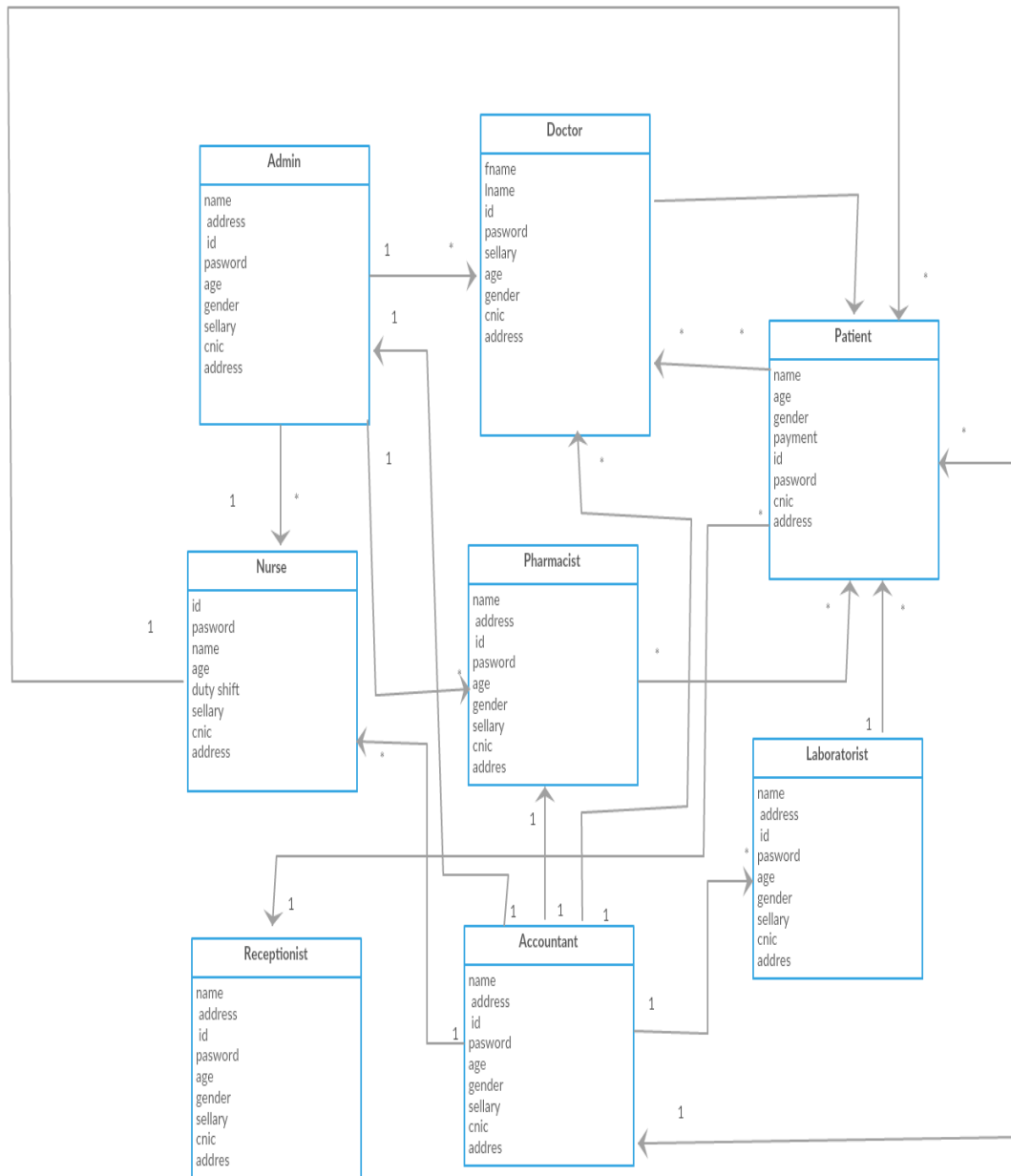
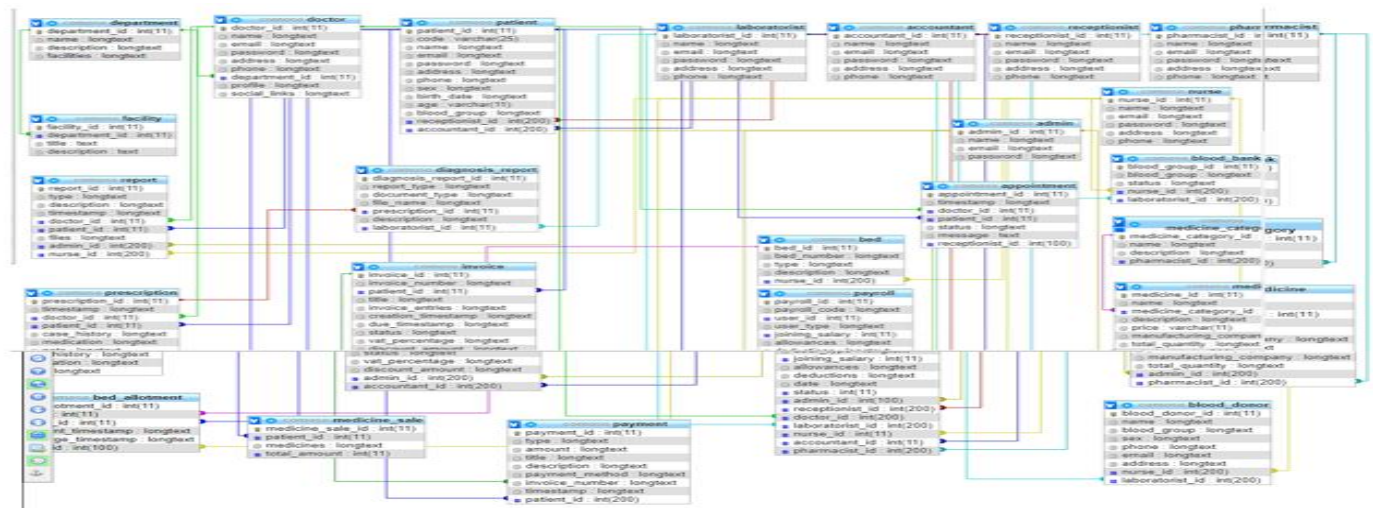


Figure 4.2 (Domain model Diagram)

4.3. Entity Relationship Diagram with data dictionary



4.4. Class Diagram

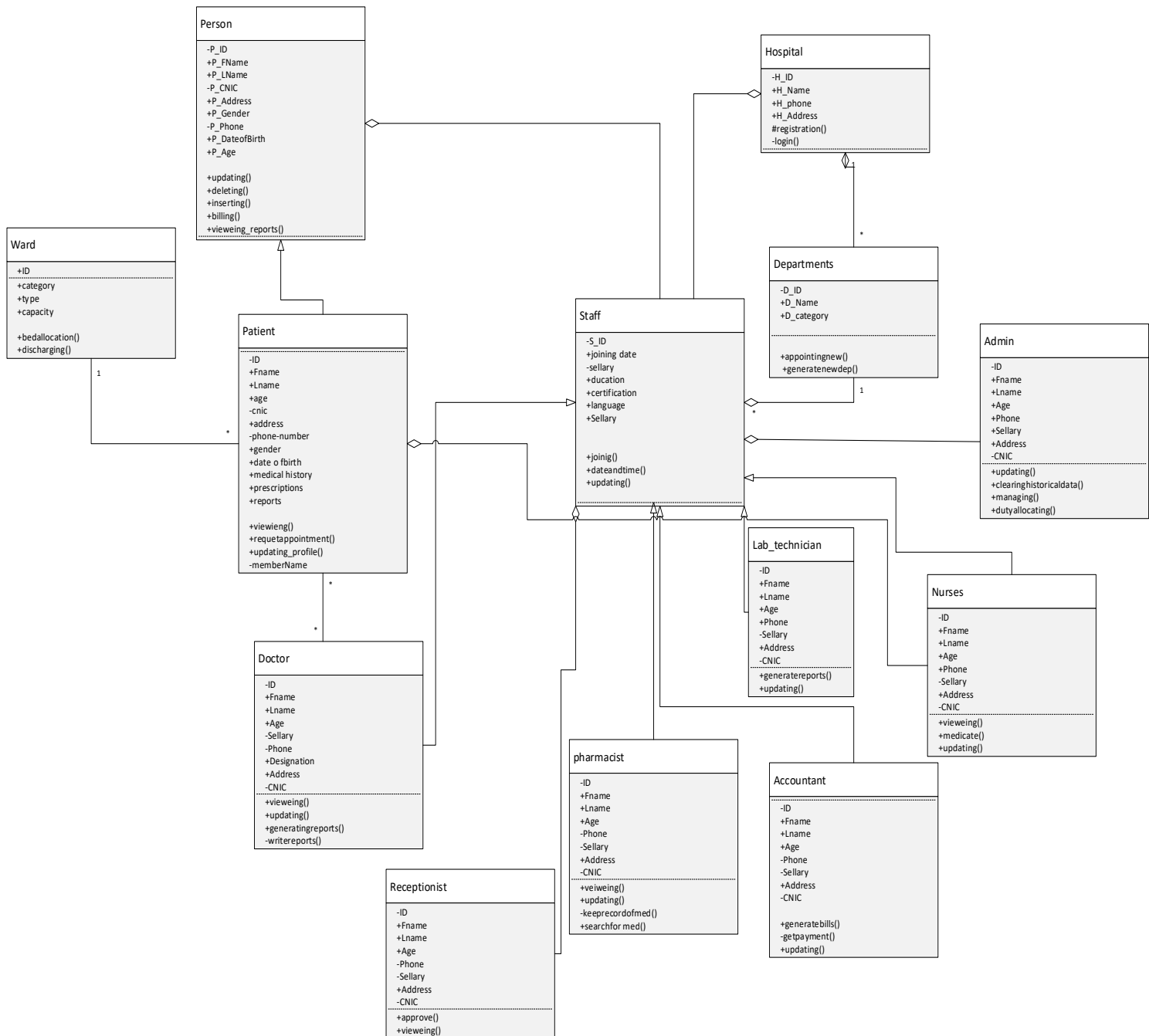


Figure 4.4 (Class diagram)

4.5. Sequence / Collaboration Diagram

A **Sequence Diagram** is an interaction diagram that emphasizes the time ordering of messages; a collaboration diagram is an interaction diagram that emphasizes the structural organization of the objects that send and receive messages. Sequence diagrams and collaboration diagrams are isomorphic, meaning that you can take one and transform it into the other.

Signup

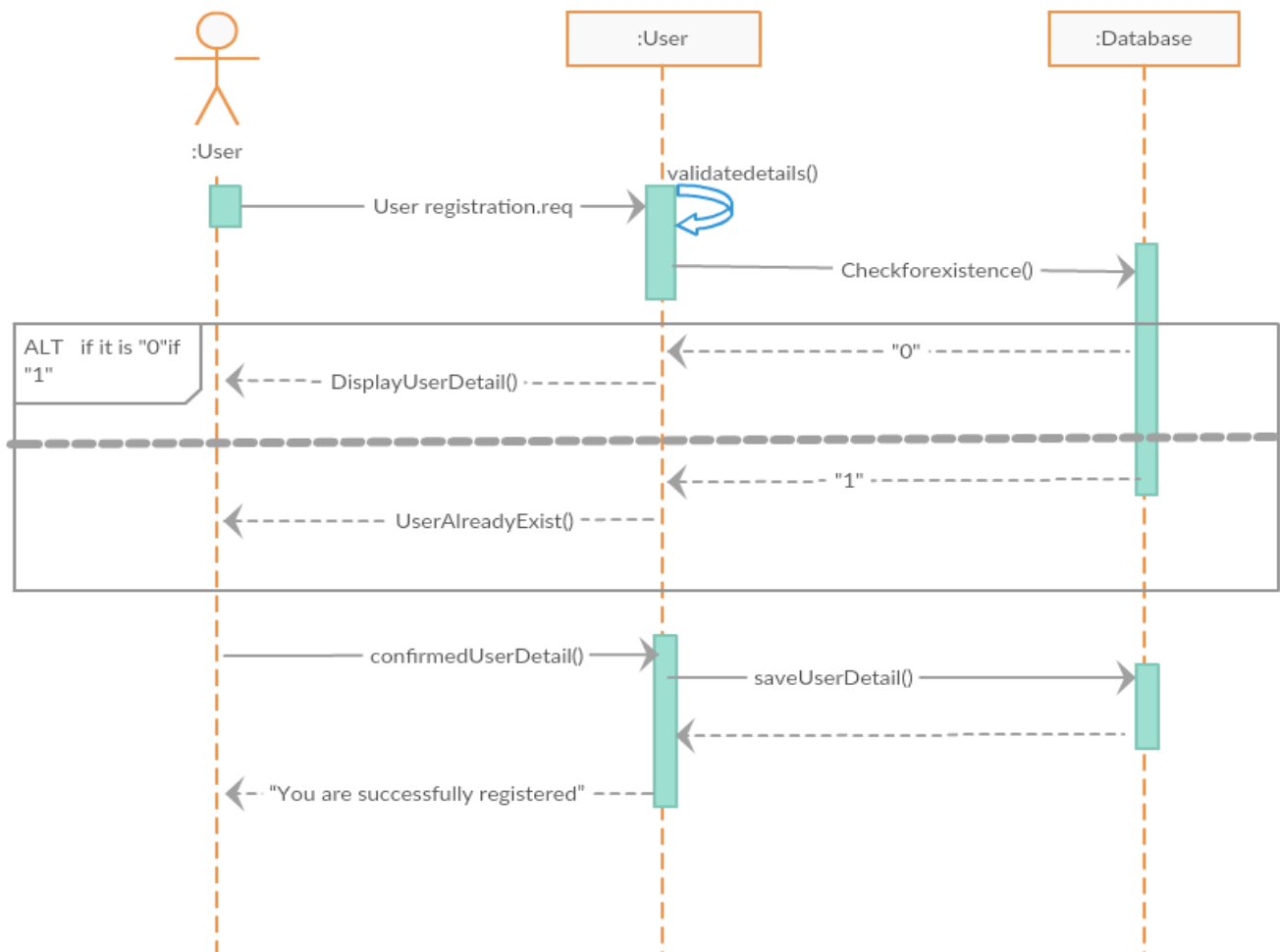


Figure 4.5.1 (Sequence diagram for signup)

Login

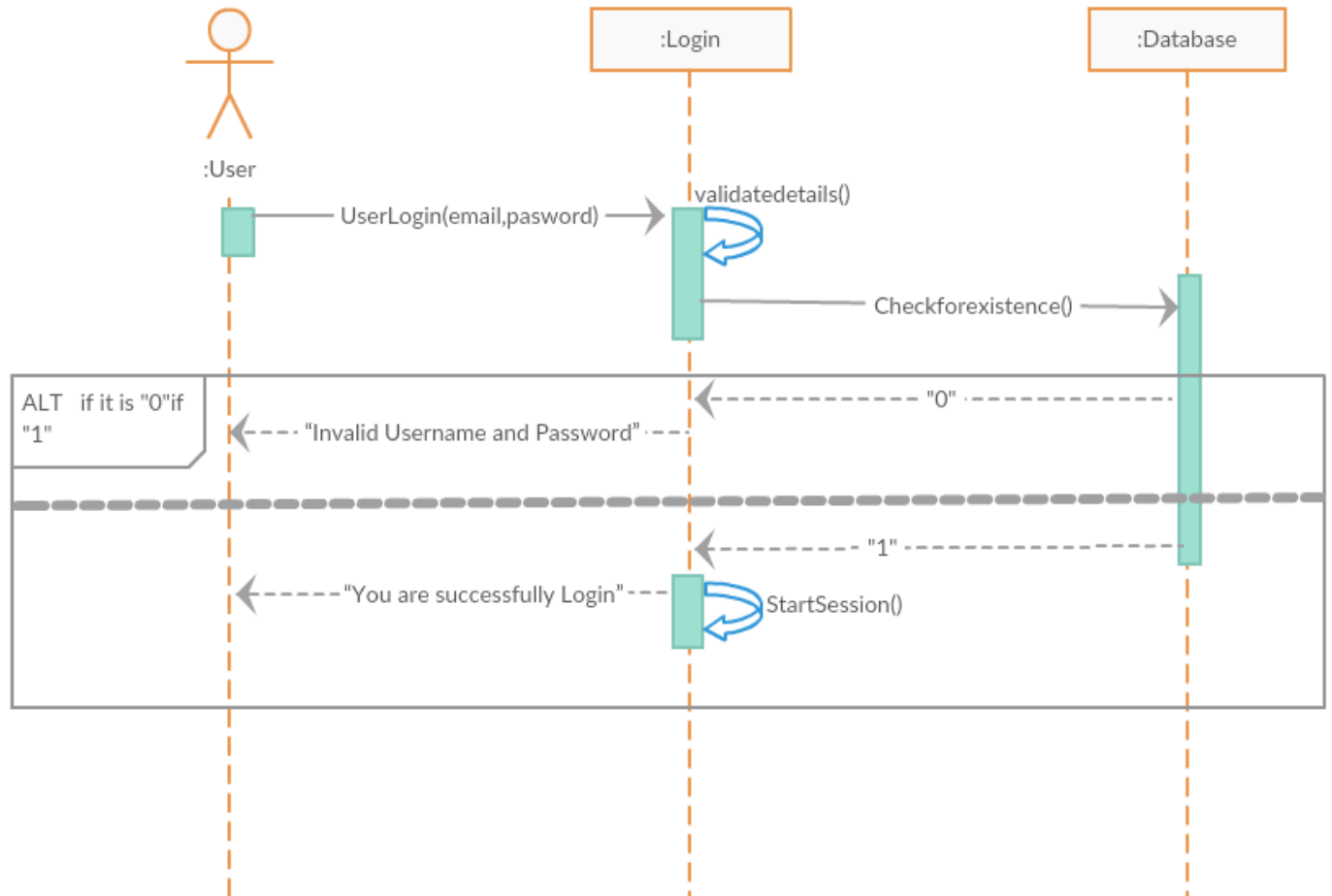


Figure 4.5.2 (Sequence diagram for login)

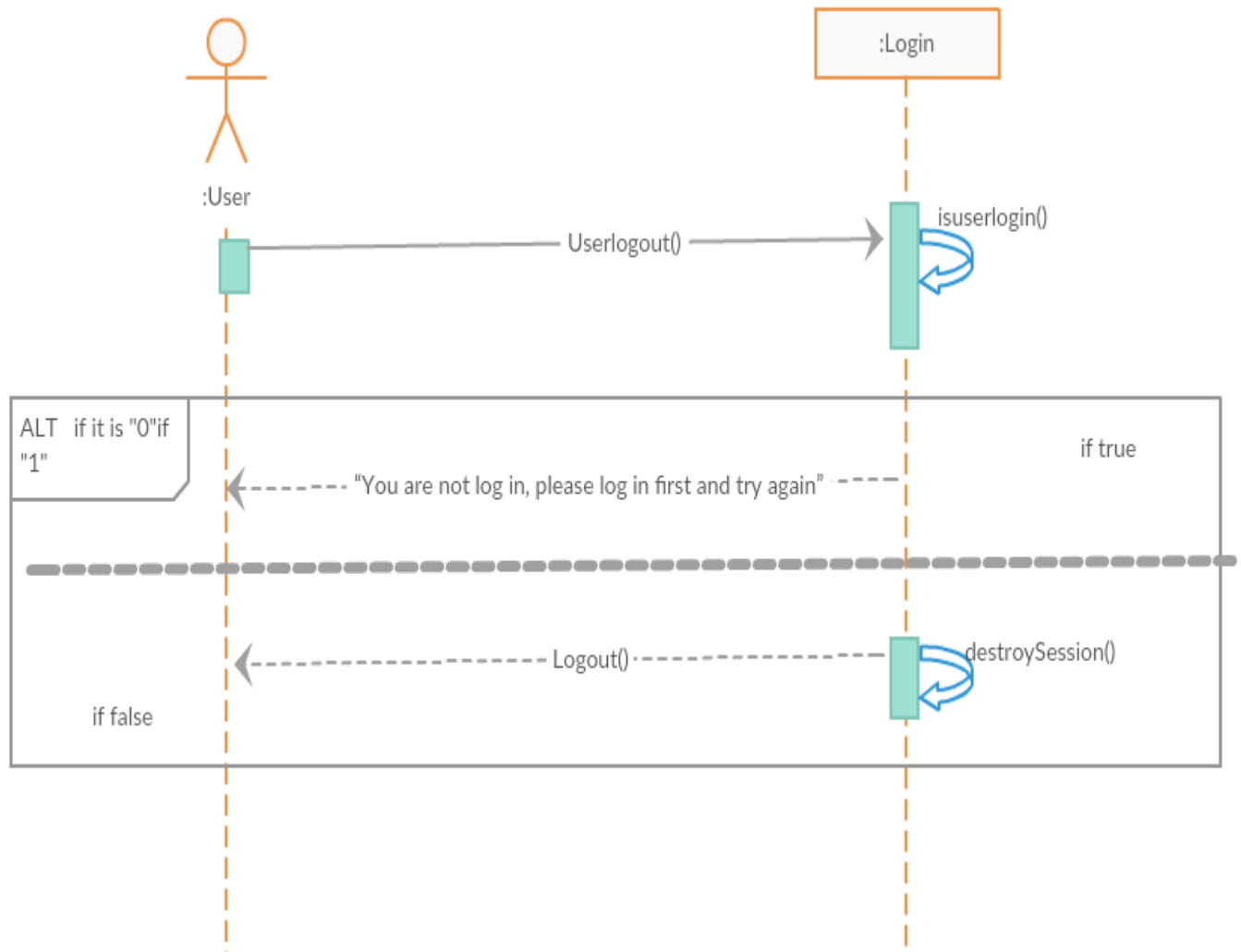
Logout:

Figure 4.5.3 (Sequence diagram for logout)

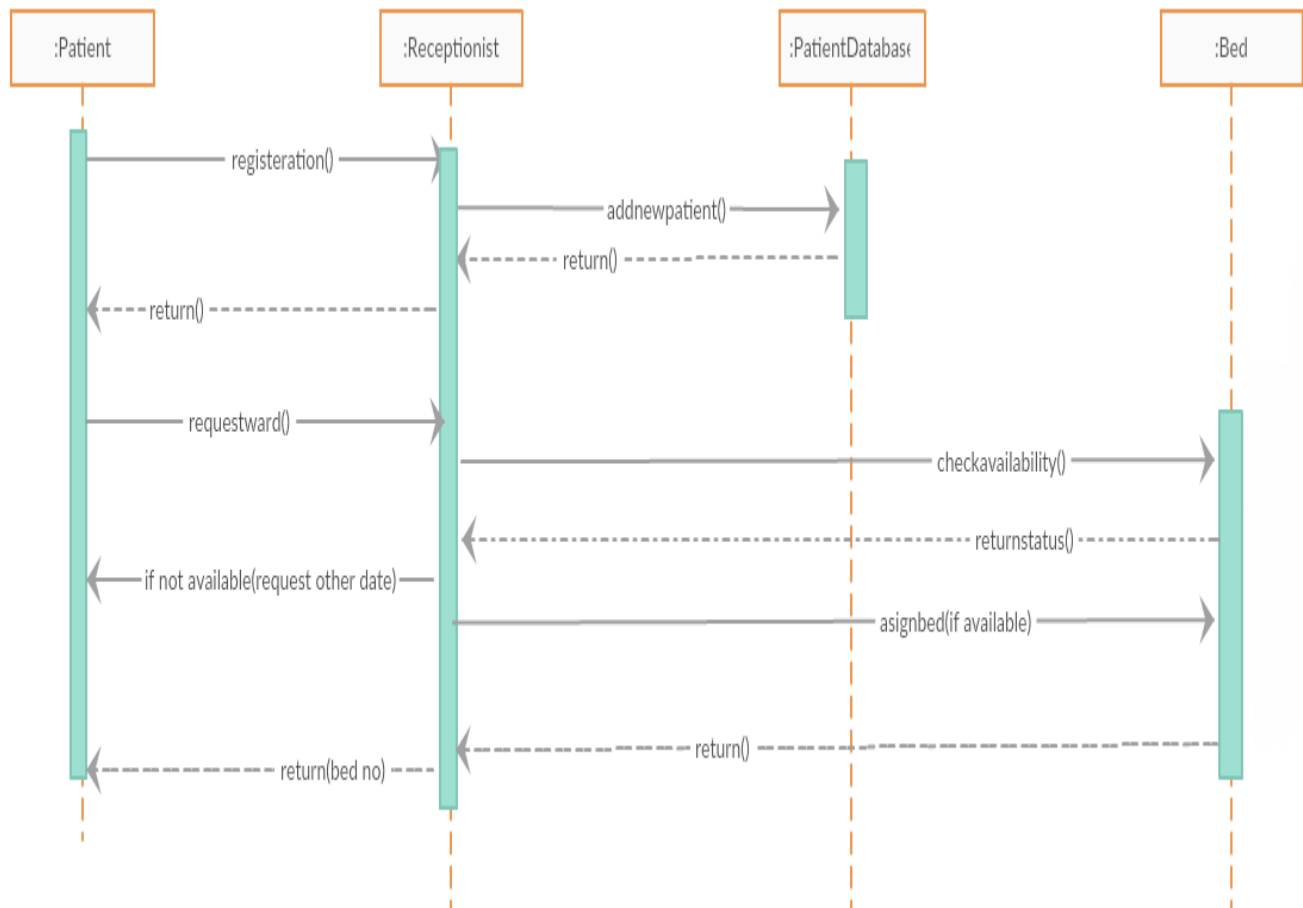
Patient Admit:

Figure 4.5.4 (Sequence diagram for patient admit)

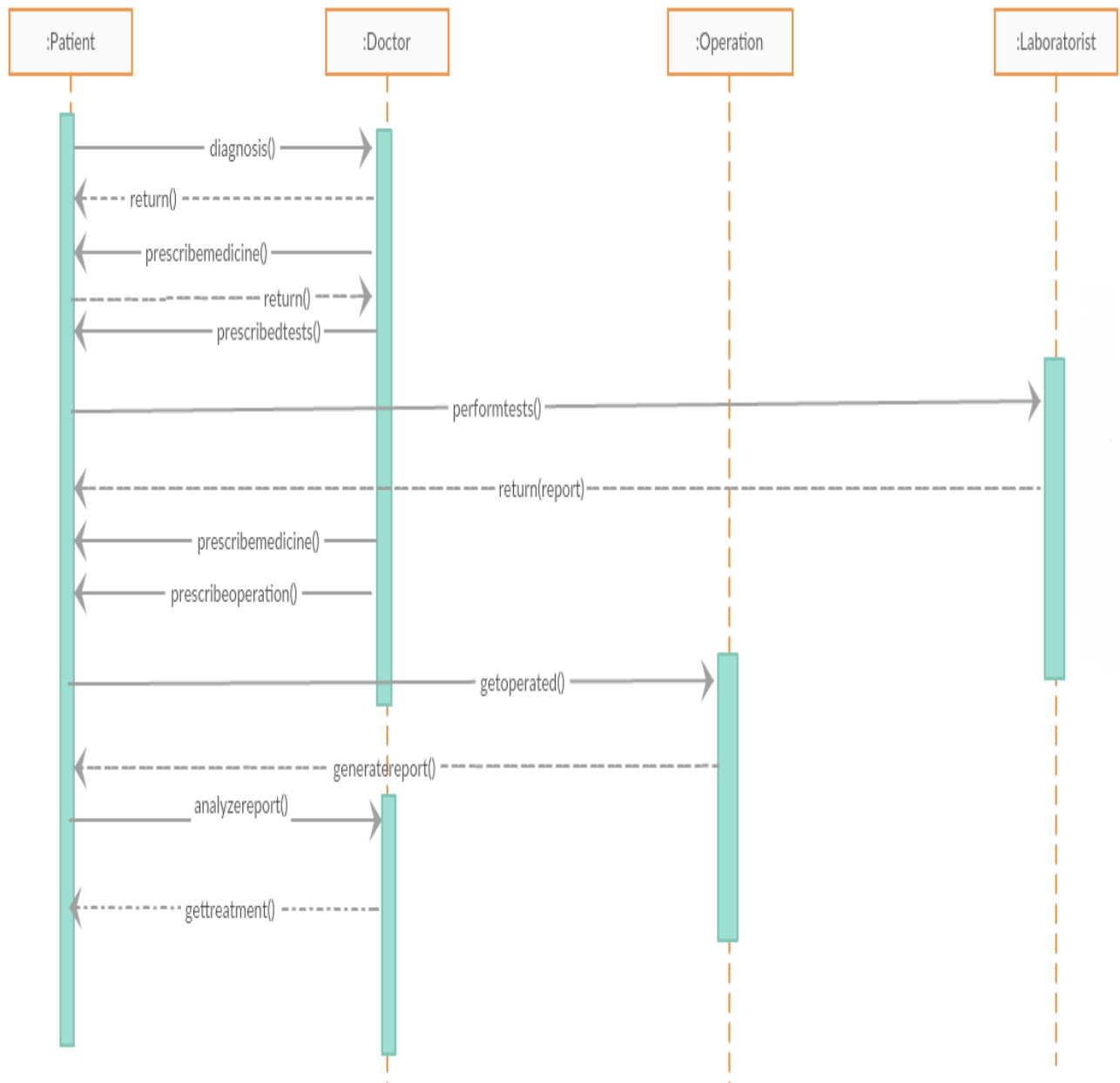
Lab test/Operation

Figure 4.5.5 (Sequence diagram for lab test/operations)

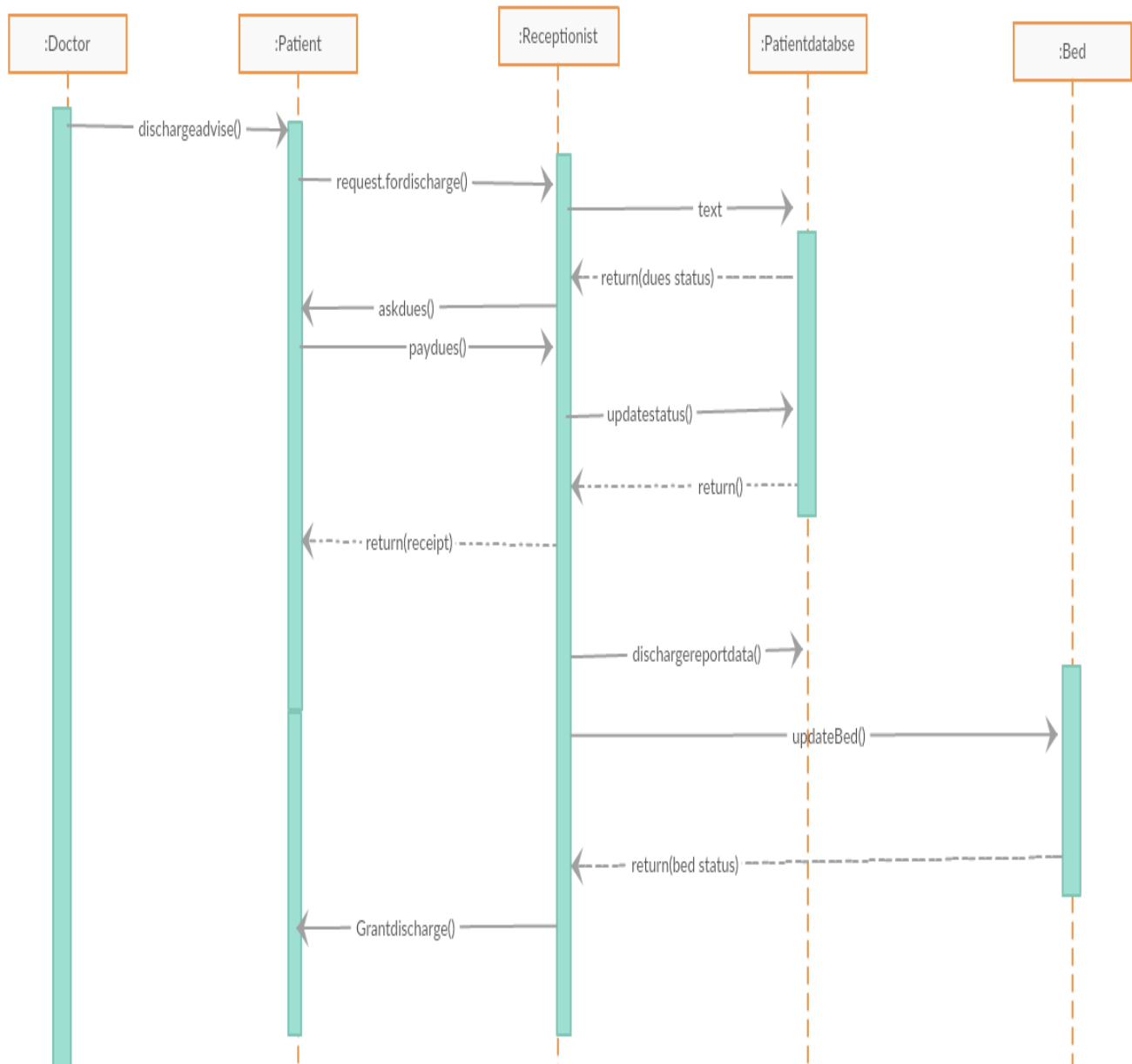
Discharge:

Figure 4.5.6 (Sequence diagram for patient discharge)

4.6. Activity Diagram

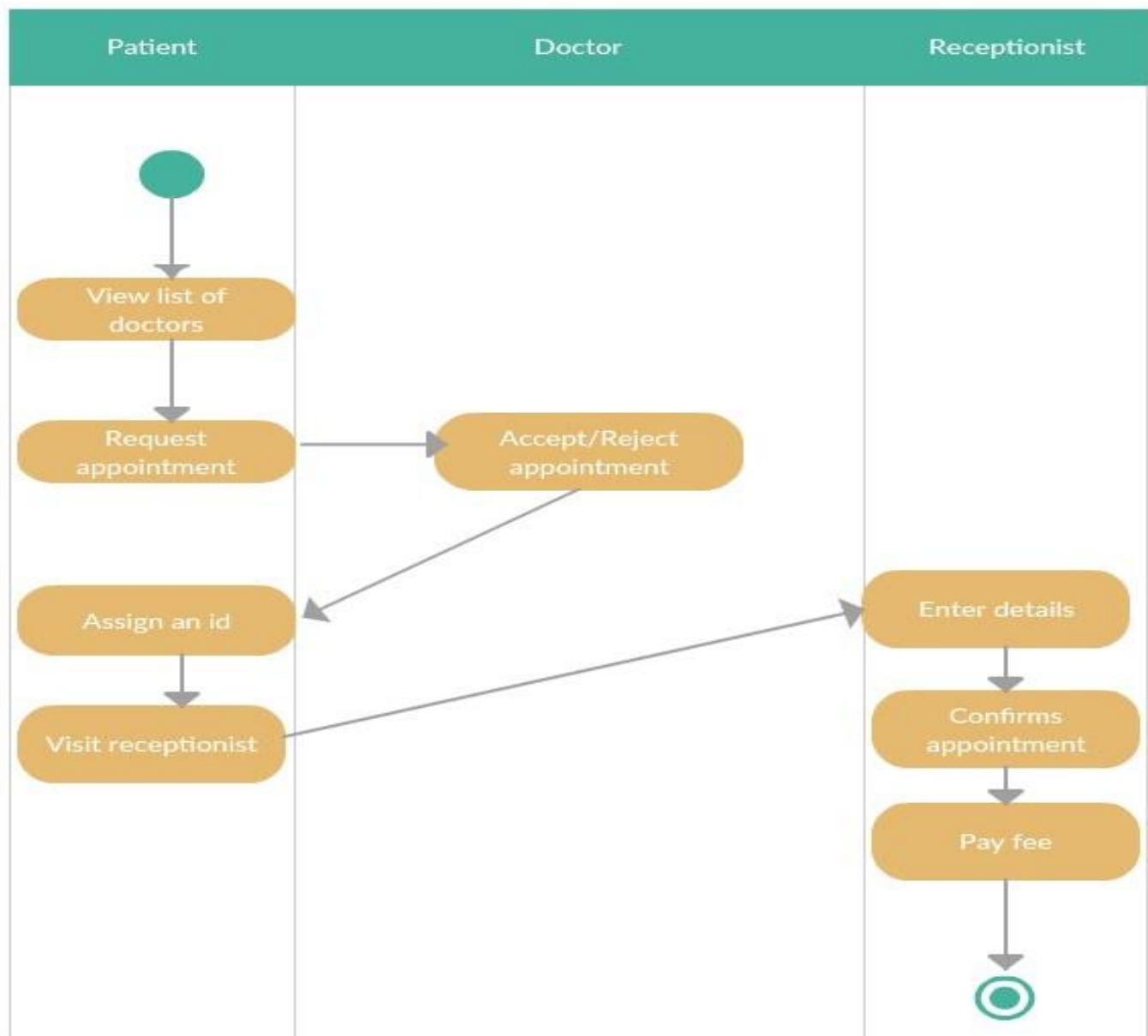


Figure 4.6.1 (Activity diagram for appointment)

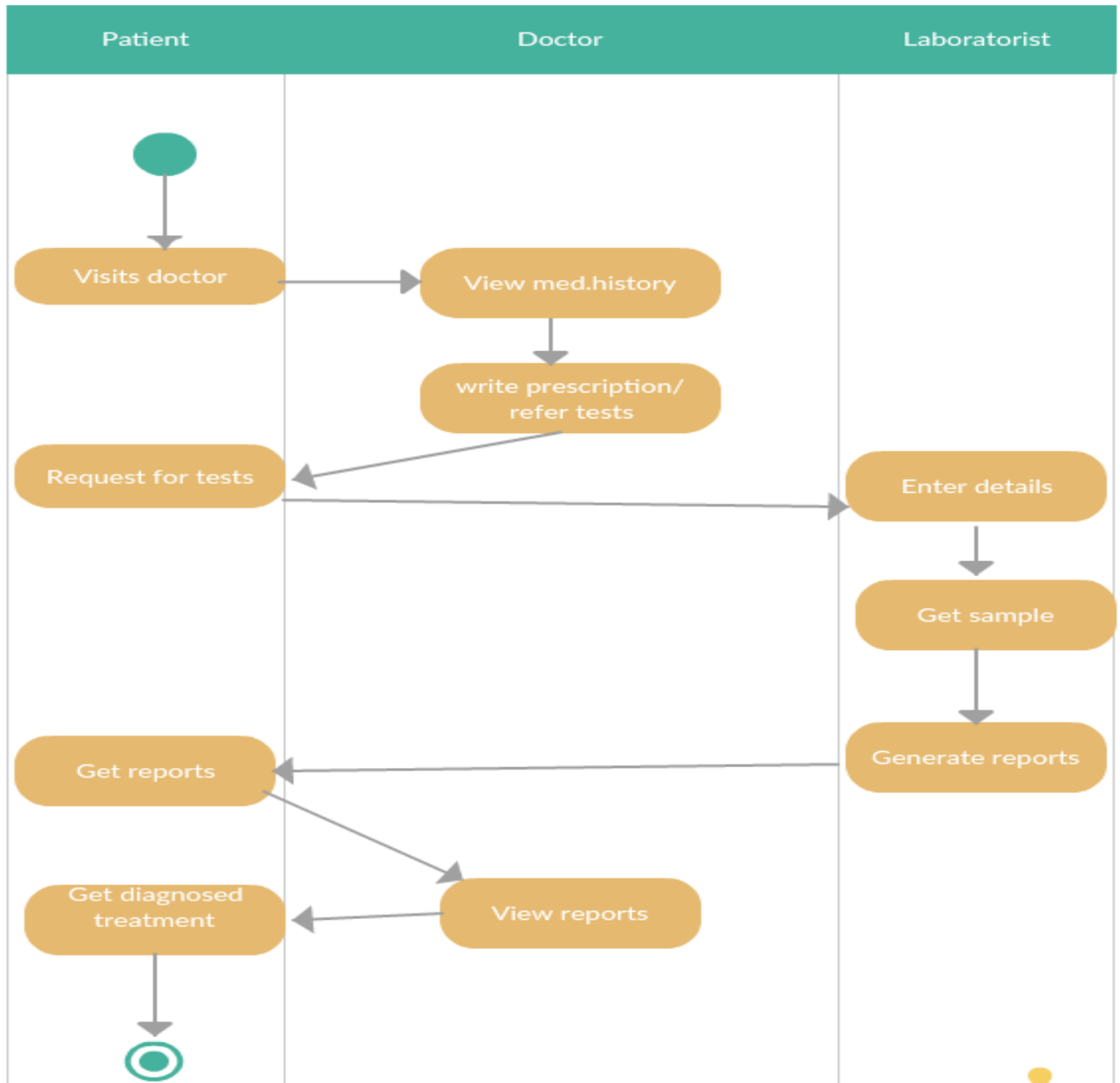


Figure 4.6.2 (Figure 4.5.1 (Activity diagram for Diagnosis))

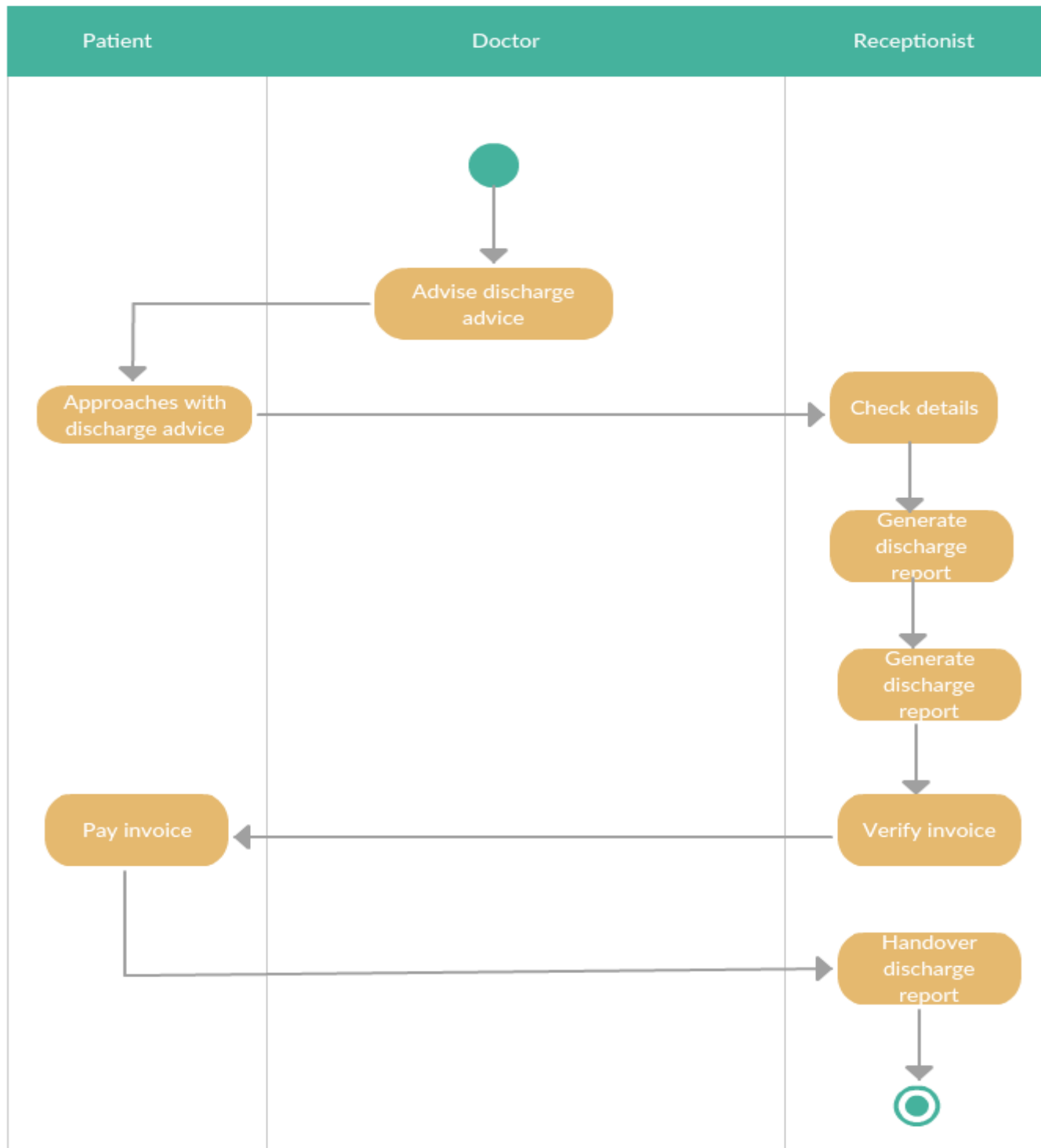


Figure 4.6.3 (Activity diagram for patient discharge)

4.7. State Transition Diagram

Administrator

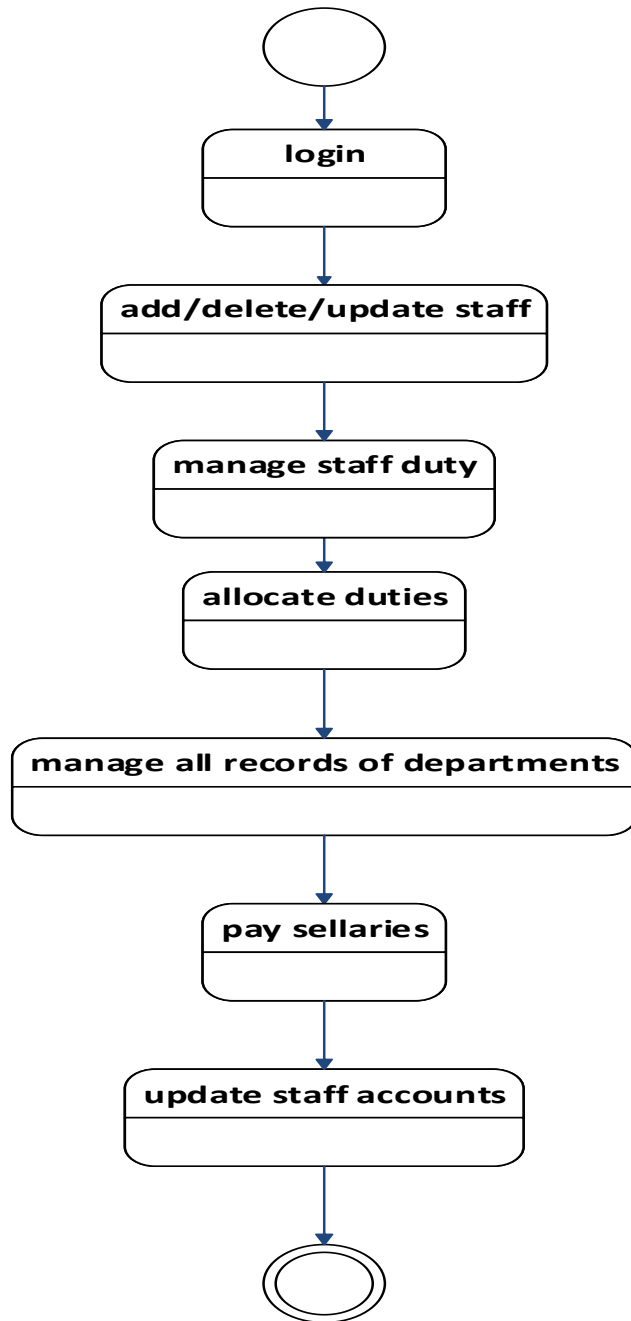


Figure 4.7.1 (Administrator sate transition diagram)

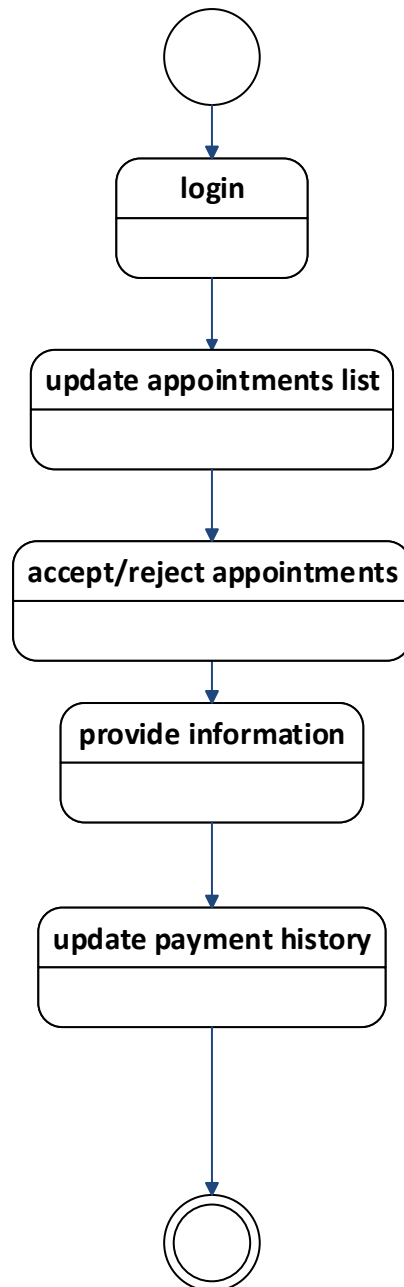
Receptionist

Figure 4.7.2 (Receptionist state transition diagram)

Doctor

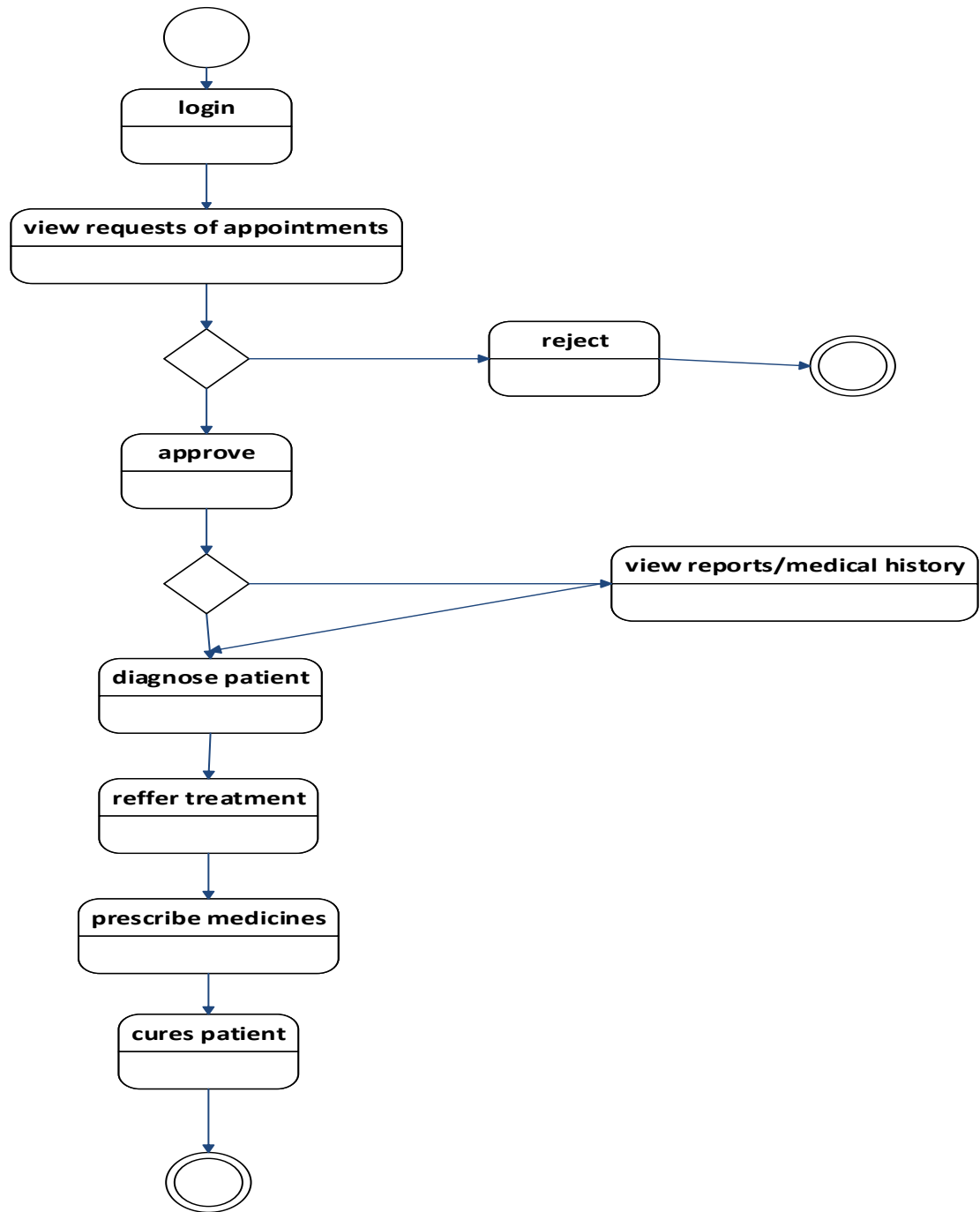


Figure 4.7.3 (Doctor state transition diagram)

Patient

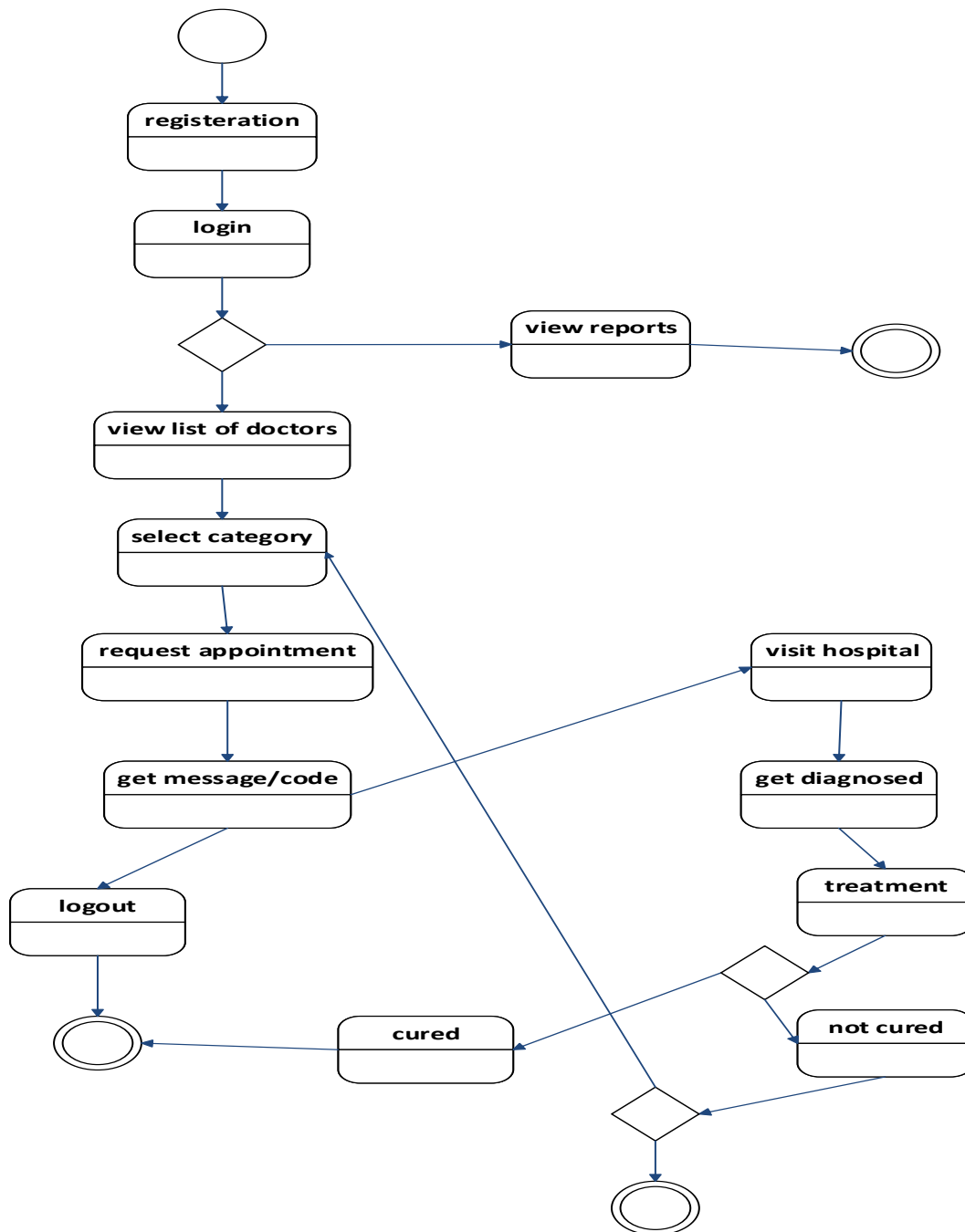


Figure 4.7.4 (Patient state transition diagram)

Nurses

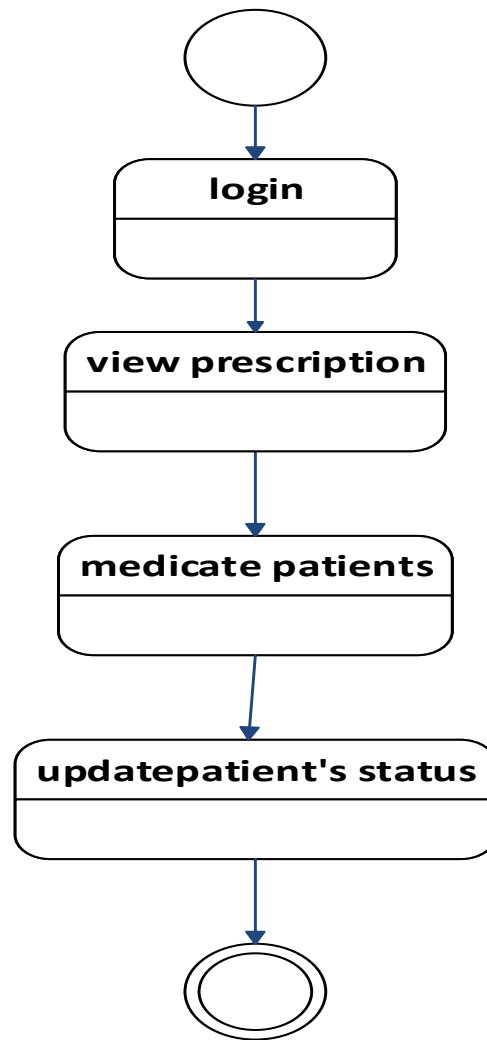


Figure 4.7.5 (Nurse state transition diagram)

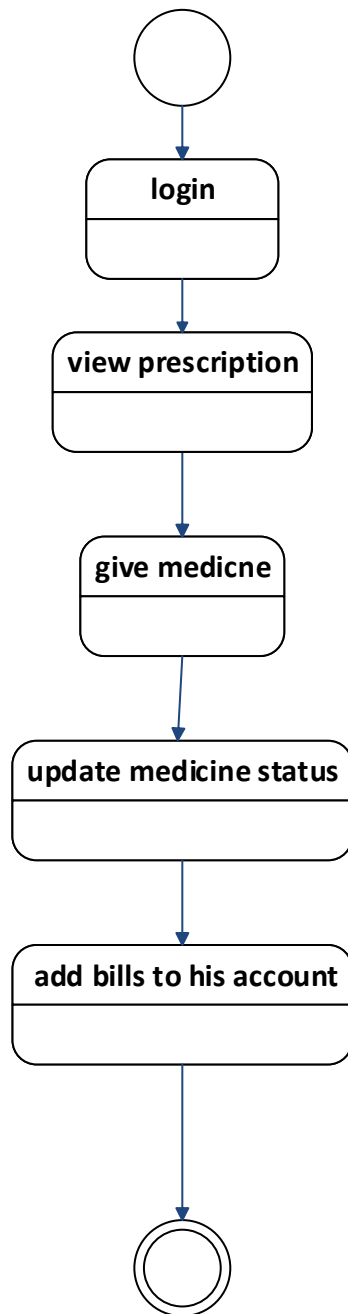
Pharmacist

Figure 4.7.6 (Pharmacist state transition diagram)

Lab-Technician

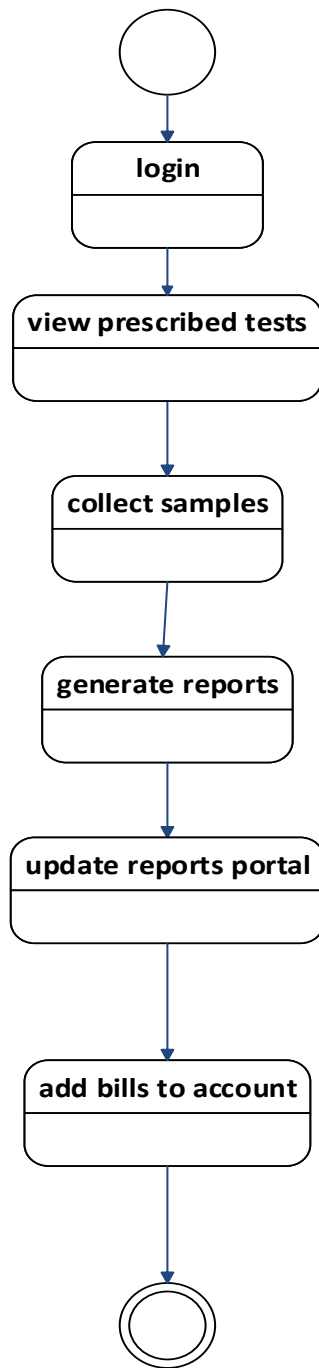


Figure 4.7.7 (Lab-Technician state transition diagram)

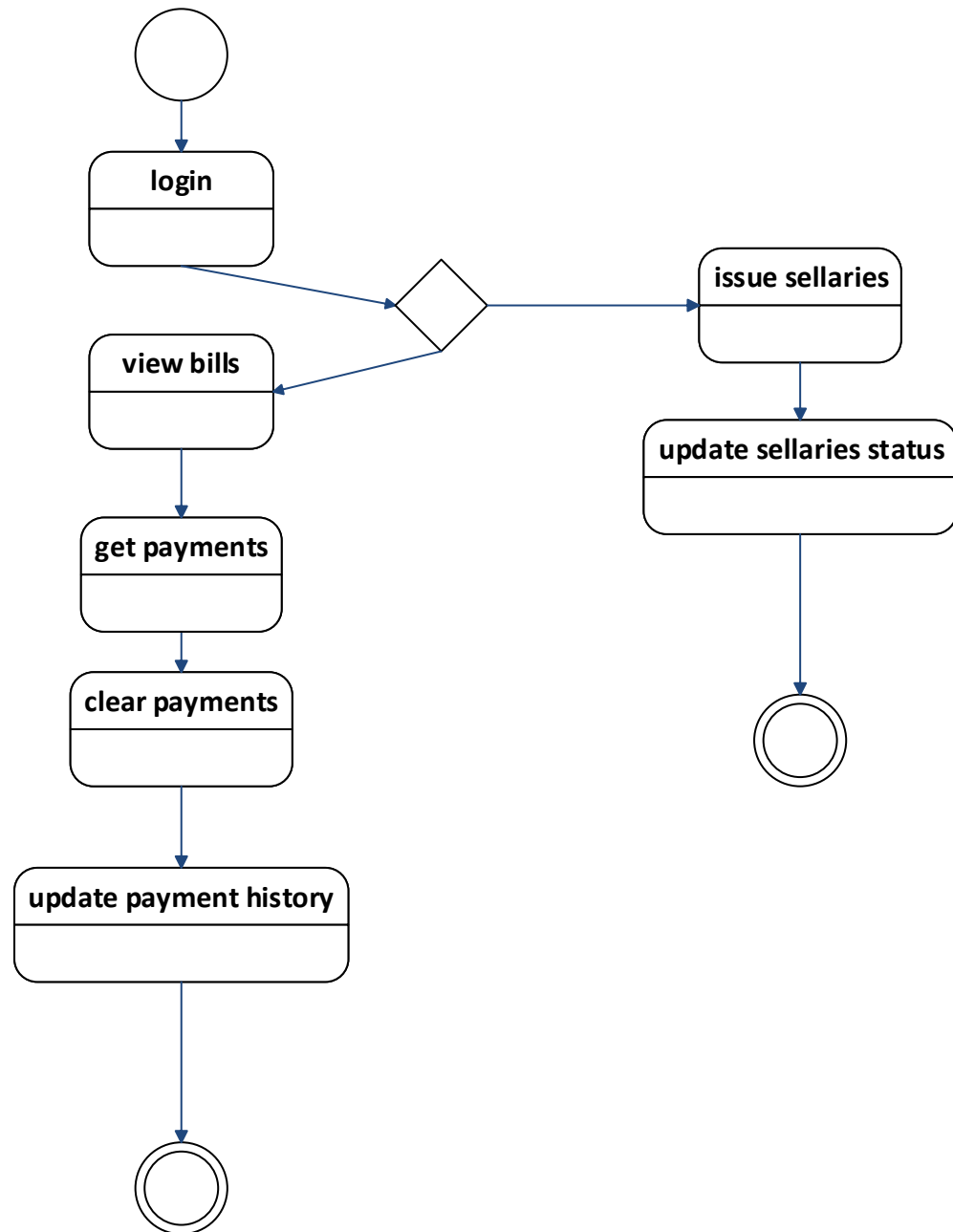
Accountant

Figure 4.7.8 (Accountant state transition diagram)

4.8. Component Diagram

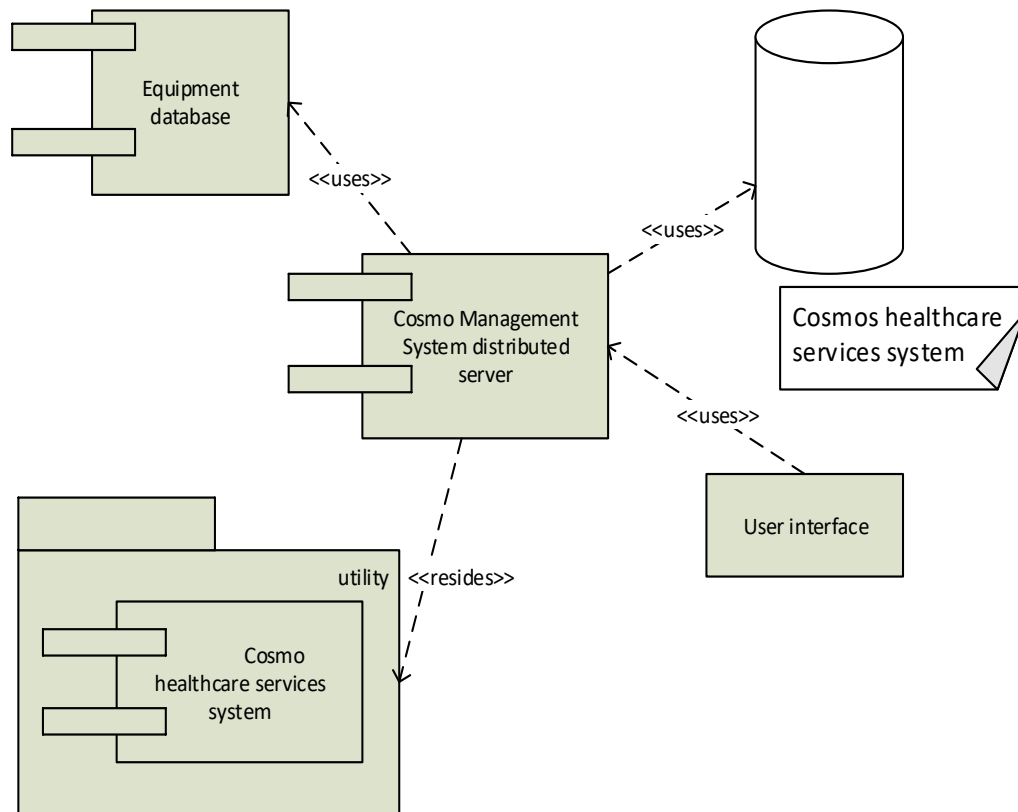


Figure 4.8 (component diagram)

4.9. Deployment Diagram

A **Deployment Diagram** shows the configuration of run-time processing nodes and the components that live on them. Deployment diagrams address the static deployment view of architecture. They are related to component diagrams in that a node typically encloses one or more components.

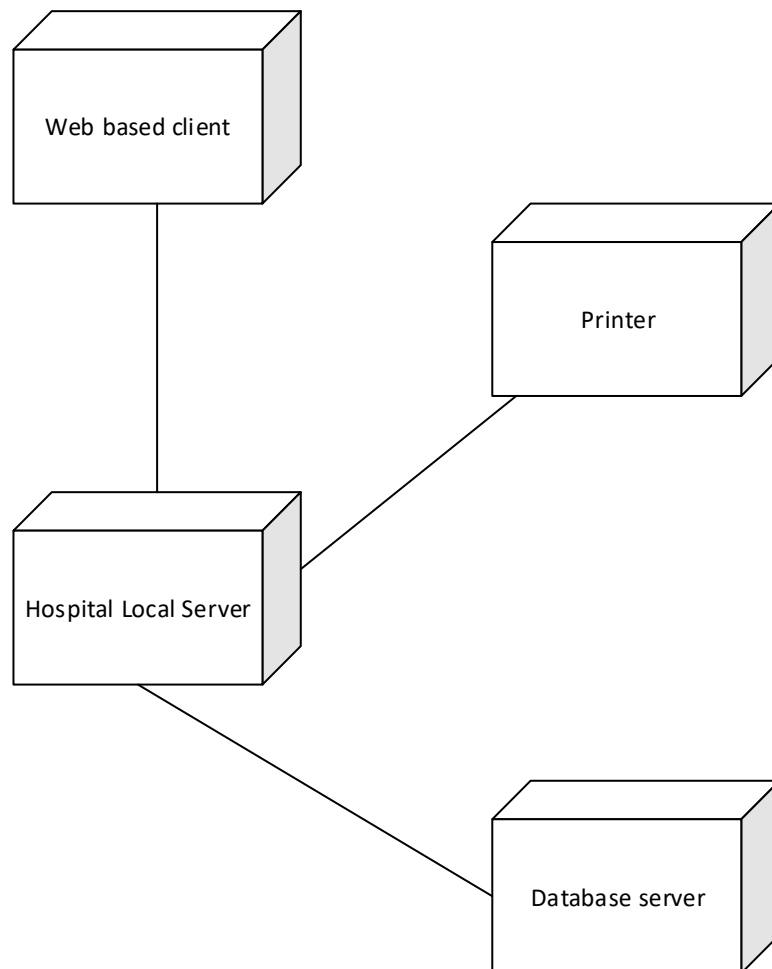


Figure 4.9 (Deployment diagram)

4.10. Data Flow diagram

0' Level DFD

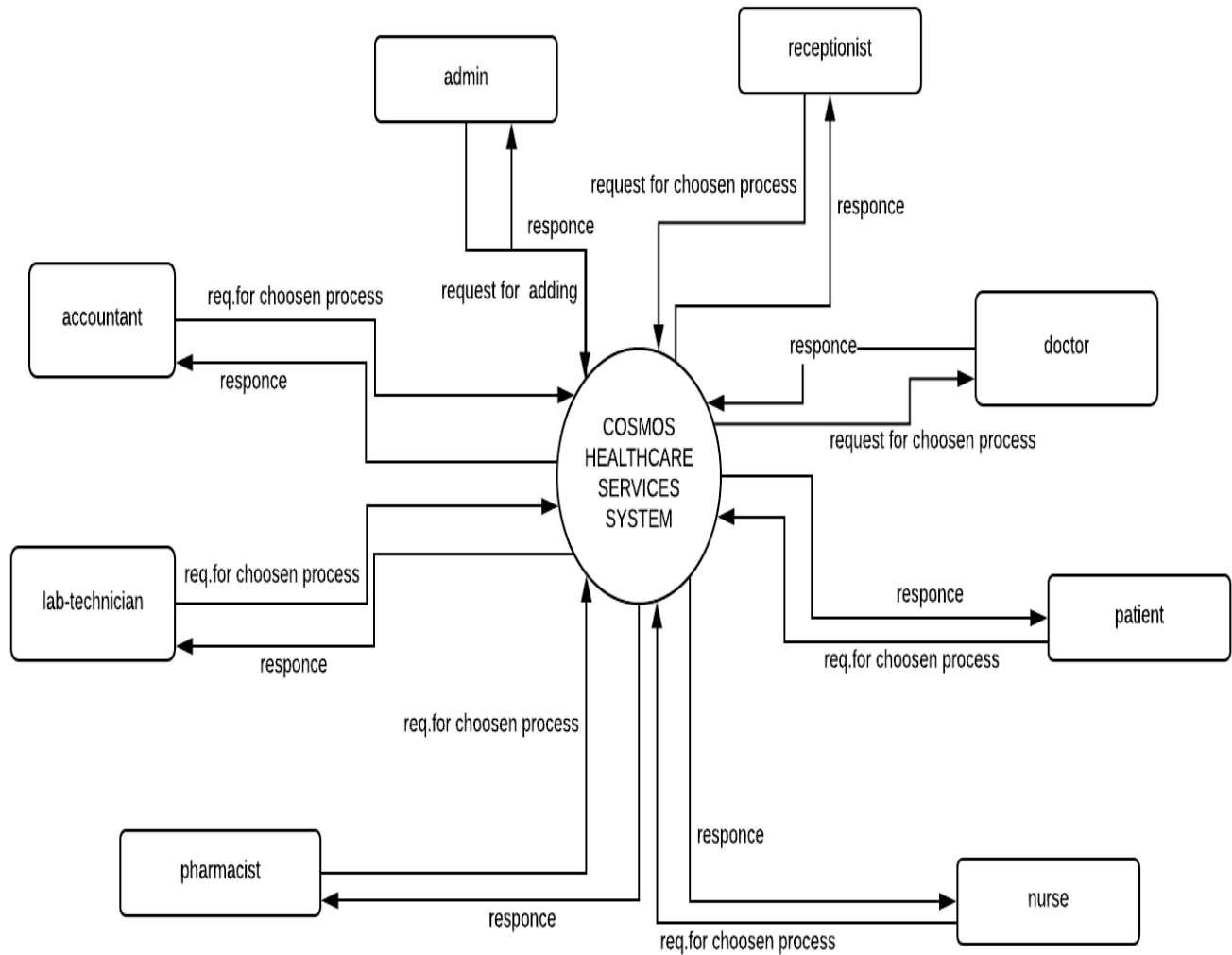


Figure 4.10.1 (0 level data flow diagram)

1'Level DFD

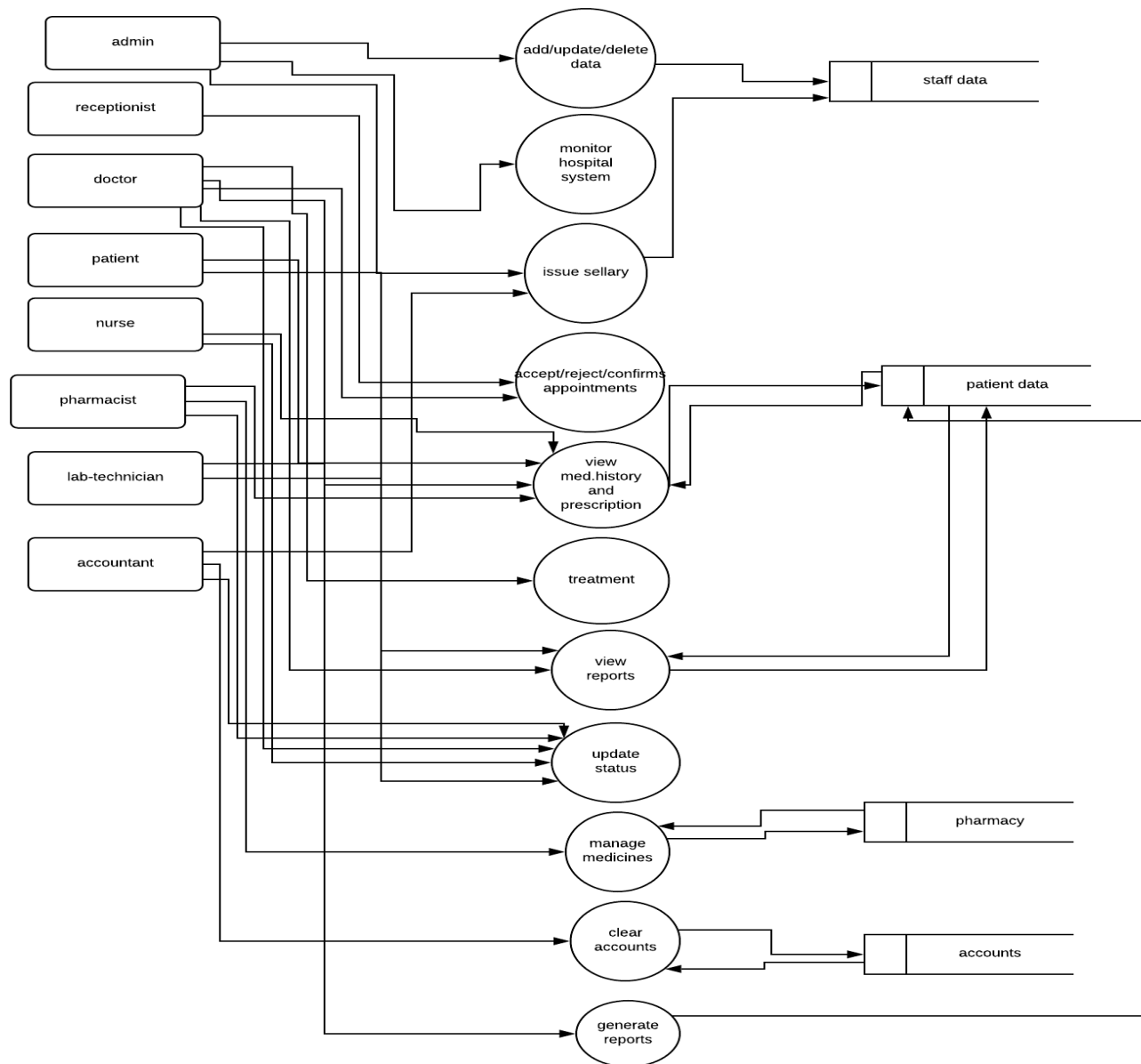


Figure 4.10.2 (1 level data flow diagram)

Chapter 5

Implementation

Chapter 5: Implementation

5.1. Important Flow Control/Pseudo codes

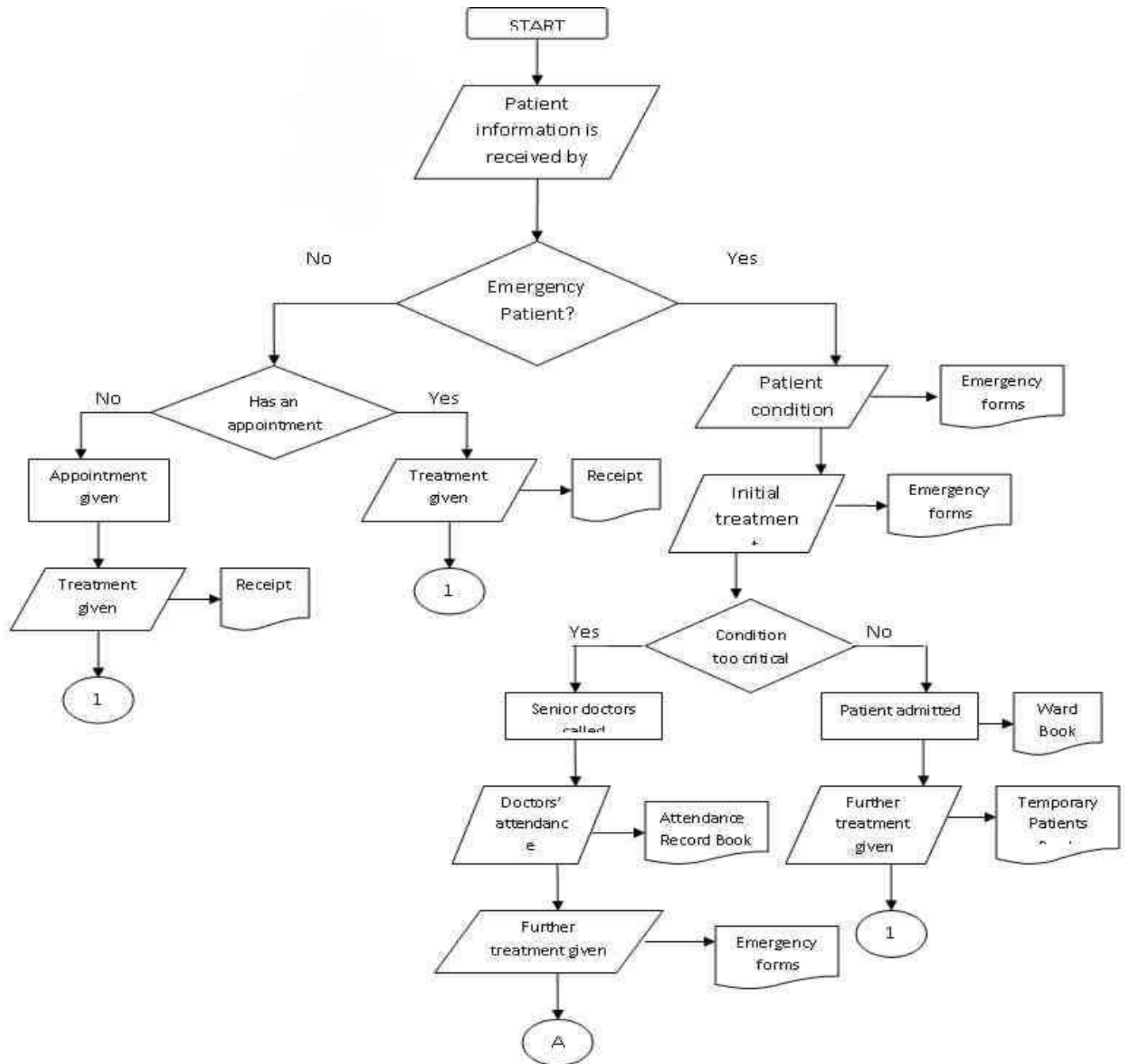


Figure 5.1 (flow chart)

5.2. Components, Libraries, Web Services and stubs

PayPal Library:

```
$this->load->library('PayPal');
```

Session Library:

```
$this->load->library('session');
```

Web Services:

Tera Host

5.3. Deployment Environment

Our main target is to facilitate our beloved people, we are trying to reduce the difficulties that patients and other people face while choosing and visiting doctors.

According to the scope of our project it has health care environment for its deployment because it is all about designed for health care system.

5.4. Tools and Techniques

Following are the tools used for development

Operating system:	Windows 7/ xp/8/10
Tools:	Adobe dreamweaver CS6
	Adobe photoshop CS6
	Android Studio
	SmartDraw Suit Edition
	XAMPP 5.6
Front end:	HTML5
	CSS3
	Bootstrap
Server side script:	PHP(CodeIgniter),Java
Database:	SQL Server

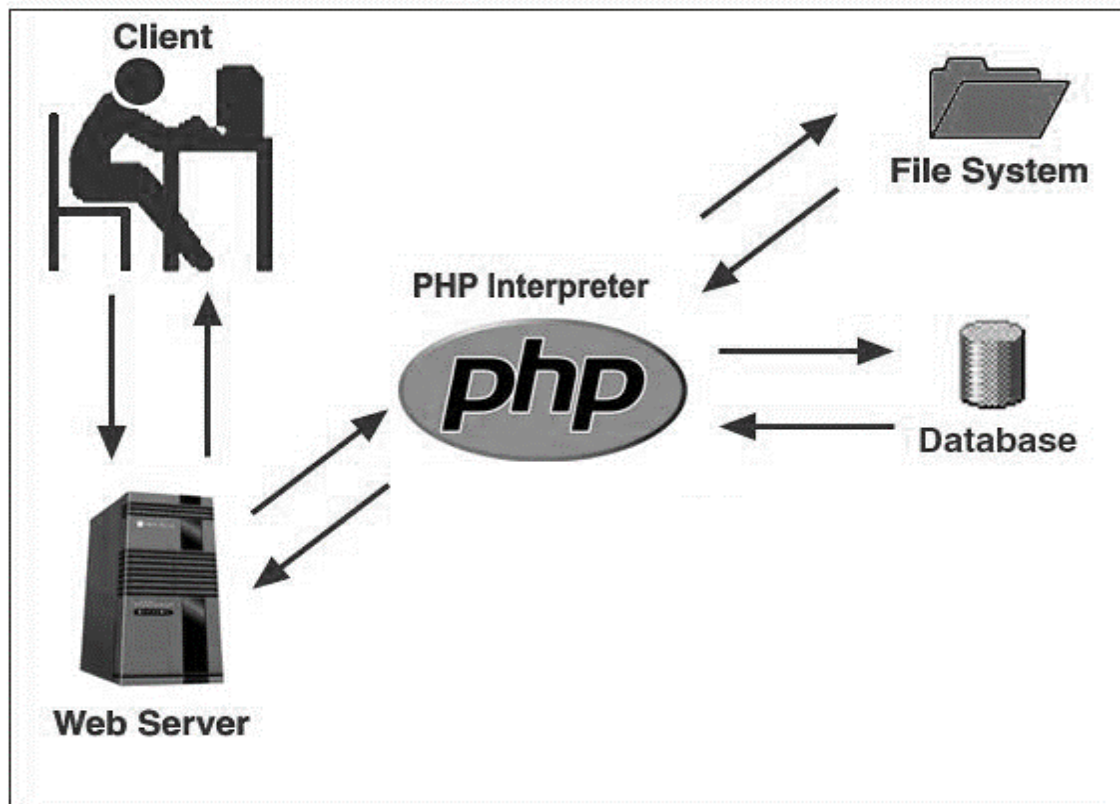
How PHP works:

Figure I (How PHP work)

5.5. Best Practices / Coding Standards

Best practices are available on many mediums but there are some authentic and more reliable sources for the learning and developing the new and innovative things by the new practices and concepts. There are many changings in layouts coding standards and conventions with the passage of time like many Web developers are often uncertain about the coding style and syntax to use in HTML. Between 2000 and 2010, many web developers converted from HTML to XHTML. With XHTML, developers were forced to write valid and "well-formed" code. HTML5 is a bit sloppier when it comes to code validation.

But the most authentic and best platforms of coding practices are:

- https://www.w3schools.com/html/html5_syntax.asp
- <http://docs.ckan.org/en/ckan-2.7.0/contributing/html.html>
- <https://codeigniter.com/>

5.6. Version Control

Version control is basically for the following purposes:

- Check-in and check-out functions, so you can keep track when a file is being edited and who is making changes.
- Preservation of old versions.
- Access prior versions.
- Version notes entered during document check-in are searchable
- Revision History that includes usernames, timestamps and comments for an at-a-glance view of your documents' edits.

As we are getting just a start with this project of new concept so we will launch its first version now that is **Cosmos Health services system ver1.1**. But we know very well that people wants more and more enhancement in the system with the passage of usage time for more facilities so we are ambitious to develop its more version as per requirement of the system enhancement whenever it is more required.

Chapter 6

Testing and Evaluation

Testing of Cosmos Health services system

Test Case ID: 1

Test Scenario:

This test case check that signup page working and email validations.

Prerequisites:

For access in the system user need email address.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
If user not use this symbol @	Not Valid	Not Valid	Pass	
If user use this symbol @	Valid	Valid	Pass	
If user use symbol @ , without period	Not Valid	Not Valid	Pass	

Test Case ID: 2

Test Case scenario:

This test case verify signup page working and password validations.

Prerequisites:

For access in the system user need email address.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Less than six characters	Not Valid	Not Valid	Pass	
More than six or six characters	Valid	Valid	Pass	

Test Case ID: 3**Test Case scenario:**

This test case verify signup page working and validations of upload picture

Prerequisites:

For upload picture user must have own account.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Picture extension txt,.doc,.pdf	Not upload pic doesn't accurate extension	Not upload pic doesn't accurate extension	Pass	
Picture extension .png , .jpg	Upload picture	Upload picture	Pass	

Test Case ID: 4**Test Case scenario:**

This test case check that Login email validations.

Prerequisites:

For access in the system at login page user must have already account with email address.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Not email id match in database record or doesn't signup this mail id	Not Validate email id	Not Validate email id	Pass	
Email id match and validate	Validate email	Validate email	Pass	

Test Case ID: 5**Test Case scenario:**

This test case check that Login password validations.

Prerequisites:

For access in the system at login page user must have already account.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Check unmatched password	Not access into system. Not validate email	Not access into system. Not validate email	Pass	
Retry and entered right password	Accepted	Accepted	Pass	

Test Case ID: 6**Test Case scenario:**

This test case verify adding/delete/edit doctor's record.

Prerequisites:

For doctor record adding/delete/update admin must have login

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Wrong input or empty required field	Not add/del/edit doctor record	Not add/del/edit doctor record	Pass	Wrong information
Accurate input info and complete	Add/Del/Update record of doctor	Add/Del/Update record of doctor	Pass	

Test Case ID: 7**Test Case scenario:**

This test case verify adding/delete/edit patient's record.

Prerequisites:

For patient record adding/delete/update admin must have login

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Wrong input or empty required field	Not add/del/edit patient record	Not add/del/edit patient record	Pass	Wrong information
Accurate input info and complete	Add/Del/Update record of doctor	Add/Del/Update record of doctor	Pass	Wrong information

Test Case ID: 8**Test Case scenario:**

This test case verify viewing doctor's availability

Prerequisites:

For viewing doctor availability patient must have login

Test Data	Expected Result	Actual Result	Final status	Reason of failure
If not select depart for availability check	Not show any Doctor availability	Not show any Doctor availability	Pass	Wrong information
Select depart and date, time for viewing availability	Show List of Doctor with date and time availability	Show List of Doctor with date and time availability	Pass	

Test Case ID: 9**Test Case scenario:**

This test case verify of requesting the appointment to doctor

Prerequisites:

For requesting the appointment to doctor patient must have login in our account.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Requesting for appointment to doctor without set date, time	Not send to doctor request for appointment	Not send to doctor request for appointment	Pass	
Requesting for appointment to doctor with all info and date , time	Send to request doctor for appointment	Send to request doctor for appointment	Pass	

Test Case ID: 10**Test Case scenario:**

This test case check approval of appointment from doctor

Prerequisites:

For approval of appointment from doctor. Doctor must have login in our account.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Doctor approve appointment request	Done appointment and send notification to patient	Done appointment and send notification to patient	Pass	
Doctor reject appointment request	Appointment request reject and send notification	Appointment request reject and send notification to patient	Pass	

Test Case ID: 11**Test Case scenario:**

This test case check for password change with old password

Prerequisites:

For change password user must have login and remember old password

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Give old password wrong and set new password	Not set new password	Not set new password	Pass	
Give old password right and set new password	Set new password successfully	Set new password successfully	Pass	

Test Case ID: 12**Test Case scenario:**

This test case check that Change password validation

Prerequisites:

For access in the system user should be logged in.

Test Data	Expected Result	Actual Result	Final status	Reason of failure
Less than six Characters	Not Valid	Not Validate	Pass	
More than six or six characters	Valid	Validate	Pass	

Chapter 7

Summary, Conclusion and Future Enhancements

7.1. Project Summary

Cosmos Health Services System provides the benefits of streamlined operations, enhanced administration & control, superior patient care, strict cost control and improved profitability. "Cosmos HCS" is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals as well as for patients. Patients can see his/her prescription like medicine diet plan etc. For ease of the patients and doctors we also developing an android app, using that app they can access records easily any time just using their smartphones over the internet. Patients can take appointment or can also check the availability of the doctor. It covers all the required modules right from Patient Registration, Medicine details, Doctor, Wards, , Admin, Store, Patient appointment, bill payment, record modification, discharge details etc.

The project 'Hospital Management System' is based on the database, object oriented programming. As there are many areas where we keep the records in database for which we are using MY SQL software which is one of the best and the easiest software to keep our information. This project uses Html as the front-end software and for the back-end we are using PHP "CodeIgniter framework" which is an Object Oriented Programming and has connectivity with MY SQL.

7.2. Achievements and Improvements

While doing this COSMOS HEALTH CARE SYSTEM project we achieved many tips and techniques and we improved a lot. We achieved a main goal of our struggle that we developed a fully functional project while having many hardships like resources and lack of knowledge of this project's technology. We achieved the goal of helping others by providing some attractive facilities.

We improved our skills very much. As we developed it by using two different tools so we got opportunity to learn and explore two tools. These tools are such tools that can help us in future as more as we explore it.

Some achievements are enlisted as:

- Patient Can Check Facilities online
- Validations accuracy
- Decrease Human Resource consumption
- Reliability
- Security
- Decrease paper work
- Time saving
- Efficiency
- User friendly
- Good Command on different software

7.3. Critical Review

The COSMOS HEALTH SERVICES SYSTEM includes registration of patients, stores their information, additionally generate computerized asking within the pharmacy and labs.

The code facilitate by giving a singular id for each patient then stores the small print of data of each patient and the workers mechanically. It contains search facility to see the availability of wards. Patient will search availableness of a doctor and therefore the secretarial assistant will check details of a patient exploitation the Id. The mobile application is for the doctor and patient solely. The patient login it and may read the list of accessible doctors, their medical record, and their reports and may fix the appointment of their desired doctor. The objectives of this system are as following:

- Keeping the record of patients and doctors with a mobile application.
- Recording information about the Patients online with application.
- Manage the Online Admission on Simple Click
- Minimize the operational time and make the operational activity easy
- Keep track of details so manage the work easily.
- Complete Report view to patient side and doctor side.
- Easy to view all detail of everything.
- Keeping record of the protection provided to children/patients.
- Keeping information regarding numerous diseases and medicines out ther to cure them.
- To provide the facility to new patient to register online.
- To provide the facility to admin to manage forms online instead of manual entry.
- To provide the facility to admin staff to manage records.
- To provide the facility to manage attendance.

These are the various jobs that need to be done in a Hospital by the operational staff and Doctors.

Features:

The various features of our product are as:

- Admin add, delete and edit record, new entry of any employee and doctors
- Can generate reports
- Can change their profiles
- Can generates payment voucher
- Confirms the appointments
- View the history of patients
- Patients can view the doctors availability, time and place
- Patients can select relevant doctor
- Patient can confirms appointment with doctor
- Patient can view his previous reports and medication
- Doctor can also review the history, reports and medication of the patients
- Doctor can confirms/rejects the patients appointment

7.4. Lessons Learnt

While doing this huge project of very long time period we learned many great lessons that includes both moral, behavioral and skill learning.

- We learned to manage the project for its hierarchal error free development with all of its testing.
- We learned team management, that how to manage the team and work task to complete the project on time within the cost budget with full functionality.
- We learned team working and collaboration.
- We learned different tools to use with new technology.

7.5. Future Enhancements/Recommendations

In this modern era of development every system is upgrading day by day with more and more efficient functionalities so in future we will enhance our project to more complex level for effective use. It is recommended to enhance it in future according to the new requirements of the public users rather than to stop it here.

Appendices

Appendix A: User Manual

Contents

- Admin Panel
- Doctor Panel
- Patient Panel
- Nurse Panel
- Pharmacist Panel
- Laboratorist Panel
- Accountant Panel
- Receptionist Panel

Admin Panel

DASHBOARD

Total doctors, patients, nurses, pharmacists, laboratorists, accountants, payments, medicines, operation reports, birth reports, death reports and settings at a glance.

MANAGE DEPARTMENTS

- * Manage all departments of the hospital
- * Create a new department
- * Edit any department
- * Delete a department

— *How to create a new department?*

Click on add department button from department page of admin panel, fill out the form and click on submit button.

MANAGE DOCTORS

- * Manage all doctors of the hospital
- * Create a new doctor
- * Edit any doctor
- * Delete a doctor

— *How to create a new doctor?*

Click on add doctor button from doctor page of admin panel, fill out the form and click on submit button.

MANAGE PATIENTS

- * Manage all patients of the hospital
- * Create a new patient
- * Edit any patient
- * Delete a patient

— *How to create a new patient?*

Click on add patient button from patient page of admin panel, fill out the form and click on submit button.

MANAGE NURSES

- * Manage all nurses of the hospital
- * Create a new nurse
- * Edit any nurse
- * Delete a nurse

— *How to create a new nurse?*

Click on add nurse button from nurse page of admin panel, fill out the form and click on submit button.

MANAGE PHARMACISTS

- * Manage all pharmacists of the hospital
- * Create a new pharmacist
- * Edit any pharmacist
- * Delete a pharmacist

— *How to create a new pharmacist?*

Click on add pharmacist button from pharmacist page of admin panel, fill out the form and click on submit button.

MANAGE LABORATORISTS

- * Manage all laboratorists of the hospital
- * Create a new laboratorist
- * Edit any laboratorist
- * Delete a laboratorist

— *How to create a new laboratorist ?*

Click on add laboratorist button from laboratorist page of admin panel,
fill out the form and click on submit button.

MANAGE ACCOUNTANTS

- * Manage all accountants of the hospital
- * Create a new accountant
- * Edit any accountant
- * Delete an accountant

— *How to create a new accountant?*

Click on add accountant button from accountant page of admin panel,
fill out the form and click on submit button.

MANAGE RECEPTIONISTS

- * Manage all receptionists of the hospital
- * Create a new receptionist
- * Edit any receptionist
- * Delete a receptionist

— *How to create a new receptionist?*

Click on add receptionist button from receptionist page of admin panel,
fill out the form and click on submit button.

MONITOR HOSPITAL

View information of payment history, bed allotment, blood bank, blood donors, medicines, operation reports, birth reports and death reports of the entire hospital.

MANAGE NOTICEBOARD

- * Manage all notices of the hospital
- * Create a new notice
- * Edit any notice
- * Delete a notice
- * Calendar view of all notices created by the admin that can be viewed by month, week and day

— *How to create a new notice?*

Click on add notice button from noticeboard page of admin panel, fill out the form and click on submit button.

SETTINGS

System Settings

View and edit system settings

— *How to change text alignment?*

- Login to your admin
- Go to menu : Settings > System Settings
- Choose Text align > Right to Left (RTL) or Left to Right (LTR)
- Save your option

Language Settings

Add and manage language settings

— *How to convert to your language?*

Converting the software to your native language is so easy. Follow these steps :

- Login to administrative panel
- Go to settings > manage language
- You can add / delete any language to the database
- Update the default phrases into your language and save it

Simply and easily make the software your native!

— *How to import language pack?*

There are 20+ language pack available. Follow these steps to import language pack:

- Login to phpmyadmin
- Go to your database, where you have installed this script
- Go to import menu in right side
- Upload the language.sql file from 'uploads' directory and import it
- You will see 20+ language pack is installed in your admin panel

Simply and easily make the software your native!

— *How to change default language?*

- Login to your admin
- Go to menu : Settings > System Settings
- Choose your language from language list
- Save your option

SMS Settings

View and edit your click tell sms settings

PROFILE

Edit profile and password of the admin

Doctor Panel

DASHBOARD

Calendar view of all appointments of logged in doctor and notices created by the admin that can be viewed by month, week and day.

MANAGE APPOINTMENTS

Appointment List

- * Manage all appointments of the logged in doctor
- * Create a new appointment
- * Edit any appointment
- * Delete an appointment
- * Calendar view of all approved appointments that can be viewed by month, week and day

— *How to create a new appointment ?*

- Click on add appointment button from appointment page of doctor panel, fill out the form and click on submit button.
- If 'Notify Patient With SMS' checkbox is checked then a notification sms will be sent to the patient.

Requested Appointments

- * Manage all requested appointments that requires approval
 - * Approve any appointment
 - * Delete a requested appointment
- *How to approve an appointment ?*
- Click on approve button from requested appointment page of doctor panel, fill out the form and click on approve button.
 - If 'Notify Patient With SMS' checkbox is checked then a notification sms will be sent to the patient.

MANAGE PRESCRIPTIONS

- * Manage all prescriptions of the logged in doctor
 - * Create a new prescription
 - * Edit any prescription
 - * View any prescription
 - * Delete a prescription
 - * Create diagnosis report for a prescription
 - * View associated diagnostic reports
 - * Delete diagnosis reports
- *How to create a new prescription ?*
- Click on add prescription button from prescription page of doctor panel, fill out the form and click on submit button.
- *How to create and manage diagnosis reports ?*
- Click on view diagnosis report button from prescription page's prescription list of doctor panel. All diagnosis reports of the current prescription is shown here.

- Fill out the form and click on submit button to create a new diagnosis report.
- Click on download button to download any document of the associated report.

MANAGE PATIENTS

- * Manage all patients who have appointments with logged in doctor
- * Create a new patient
- * Edit a patient
- * View profile of a patient
- * Delete a patient
- * View medication history of a patient

— *How to create a new patient ?*

Click on add patient button from patient page of doctor panel, fill out the form and click on submit button.

— *How to view medication history ?*

Click on view medication history button under action menu from patient page's patient list of doctor panel. All medication history of the current patient is shown here.

MANAGE BED ALLOTMENTS

- * Manage all bed allotments of the hospital
- * Create a new bed allotment
- * Edit any bed allotment
- * Delete a bed allotment

— *How to create a new bed allotment ?*

Click on add bed allotment button from bed allotment page of doctor panel, fill out the form and click on submit button.

BLOOD BANK

View blood donor list and blood bank status.

MANAGE REPORTS

- * Manage all reports created by the logged in doctor
- * Create a new report
- * Edit any report
- * Delete a report

— *How to create a new report ?*

Click on add report button from report page of doctor panel, fill out the form and click on submit button.

PRIVATE MESSAGING

Send and receive messages between logged in doctor and the patients having appointments with that doctor.

— *How to send new message ?*

Click on new message button from message page of doctor panel, fill out the form and click on submit button.

— *How to reply to received messages ?*

- A list of all recipients and senders is shown on message page.
- Click on any sender/receiver of the list to view associated messages, fill out the form at the bottom and click on send to reply to any message.

PROFILE

- * View and edit profile.
- * Edit password.

Patient Panel

DASHBOARD

Calendar view of all notices created by the admin that can be viewed by month, week and day.

MANAGE APPOINTMENTS

Appointment List

- * View all approved appointments of the logged in patient

- * Apply for a new appointment

viewed by month, week and day

— *How to apply for a new appointment ?*

Click on apply for appointment button from appointment list page of patient panel, fill out the form and click on submit button.

Pending Appointments

View all pending appointments of logged in patient.

MANAGE PRESCRIPTIONS

- * View all prescriptions of the logged in patient

- * View associated diagnostic reports

SHOW DOCTORS

View all doctors list and their departments.

BLOOD BANK

View blood donor list and blood bank status.

ADMIT HISTORY

View admit history of logged in patient.

OPERATION HISTORY

View operation history of logged in patient.

INVOICE

- * View all invoices of logged in patient
- * View invoice details
- * Print any invoice

PRIVATE MESSAGING

Send and receive messages between logged in patient and the doctors having appointments with that patient.

— *How to send new message ?*

Click on new message button from message page of patient panel, fill out the form and click on submit button.

— *How to reply to received messages ?*

- A list of all recipients and senders is shown on message page.
- Click on any sender/receiver of the list to view associated messages, fill out the form at the bottom and click on send to reply to any message.

PROFILE

- * View and edit profile.
- * Edit password.

Nurse Panel

DASHBOARD

Calendar view of all notices created by the admin that can be viewed by month, week and day.

MANAGE PATIENTS

- * Manage all patients
- * Create a new patient
- * Edit a patient
- * Delete a patient

— *How to create a new patient ?*

Click on add patient button from patient page of nurse panel, fill out the form and click on submit button.

MANAGE BEDS AND BED ALLOTMENTS

Manage Beds

- * Create a new bed
- * Edit a bed
- * Delete a bed

— *How to create a new bed ?*

Click on add bed button from bed page of nurse panel, fill out the form and click on submit button.

Manage Bed Allotments

- * Manage all bed allotments of the hospital
- * Create a new bed allotment
- * Edit any bed allotment
- * Delete a bed allotment

— *How to create a new bed allotment ?*

Click on add bed allotment button from bed allotment page of nurse panel, fill out the form and click on submit button.

MANAGE BLOOD BANK AND BLOOD DONORS

Manage Blood Bank

- * View all blood bank status of the hospital
- * Edit blood bank status

Manage Blood Donors

- * Manage all blood donors of the hospital
- * Create a new blood donor
- * Edit any blood donor
- * Delete a blood donor

— *How to create a new blood donor ?*

Click on add blood donor button from blood donor page of nurse panel, fill out the form and click on submit button.

MANAGE REPORTS

- * Manage all reports of the hospital
- * Create a new report
- * Edit any report
- * Delete a report

— *How to create a new report ?*

Click on add report button from report page of nurse panel, fill out the form and click on submit button.

PROFILE

- * View and edit profile and Edit password.

Pharmacist Panel

DASHBOARD

Calendar view of all notices created by the admin that can be viewed by month, week and day.

MANAGE MEDICINE CATEGORIES AND MEDICINES

Manage Medicine Categories

- * Manage all medicine categories of the hospital
- * Create a new medicine category
- * Edit any medicine category
- * Delete a medicine category

— *How to create a new medicine category ?*

Click on add medicine category button from medicine category page of pharmacist panel, fill out the form and click on submit button.

Manage Medicines

- * Manage all medicines of the hospital
- * Create a new medicine
- * Edit any medicine
- * Delete a medicine

— *How to create a new medicine ?*

Click on add medicine button from medicine page of pharmacist panel, fill out the form and click on submit button.

PROFILE

- * View and edit profile.
- * Edit password.

Laboratorists Panel

DASHBOARD

Calendar view of all notices created by the admin that can be viewed by month, week and day.

MANAGE BLOOD BANKS

- * View all blood bank status of the hospital
- * Edit blood bank status

MANAGE BLOOD DONORS

- * Manage all blood donors of the hospital
- * Create a new blood donor
- * Edit any blood donor
- * Delete a blood donor

— *How to create a new blood donor ?*

Click on add blood donor button from blood donor page of pharmacist panel, fill out the form and click on submit button.

PROFILE

- * View and edit profile.
- * Edit password.

Accountant Panel

DASHBOARD

Calendar view of all notices created by the admin that can be viewed by month, week and day.

MANAGE INVOICES

- * Manage all invoices of the hospital
- * Create an invoice
- * View invoice details
- * Print any invoice
- * Edit any invoice
- * Delete an invoice

— *How to create a new invoice ?*

Click on add invoice button under invoice menu from accountant panel, fill out the form and click on create new invoice button.

PROFILE

- * View and edit profile.
- * Edit password.

Receptionist Panel

DASHBOARD

Calendar view of all notices created by the admin that can be viewed by month, week and day.

MANAGE APPOINTMENTS

Appointment List

- * View all appointments
- * Create a new appointment
- * Calendar view of all approved appointments that can be viewed by month, week and day

— *How to create a new appointment ?*

- Click on add appointment button from appointment list page of receptionist panel, fill out the form and click on submit button.
- If 'Notify Patient With SMS' checkbox is checked then a notification sms will be sent to the patient.

— *How to filter appointments ?*

- Go to appointment list page of receptionist panel
- By default appointments from the last 30 days of all doctors is shown
- Select desired doctor, start date and end date. Click on filter appointments button to apply the filter.

Requested Appointments

- * Manage all requested appointments that requires approval
- * Approve any appointment

— *How to approve an appointment ?*

- Click on approve button from requested appointments page of receptionist panel, fill out the form and click on approve button.
- If 'Notify Patient With SMS' checkbox is checked then a notification sms will be sent to the patient.

PROFILE

- * View and edit profile.
- * Edit password.

Appendix B: Information / Promotional Material

A.1. Broacher

Keep healthy and stay strong

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Cosmos Health Care system

Cosmos Health care system

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Contact Us

anconamubasher22@gmail.com

Figure A.1(Brochure)

A.2. Flyer



Figure A.2(Flyer)

A.3. Standee

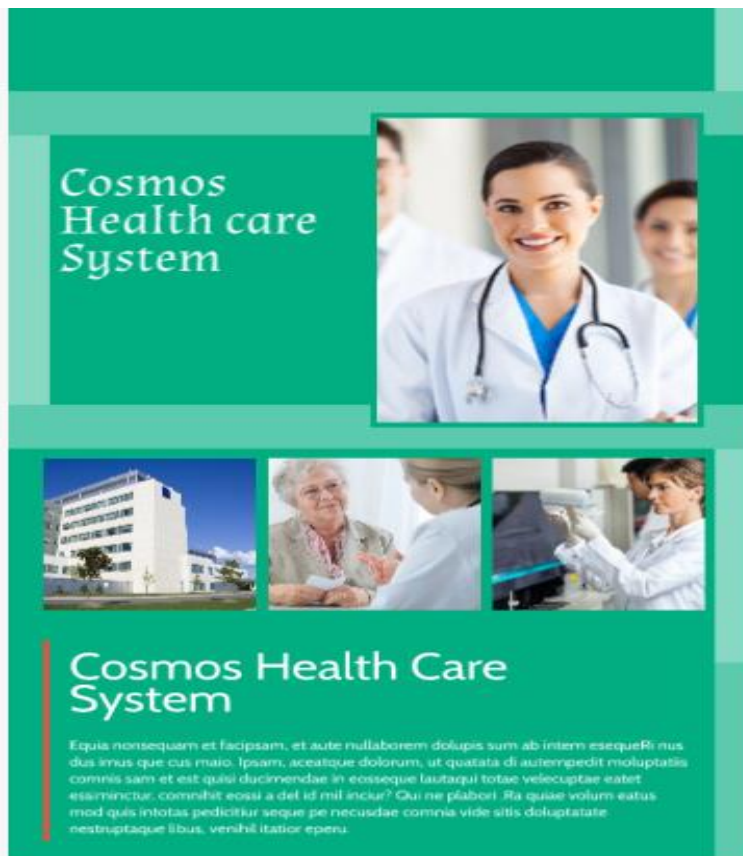


Figure A.3(Standee)

A.4. Banner

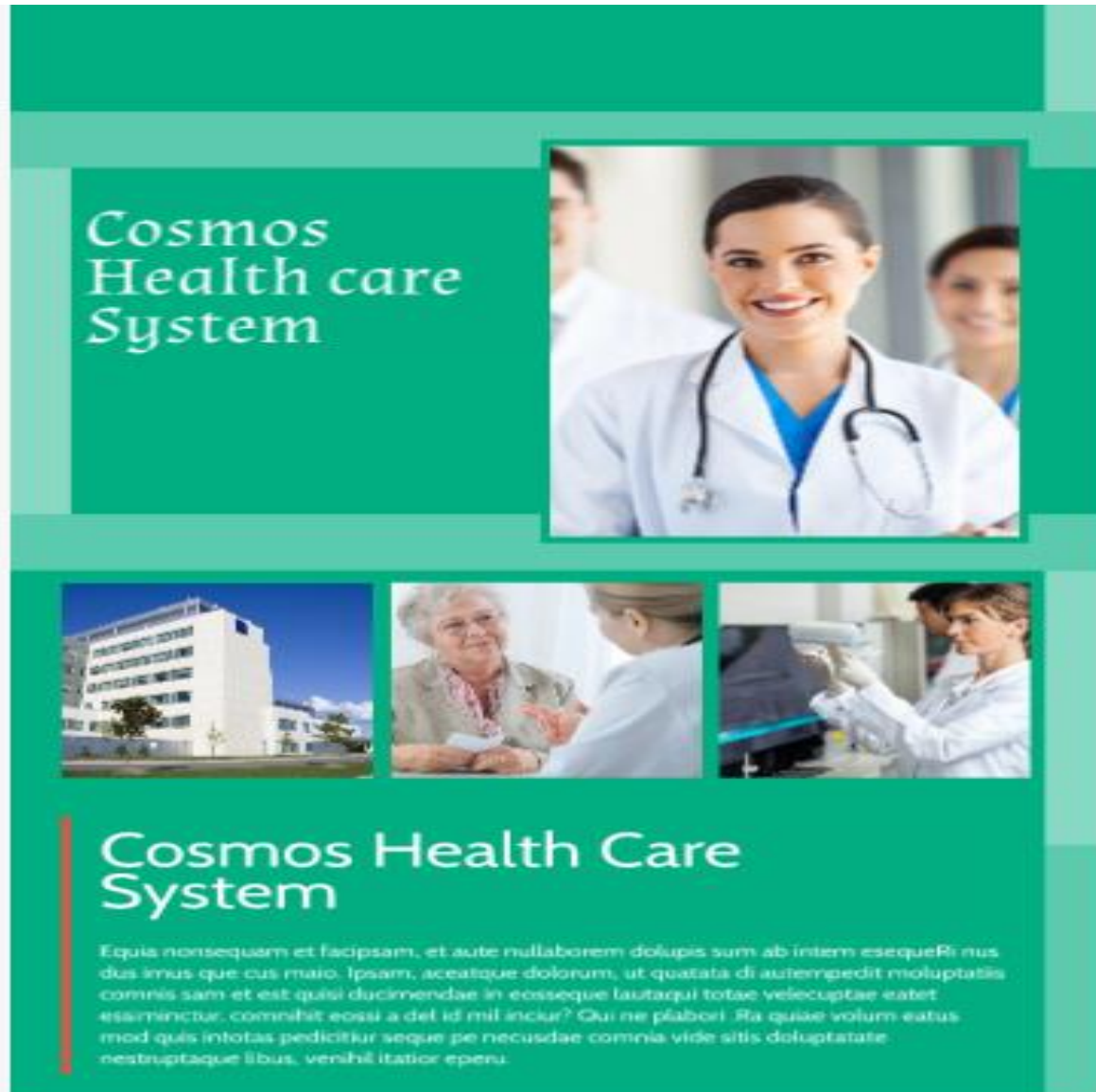


Figure A.4(Banner)

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