Software Requirements Specification
For
"Mediquick"

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1. Introduction

Software Requirement Specifications also known as SRS picturizes the full depth, requirements, scope and many other criteria. A detail and specific requirements of our project will be provided by document of ***"Mediquick"***.

1.1 Purpose

The main purpose of this project is to provide the automation service of reservation of doctor schedule, Prescription of the doctor, lab management and various other features. Mainly we want to build a diagnosis management system.

1.2 Project Scope

We want to build an app which will connect three parties including patient, clinic controllers and doctors. They all will be connected through a large database which will help them to store their data and get the necessary information without any hazard. We also visualize their connection through different diagrams. This project will reduce time and cost of both parties and it will be effective for our health sector also.

1.3 Glossary

This subsection contains definitions of all the terms, acronyms, and abbreviations used in the document. Terms and concepts from the application domain are defined.

- API – Application Programming Interface
- SRS – Software Requirement Specifications
- UI – User Interface
- SDLC – Software Development Life Cycle
- DBMS – Database Management System

1.4 References

IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

1.5 Overview

In the current situation of our country, it is very hard for our patients to get the appointment of the doctors or getting treatments from clinics. Also, clinic cannot manage the data of their doctors or patients in a collective way. It causes havoc for all parties.

We live in the era where we can get data through access and also store our information in the secured database. But getting treatment from doctors and other treatment related issues are not handled in a disciplined manner in our country. It wastes time and create various other problems.

As no such system exists, patients find it difficult to deal with the doctors and clinics. Even clinic cannot manage the doctor and patient schedule properly. The ultimate result costs the patients mainly who must get the proper treatment. doctors also cannot get the information how many patients they have to deal with or cannot see the history of the patient.

By analyzing such circumstances, we want to build an automation system of proper diagnostic management system through our project ***"Mediquick"***. All information of doctors, clinic and patients will be stored and they can easily access their data very easily. We also ensure the necessary security of information and other processes.

2. User Classes and characteristics

There are six types of stakeholders in our "Diagnostic Center Module". Such as:

Patient: Patient can get the appointment of the doctors and also can view the prescription. They also can get the lab suggestion through their own account. But first of all, they need to create an account to access this feature. They can view the clinic list very easily.

Doctor: Doctor will have their own account and they can view the patient history and can prescribed them.

Clinic: Clinic will manage the doctor appointment schedule according to the permission of the doctor and can also their own lab schedule.

Lab manager: Lab manger will have a separate account. He can view the suggested lab of the patients and can also view and submit the new lab report.

3. Design and implementation constraints

Design and implementation constraints are those that we have used to implement this project make successful. It also describes tool that enables developers and testers to view and interact with the user interface (UI) elements of this application.

3.1 User Interface Technology

3.1.1 Programming Language

We will use Java as programming language to develop our application. Mainly Java Swing and Java FX will be used to develop this project.

3.1.2 Web Server

A Web server is a program that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users, in response to their requests, which are forwarded by their computers' HTTP clients. Dedicated computers and appliances may be referred to as Web servers as well. We will use the Apache HTTP server to implement this project.

3.1.3 Database Server

We will use MySQL database server to store all of the information of this system. The reason behind to choose the database server are given below:

- Security
- Reporting and Data Mining
- Replication
- Fault tolerance
- Performance diagnostics

4. Requirement Specification

Before a system is designed and implemented, the requirements have to be specified in enough detail to make analysis and design possible. This is a big part of software engineering, especially for larger systems. The complete requirement specification based on the elicitation process is described in this section.

4.1 Functional Requirements

Every system must have some functional requirements. Functional requirement defines a system or its component. It describes the functions a software must perform. A function is nothing but inputs, its behavior, and outputs. It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality which defines what function a system is likely to perform. Functional software requirements help to capture the intended behavior of the system. Now, we are going to mention functional requirements associating with our project.

Table 01: Patient search for hospitals

FR-1	**Patient search for hospitals**
Description	Patient finds the hospital and come to search his needed doctors for doctor's appointment. But in our apps finding hospital can be done by using a search option. Patient need to search hospitals by Find Hospital's module, which is unique. Now, no need to check manually.
Stakeholders	Patient
Priority	High

Table 02: Patient search for Doctors

FR-2	**Patient search for Doctors**
Description	After searching through the hospital and come to search his needed doctors for doctor's appointment. But in our apps find doctors can be done by using a search option. Patient need to search doctors by Find doctor's module, which is unique. Now, no need to check manually.
Stakeholders	Patient
Priority	High

Table 03: Patient see Doctors details

FR-3	**Patient see Doctors details**
Description	When patient search for a doctor, then they will be able to see the doctor profile assigned to that hospital. And then patient will see the doctor's qualification, about doctor etc.
Stakeholders	Patient
Priority	High

Table 04: Patient set appointment

FR-4	**Patient set appointment**
Description	After searching doctors, patient come to the hospital for set appointment. But in our apps doctor’s appointment can be done by using a set appointment button, which is unique. Now, no need to set appointment manually.
Stakeholders	Patient
Priority	High

Table 05: Patient cancel appointment

FR-5	**Patient cancel appointment**
Description	After set the appointment, patient need to cancel the appointment for various reason. Patient come to the hospital and talk with management for cancel the appointment. But in our app’s appointment can be cancel by using a Cancel appointment button. Now, no need to cancel appointment manually.
Stakeholders	Patient
Priority	Low

Table 06: Patient update appointment

FR-6	**Patient update appointment**
Description	After set the appointment, patient need to update the appointment for various reason. Patient come to the hospital and talk with management for update the appointment. But in our app’s appointment can be update by using an Update appointment button. Now, no need to update appointment manually.
Stakeholders	Patient
Priority	Low

Table 07: Patient update own profile

FR-7	**Patient update own profile**
Description	Patient need to update their profile. For updating own profile, they need to log in to the system.
Stakeholders	Patient
Priority	Low

Table 08: Patient change account and password

FR-8	**Patient change account and password**
Description	Patient need to change account and password. For change account and password own profile, they need to log in to the system.
Stakeholders	Patient
Priority	Low

Table 09: Doctor check appointment

FR-9	**Doctor check appointment**
Description	Manually, doctor don't know about the number today's appointment, about patient info, diseases description. But in our apps, after entering the app by doctor email and password, doctor see the number today's appointment, about patient info, diseases short description.
Stakeholders	Doctor
Priority	High

Table 10: Doctor prescribe test and medicine

FR-10	**Doctor prescribe test and medicine**
Description	Manually, doctor gives the prescription. But in our apps doctor log in the app with patient ID and Password and add the prescribe test and medicine added in the document. No need to write on prescription. Patient also print out the prescription.
Stakeholders	Doctor
Priority	High

Table 11: Doctor update own profile

FR-11	**Doctor update own profile**
Description	Doctor need to update their profile. For updating own profile, they need to log in to the system.
Stakeholders	Doctor
Priority	Low

Table 12: Doctor change account and password

FR-12	**Doctor change account and password**
Description	Doctor need to change account and password. For change account and password own profile, they need to log in to the system.
Stakeholders	Doctor
Priority	Low

Table 13: Lab Reporter check necessary test

FR-13	**Lab Reporter check necessary test**
Description	Patient come to the lab reporter for do the necessary test and patient come with prescription. Lab reporter check the prescription. But in our apps patient no need to come with prescription but also with his ID and password. Lap reporter see the necessary test with patient ID and Password. Now, no need to check manually.
Stakeholders	Lab Reporter
Priority	High

Table 14: Lab Reporter create report

FR-14	**Lab Reporter create report**
Description	Manually, patient wait for test report result. Patient collect the report result and go to the doctor. But in our apps lab reporter add the report result in the patient document by using patient ID and Password. Now, no need to wait manually.
Stakeholders	Lab Reporter
Priority	High

Table 15: Lab Reporter update own profile

FR-15	**Lab Reporter update own profile**
Description	Lab Reporter need to update their profile. For updating own profile, they need to log in to the system.
Stakeholders	Lab Reporter
Priority	Low

Table 16: Lab Reporter change account and password

FR-16	**Lab Reporter change account and password**
Description	Lab Reporter need to change account and password. For change account and password own profile, they need to log in to the system.
Stakeholders	Lab Reporter
Priority	Low

Table 17: Clinic manager add clinic

FR-17	**Clinic manager add clinic**
Description	In our app's clinic manager add clinic with following some rules. Patient also search clinic which also includes this system.
Stakeholders	Clinic manager
Priority	High

Table 18: Clinic manager manage doctors

FR-18	**Clinic manager manage doctors**
Description	Manually clinic management add doctors which type of doctor are necessary in their clinic. In our app's clinic manager add doctor with their necessary information. Clinic manager also add, delete, update their information. Patient also see the doctor details.
Stakeholders	Clinic manager
Priority	High

Table 19: Clinic manager manage employees

FR-19	**Clinic manager manage employees**
Description	In our app's clinic manager add employees with their necessary information. Clinic manager also add, delete, update their information.
Stakeholders	Clinic manager
Priority	Medium

Table 20: Clinic Manager update own profile

FR-20	**Clinic Manager update own profile**
Description	Doctor need to update their profile. For updating own profile, they need to log in to the system.
Stakeholders	Clinic Manager
Priority	Low

Table 21: Clinic Manager change account and password

FR-21	**Clinic Manager change account and password**
Description	Lab Reporter need to change account and password. For change account and password own profile, they need to log in to the system.
Stakeholders	Clinic Manager
Priority	Low

Table 22: Data retrieve from cloud server

FR-22	**Data retrieve from cloud server**
Description	Data must be retrieved from server as the whole system will be dynamic. It is also to be said that, all operational functionality will be occurred on server also.
Stakeholders	Clinic Manager
Priority	High

4.2 Data Requirements

For defining data requirements, we need to build the model. For our application maximum data would be loaded from remote user. And for that purpose, we need to focus on some major points. Such as:

- Types of entity of the system
- Route data locations
- Capacity and resources of the data requirements
- Data source sequence
- Data availability schedules
- Quantity of data
- Availability of data

4.3 Performance Requirements

It is very important to maintain performance of any software system. To ensure performance, we need to maintain some steps. Now, I will explain some perspective by which we are going to enhance the performance of our project.

4.3.1 Speed & Latency Requirements

Speed and latency requirements must be ensured while retrieving data from the cloud server.

Table 21: Search result must be faster

SLR-1	**Search result must be faster**
Description	When patient search for hospitals or doctors, then the search result must show within seconds.
Stakeholders	Patient
Priority	High

4.3.2 Precision & Accuracy Requirements

Result that is to be shown to the end user is need to be accurate. Because, wrong information might be ruined the whole business process.

Table 22: Search result must be accurate

PAR-1	**Search result must be accurate**
Description	When patient search for hospitals or doctors, then the search result must be according to the input value given by patient.
Stakeholders	Patient
Priority	High

4.3.3 Capacity Requirements

The developed system by us must be capable to handle user data, provide accurate information, handling database, manage http request etc.

Table 23: The system will handle thousands of data

CR-1	**The system will handle thousands of data**
Description	The system needs to handle data thousands of data every moment.
Stakeholders	Patient, Clinic manager
Priority	High

4.4 Dependability Requirements

The term dependability is measured based on four dimensions. Such as:

- Availability
- Reliability
- Safety
- Security

If we want to say that our application system is dependable then it must fulfil the four dimensions. But there are other tasks. Like there is no way to make mistakes or our system should have the ability to detect and then remove errors. Besides that, it is also very important to limit the damage which might be caused by system failure.

4.4.1 Reliability & Availability Requirements

Now, We will mention requirements which are related to reliability and availability.

Table 24: The system must be available on 24 X 7

RAR-1	**The system must be available on 24 X 7**
Description	Our system must be available all day long, every day in a week • The system must be updated regularly • System must be malware free
Stakeholders	Patient, Doctor, Clinic Manager
Priority	High

4.4.2 Robustness or Fault-Tolerance Requirements

To ensure robustness and fault-tolerance facilities to the end users, it is urgent to ensure 0% crush. Moreover, it must show accurate results.

Table 25: The system handles all user access without system errors

RFT-1	**The system handles all user access without system errors**
Description	Thousands of users might hit our application system at a time. All their requests must be handled without any fault.
Stakeholders	N/A
Priority	High

4.4.3 Safety-Critical Requirements

There are no safety-critical requirements in our project.

4.5 Maintainability & Supportability Requirements

It is very important to provide after service or support to the end users.

4.5.1 Maintainability Requirements

Table 26: System helps to update user profile

MR-1	**System helps to update user profile**
Description	It is important to update user profile.
Stakeholders	Patient
Priority	Medium

4.5.2 Supportability Requirements

Supportability requirements may have related to some extends. Like:

- Testability
- Extensibility
- Adaptability
- Maintainability
- Compatibility
- Configurability
- Serviceability
- Install ability

Our application meets all of the above requirements related to supportability.

4.5.3 Adaptability Requirements

There are no adaptability requirements in our system software.

4.6 Security Requirements

Making software security as a requirement is very important. Software security requirements should be its functional requirement. Software security enforces security of an application system.

Functionality related to software security can either be directly tested or observed. Some security related requirements are given below:

- Signing in a patient
- Get access according to logged in user
- Signing out as a patient
- Handling encrypted passwords

While accessing to the system, each and every module must provide a central authentication mechanism. There is also a process to prevent entering into the system by ensuring hashed password for the unauthenticated users.

4.6.1 Access Requirements

For accessing to our application system, there remains some authentication and authorization techniques. And every module of our system will provide it. Now I will provide an explanation below.

Table 27: Application provides security mechanism

AR-1	**Application provides security mechanism**
Description	Every module is designed in such a way that it only gives access to the authorized and authenticated users.
Stakeholders	Patient, Doctor, Clinic Manager, Lab Reporter, Super Admin
Priority	High

4.6.2 Integrity Requirements

Integrity requirements refers to a security system which ensures an expectation of data quality. It also ensures that all data of the system would never be exposed to the malicious modification or accidental destruction. For that reason, we will store our user passwords as encrypted format which is impossible to decrypt. It is also called hashed password.

4.6.3 Privacy Requirements

It is very important to ensure privacy of the system users. Privacy requirements enhances to protect stakeholder's privacy. In this way, all data or a partial part of data are going to be disclosed according to system's privacy policy. To ensure privacy, the central database should be protected by the anonymous. Users are permitted to get access to those data which are being associated by them which can be ensured by the user log in system.

4.7 Usability and Human-Interaction Requirements

The main target of developing any system is to make the system user friendly and easy to usable for the end users.

4.7.1 Ease of Use Requirements

Our application is easy to use and also easily understandable.

Table 28: Application must be usable for the end users

EUR-1	**Application must be usable for the end users**
Description	This app is enough usable to the patient or doctor or lab reporter or clinic manager by which they can operate this system easily.
Stakeholders	Patient, Doctor, Lab reporter, Clinic manager
Priority	High

4.7.2 Personalization and Internationalization Requirements

There are not any personalization and internationalization requirements to our system. This maiden version of our application is only be operated by Bangladesh.

4.7.3 Understand ability and Politeness Requirements

It is already said that the application which we are going to develop, is understandable enough. The system provides hints to users whether any error occurred or wrong. By reading those errors users can be able to operate the system easily.

4.7.4 Accessibility Requirements

There are no specific accessibility requirements associated to our system yet.

4.7.5 User Documentation Requirements

Documentation are mainly two types. One is internal documentation which is generally written by the application engineers. It is prepared to make development life cycle easier for the system engineers or system analysts.

Table 29: The system engineer documentation

UDR-1	**The system engineer documentation**
Description	To develop our application named mediquick, firstly we have made a system analysis team as well as documentation team.
Stakeholders	System analysts or software developers
Priority	Medium

4.7.6 Training Requirements

Training requirements involved in after service of any application. It is very necessary to properly train up end users to the system so that they would be capable to operate easily. After launching the full package to the market, firstly we provide training to the different end users like patient, doctor, lab reporter, clinic manager.

4.8 Look and Feel Requirements

Look and feel requirements mainly refers how the system will look like and how the user interface or graphical user interface of our system will display to the user.

4.8.1 Appearance Requirements

Patients, doctors and all other user must know which input fields are required and which are not. For that reason, we will use labels for all input fields. Input fields might be text type, radio, checkbox, spinner etc.

Table 30: Labels of mandatory fields must be bold

AR-1	**Labels of mandatory fields must be bold**
Description	The mandatory field's label must be bold and all input fields must have placeholder to make it easier for the users.
Stakeholders	Patient, Doctor, Lab reporter, Clinic manager
Priority	Medium

4.8.2 Style Requirements

After keeping all contents, it is very essential to load stylesheet to the application. For desktop application like desktop system, extensive mark-up language. It is to be said that we are going to develop our system at desktop platform. Style makes the system lucrative.

Table 31: The appearance must be controllable using stylesheet file

SR-1	**The appearance must be controllable using stylesheet file**
Description	For desktop application style sheet files are xml. So, all stylesheet must be controllable by the xml file.
Stakeholders	Software developer
Priority	High

4.9 Operational and Environmental Requirements

Operational and environmental requirement refers to the capabilities, performance measurements, process, measurements of effectiveness, measurements of performance, measures of sustainability, measurements of technical performances etc.

4.9.1 Expected Physical Requirements

There are no expected physical requirements in our system.

4.9.2 Requirements for Interfacing with Adjacent Systems

There are no requirements for interfacing with adjacent system for our project.

4.9.3 Release Requirements

There are no specific release requirements in our system.

4.10 Legal Requirements

Legal requirements normally refer to the terms and conditions or privacy policy of any organizations. The terms and condition of our application is that, no third-party software or person are allowed to engage to use our data for their business purpose.

4.10.1 Compliance Requirements

There are no specific compliance requirements for our system.

4.10.2 Standards Requirements

There are no specific standards requirements for our system.

5. Requirement Engineering Process

Requirement engineering refers to the process of defining, documenting and maintaining requirements in the engineering design process. It is a common role in systems engineering and software engineering.

5.1 Requirement Elicitation Techniques

Requirement elicitation is the process of collecting and refining stakeholder's requirements. It is perhaps the most difficult, most error-prone and most communication intensive software development. It can be successful only through an effective customer-developer partnership. It is needed to know what the users really need.

5.1.1 Hold Elicitation Interviews

We hold interviews that can be performed one-on-one or with a small group of stakeholders. They are an effective way to elicit requirements without taking too much stakeholder time because we meet with people to discuss only the specific requirements that are important to this system. Interviews are helpful to separately elicit requirements from members in preparation for workshops where those members of this system come together to resolve any conflicts.

5.1.2 Perform Observation

We observe the diagnostic center management system. We observe how they manage the client and client information, how they manage doctor information and how they manage their system. Every observation must be guided by clearly stated objectives. The analyst should know what data is to be collected, how observation will be done, when and where to observe, how the data will be collected and what the data will be used for after analysis.

5.1.3 System Interface Analysis

Interface analysis can also help in determining requirements for interoperability and exposing interfacing stakeholders early on in the project. It helps to clarify the boundaries of the interacting application, identify the functionality, input and output of the each interface. We saw the system interface in a diagnostic center.

5.1.4 Perform Document Analysis

Existing documentation can help reveal how systems currently work or what they are supposed to do. Documentation includes any written information about current systems, business processes, requirements specifications, competitor research. Reviewing and analysing the documents can help identify functionality that needs to remain, functionality that isn't used.

6. Appendix

6.1 Sample Interview Questions

1. How many client are handle in daily?
2. Are they use any type of database?
3. How many doctors are includes in their system?
4. In appointment time, are they receive any money?
5. Any medicine center are includes in their system?
6. Are they gives discount for second time client?
7. Are they accept any emergency patient?
8. Which types of problem they are face?

6.2 Prioritization Technique

We’ve prioritized the functional requirements by following Three-level Scale technique.

Three-level Scale:

When a BA categorizes the requirements in any of the ordering or ranking scale, it is subject to the analyst’s understanding of the business. Many analysts suggest that this method has some drawbacks and advocate methods that have more than one scale. Covey, Rebecca and Merrill would have never in their wildest dreams have thought that their “The four-quadrant 'Eisenhower Decision Matrix' for importance and urgency”, from their self-help book First things First, would become one of the most widely used prioritization techniques in the IT space.

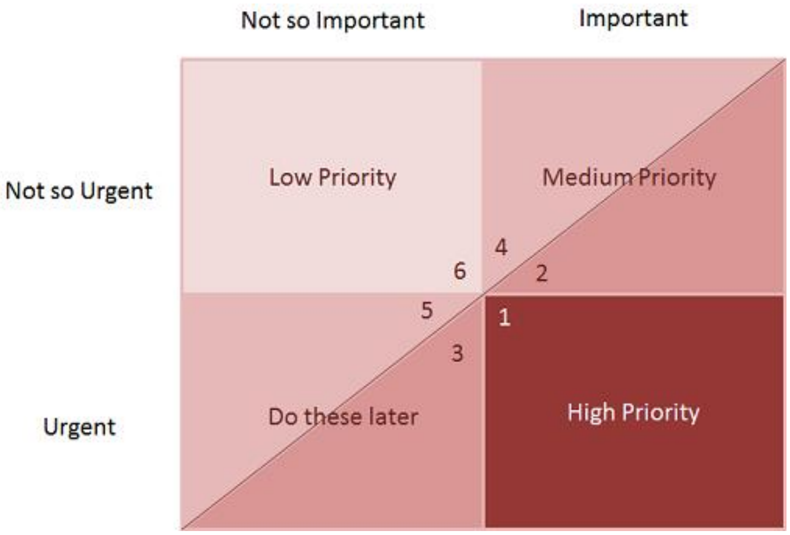

Figure 6.1: Eisenhower Decision Matrix – Lower the number, higher the priority of the section.

With the numbering on the different sections of the diagram, the priority of the sections is implicit. Important items have the highest preference, while urgent items have lower preference.

1. High Priority – These requirements are urgent and important. These are requirements that are generally with respect to compliance or contract that cannot be left out. These requirements need to be implemented in the current release and not implementing the same will have some adverse effect on the business.

2. Medium Priority – These requirements are important but not as urgent. Implement these after you implement the high priority items. If you see closely there is a line that splits this quadrant into 2 parts. Implement the items that are on the right side of the line first as they are relatively of higher medium priority.

3. Do these later – These items are urgent but do not have a lot of effect on the business. Hence do it after completing the more important medium priority items. Similar to the medium priority items, this quadrant has also been split into two; the items on the right side have a higher priority relatively to the items on the left.

4. Low Priority – These items are neither important nor are they urgent.

The items on the righthand side of the diagonal have higher priority. Start with the bottom-right corner of the high-priority quadrant and work your way up and left.

Prioritization of the requirements of Diagnostic Center Client Co-ordination System:

FR-1: Patient Search for Hospitals

This priority is high because patient needs to find doctor through hospital.

FR-2: Patient Search for Doctors

This priority is high because patient needs to search doctor to set appointment.

FR-3: Patient See Doctors Details

This priority is medium because patient needs to see doctor details to set appointment.

FR-4: Patient Set Appointment

This priority is high because patient needs to set appointment for his/her health checkup.

FR-5: Patient Cancel Appointment

This priority is low because patient needs to cancel appointment for his/her own purpose.

FR-6: Patient Update Appointment

This priority is low because patient needs to change appointment for his/her own purpose.

FR-7: Patient Update Own Profile

This priority is low because patient can change his/her own profile.

FR-8: Patient Change Account & Password

This priority is low because patient can change his/her account & password of profile.

FR-9: Doctor Check Appointment

This priority is high because doctor needs to see appointment list.

FR-10: Doctor Prescribe Test & Medicine

This priority is high because doctor needs to prescribe test & medicine to patient.

FR-11: Doctor Update Own Profile

This priority is low because doctor change his/her own profile settings.

FR-12: Doctor Change Account & Password

This priority is low because doctor can change his/her account & password of profile.

FR-13: Lab Reporter Check Necessary Test

This priority is high because lab reporter needs to check test list which are provided by doctors.

FR-14: Lab Reporter Create Report

This priority is high because lab reporter needs to create test report.

FR-15: Lab Reporter Update Own Profile

This priority is low because lab reporter can change his/her own profile.

FR-16: Lab Reporter Change Account & Password

This priority is low because lab reporter can change his/her account & password of profile.

FR-17: Clinic Manager Add Clinic

This priority is high because clinic manager needs to add clinic to the system.

FR-18: Clinic Manager Manage Doctors

This priority is high because clinic manager needs to manage doctor.

FR-19: Clinic Manager Manage Employees

This priority is medium because clinic manager needs to manage employees.

FR-20: Clinic Manager Update Own Profile

This priority is low because clinic manager can change his/her own profile.

FR-21: Clinic Manger Change Account & Password

This priority is low because clinic manager can change his/her account & password of profile.

FR-22: Data Retrieve from Cloud Server

This priority is high because data must be retrieved from cloud.

SLR-1: Search Result Must be Faster

This priority is high because search result must show within seconds.

PAR-1: Search Result Must be Accurate

This priority is high because search result must be accurate.

CR-1: The System will Handle Thousands of Data

This priority is high because the system needs to handle thousands of data in every moment.

RAR-1: The System must be available on 24X7

This priority is high because the system must be available on 24X7.

RFT-1: The System Handles All User Access without System Errors

This priority is high because the system needs to hit application system at a time.

MR-1: The System Helps to Update User Profile

This priority is medium because user needs to update their own profile.

AR-1: Application Provides Security Mechanism

This priority is high because the system only gives access the authenticated and authorized users.

EUR-1: Application must be Usable for the End User

This priority is high because separate user can operate the system easily.

UDR-1: The System Engineer Documentation

This priority is medium because system engineer will make analysis of the system.

APR-1: Labels of Mandatory Fields must be Bold

This priority is medium because mandatory fields label must be bold and all input fields must have placeholder.

SR-1: The Appearance must be Controllable Using Stylesheet File

This priority is high because all stylesheet must be controllable by the xml file.

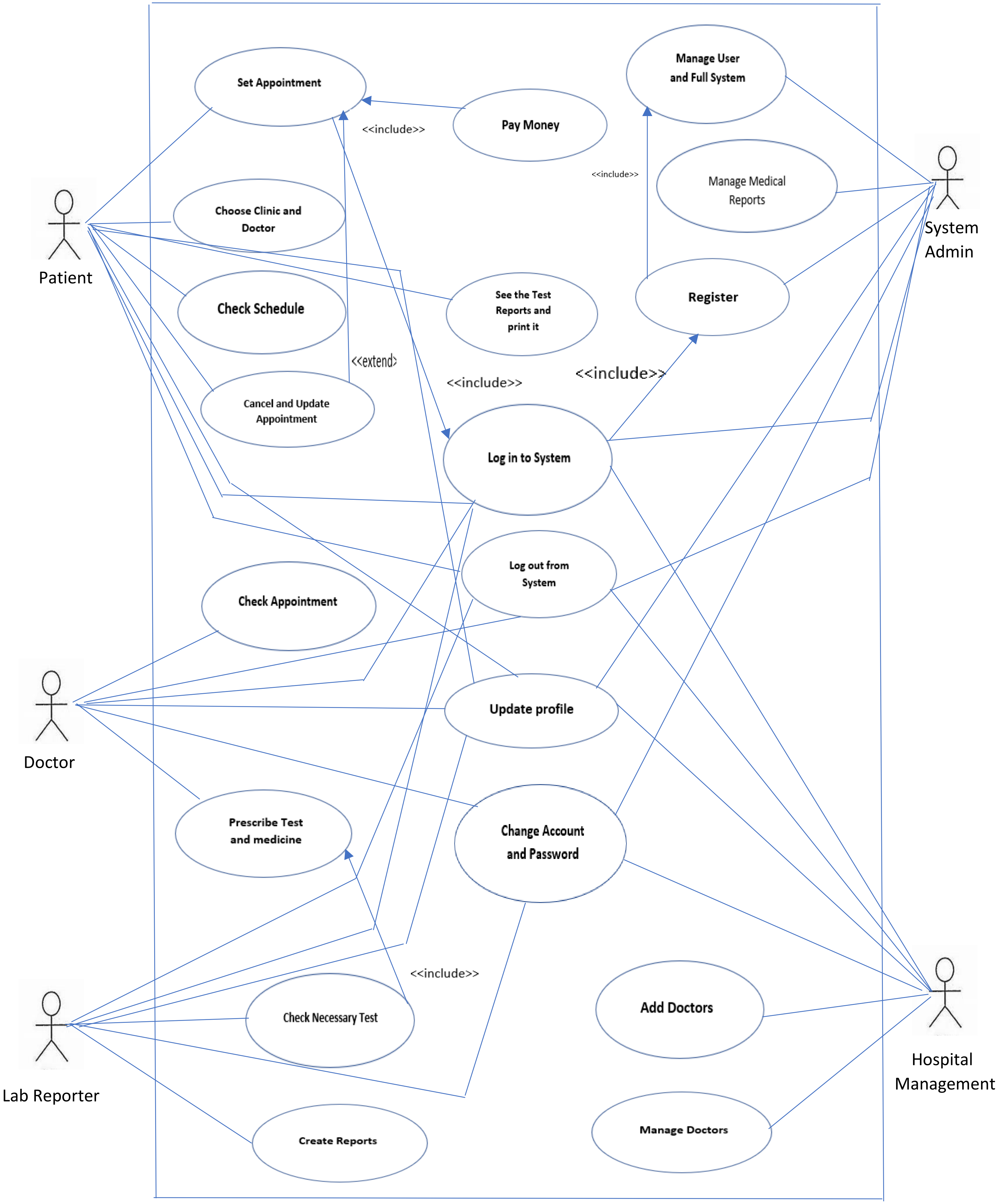

Figure 01: Use Case Diagram of Mediquick

Activity Diagram

Log out from System:

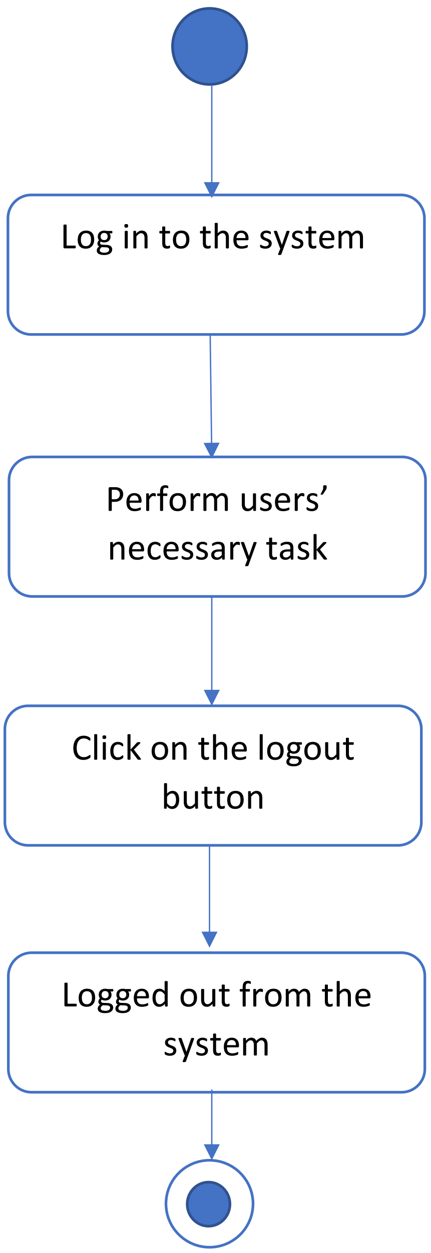
Log in to the system
Perform users' necessary task
Click on the logout button
Logged out from the system

Figure 02: Activity Diagram of Log out from System

See the test report and print it:

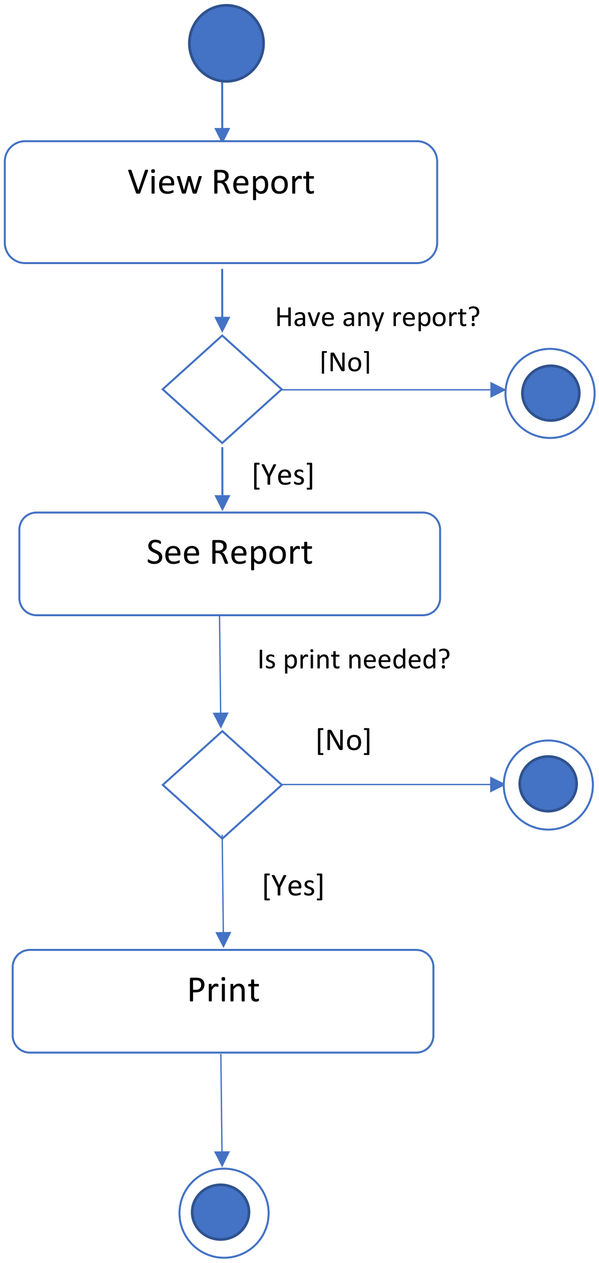

Figure 03: Activity Diagram of See the test report and print it

Manage Medical Reports:

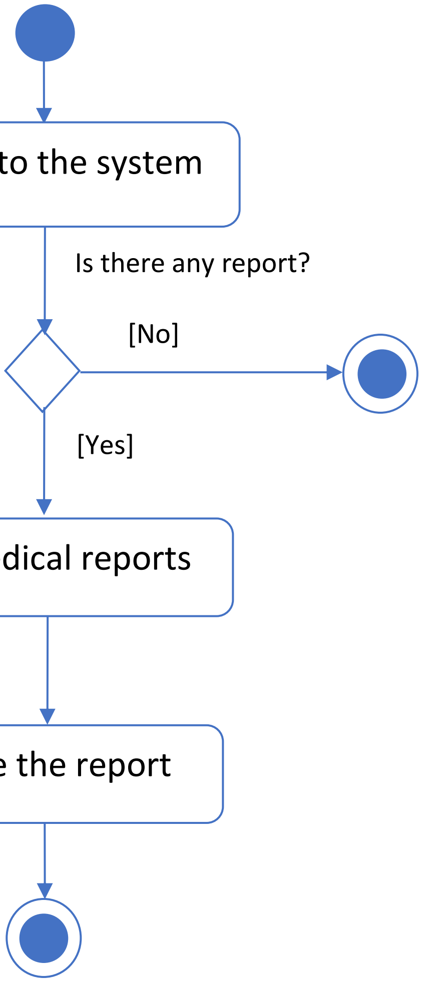

Figure 04: Activity Diagram of Manage medical reports

Check necessary Test:

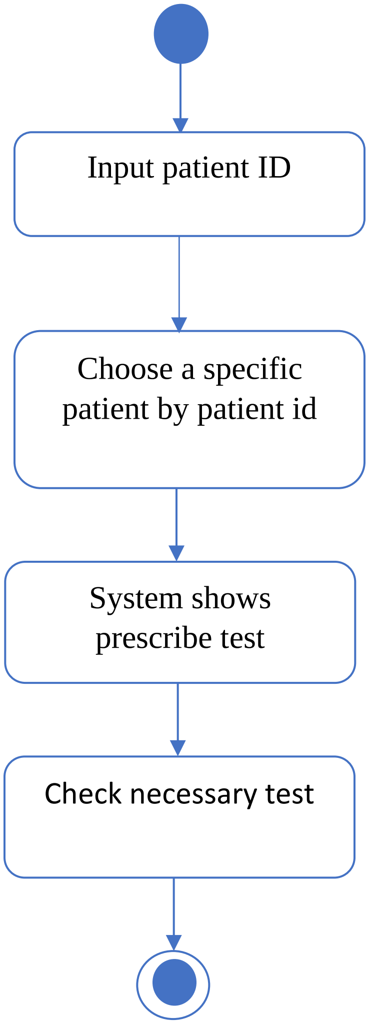
Input patient ID
Choose a specific patient by patient id
System shows prescribe test
Check necessary test

Figure 05: Activity Diagram of Check necessary test

Manage users and full system:

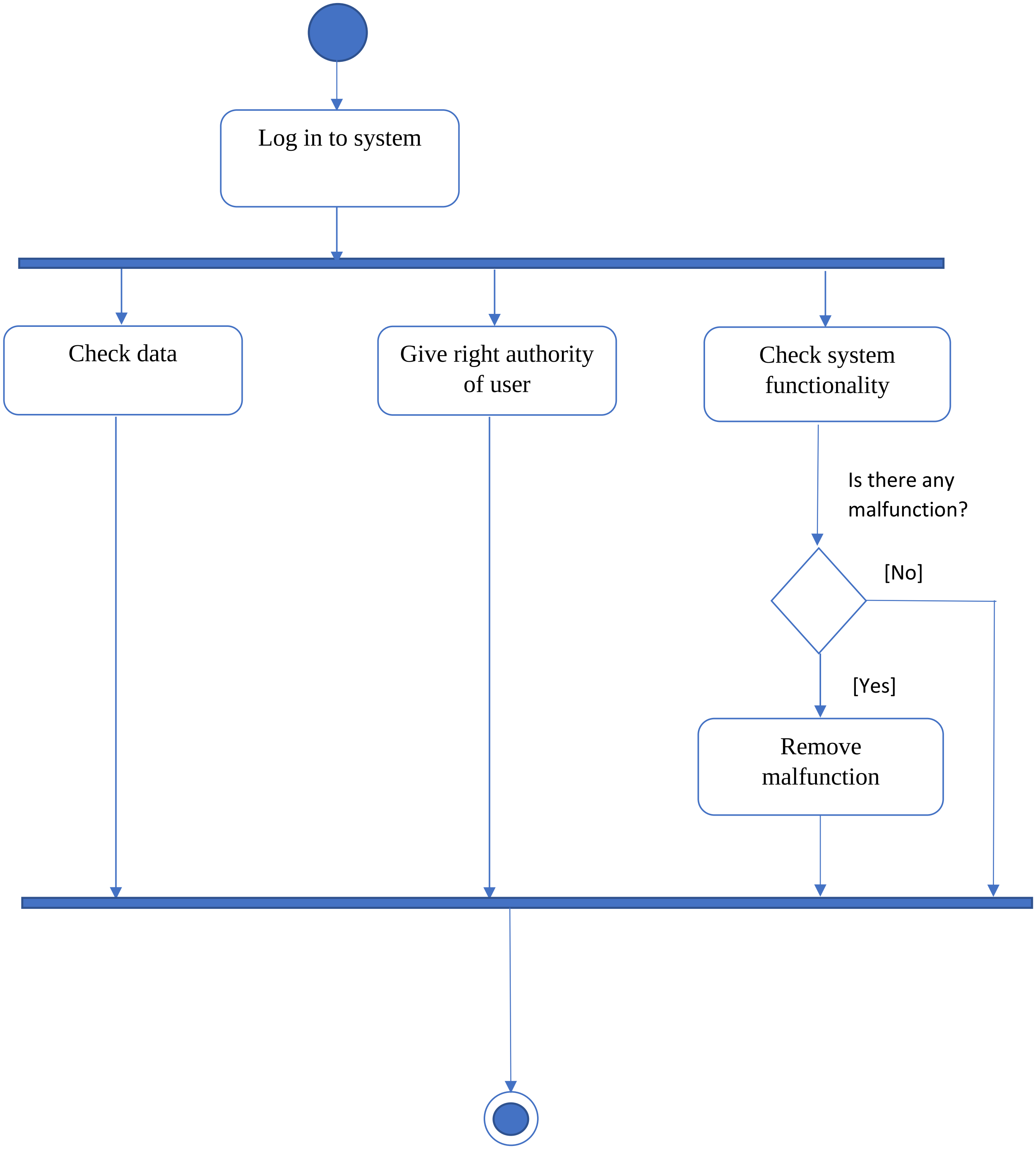
Log in to system
Check data
Give right authority of user
Check system functionality
Is there any malfunction?
[No]
[Yes]
Remove malfunction

Figure 06: Activity Diagram of Manage users and full system

Manage doctors:

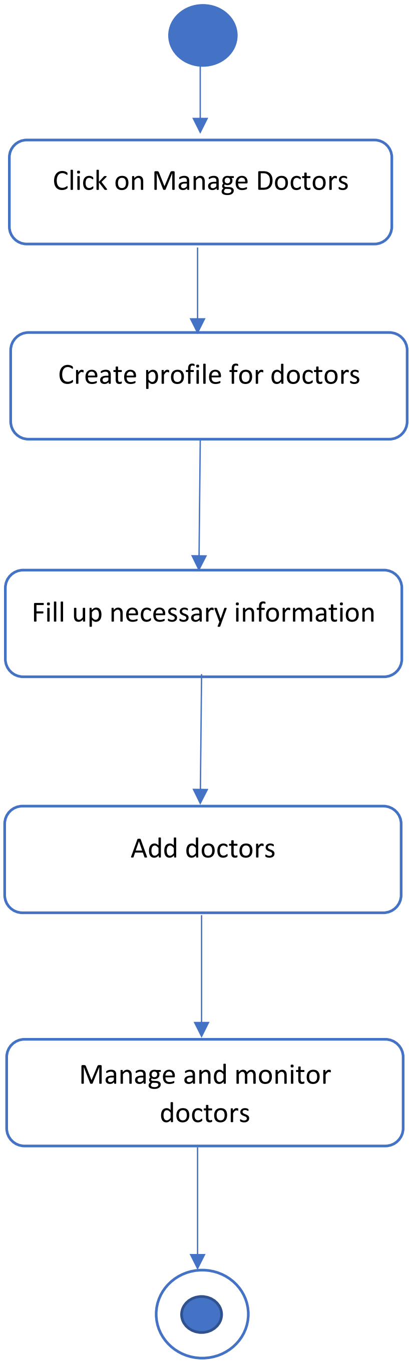
Click on Manage Doctors
Create profile for doctors
Fill up necessary information
Add doctors
Manage and monitor doctors

Figure 07: Activity Diagram of Manage doctors

Create Reports:

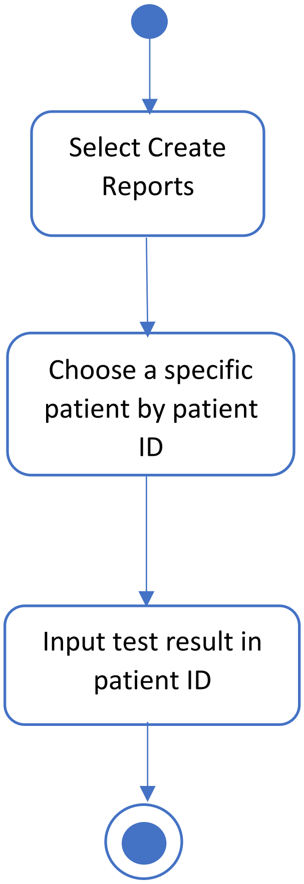
Select Create Reports
Choose a specific patient by patient ID
Input test result in patient ID

Figure 08: Activity Diagram of Create reports

Choose clinic and Doctor:

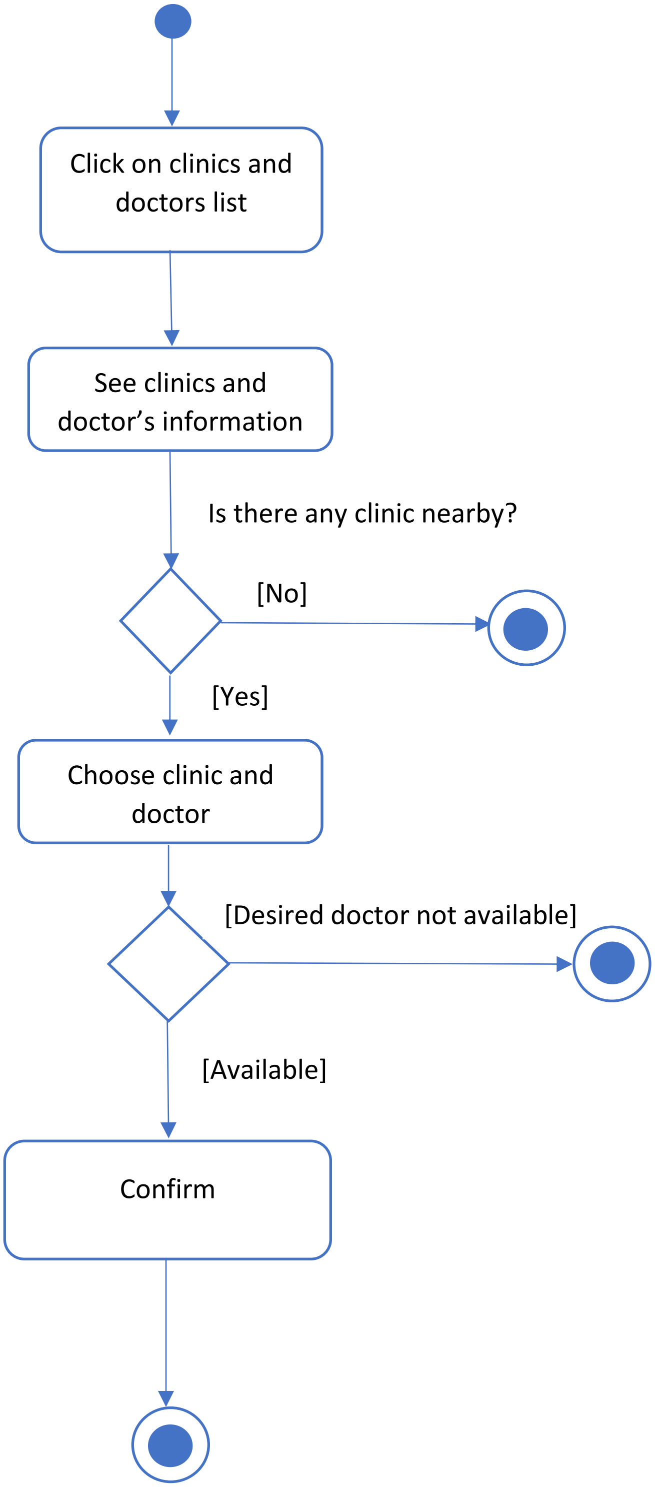
Click on clinics and doctors list
See clinics and doctor’s information
Is there any clinic nearby?
[No]
[Yes]
Choose clinic and doctor
[Desired doctor not available]
[Available]
Confirm

Figure 09: Activity Diagram of Choose clinic and doctor

Check Appointments:

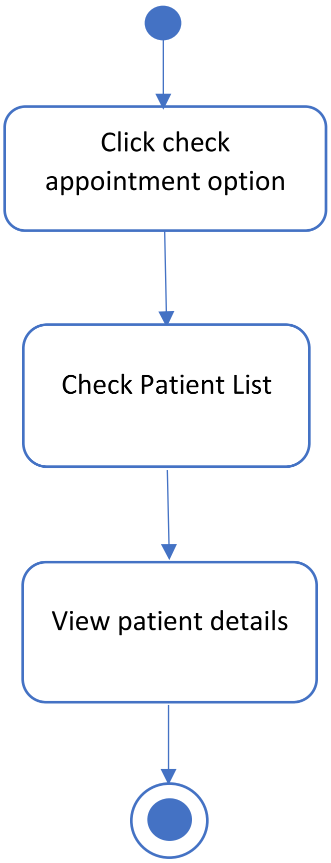

Figure 10: Activity Diagram of Check appointments

Check Schedule:

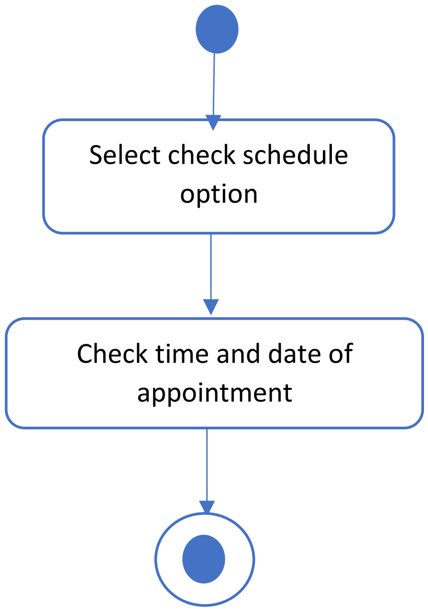
Select check schedule option
Check time and date of appointment

Figure 11: Activity Diagram of Check schedule

Pay Money:

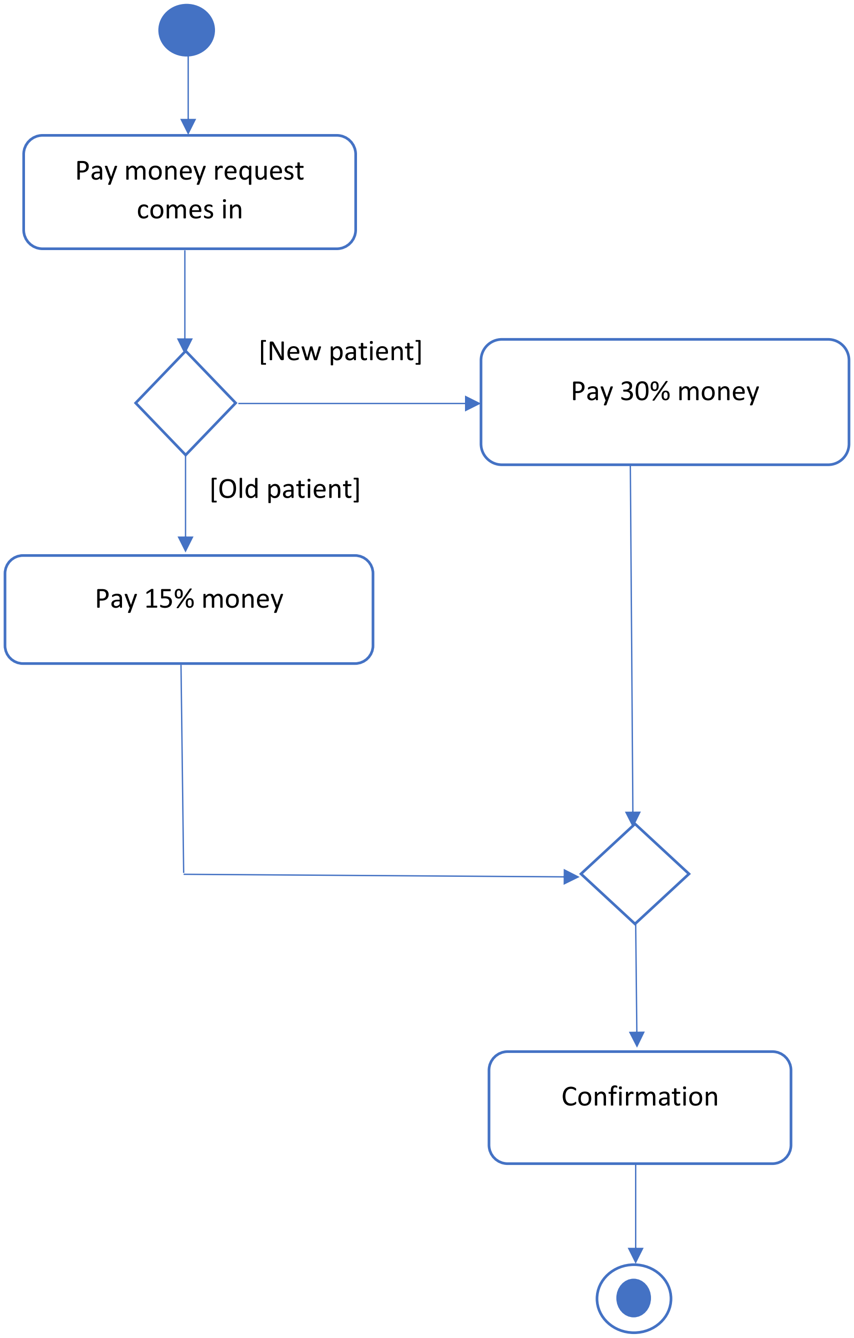

Figure 12: Activity Diagram of Pay money

Set Appointment:

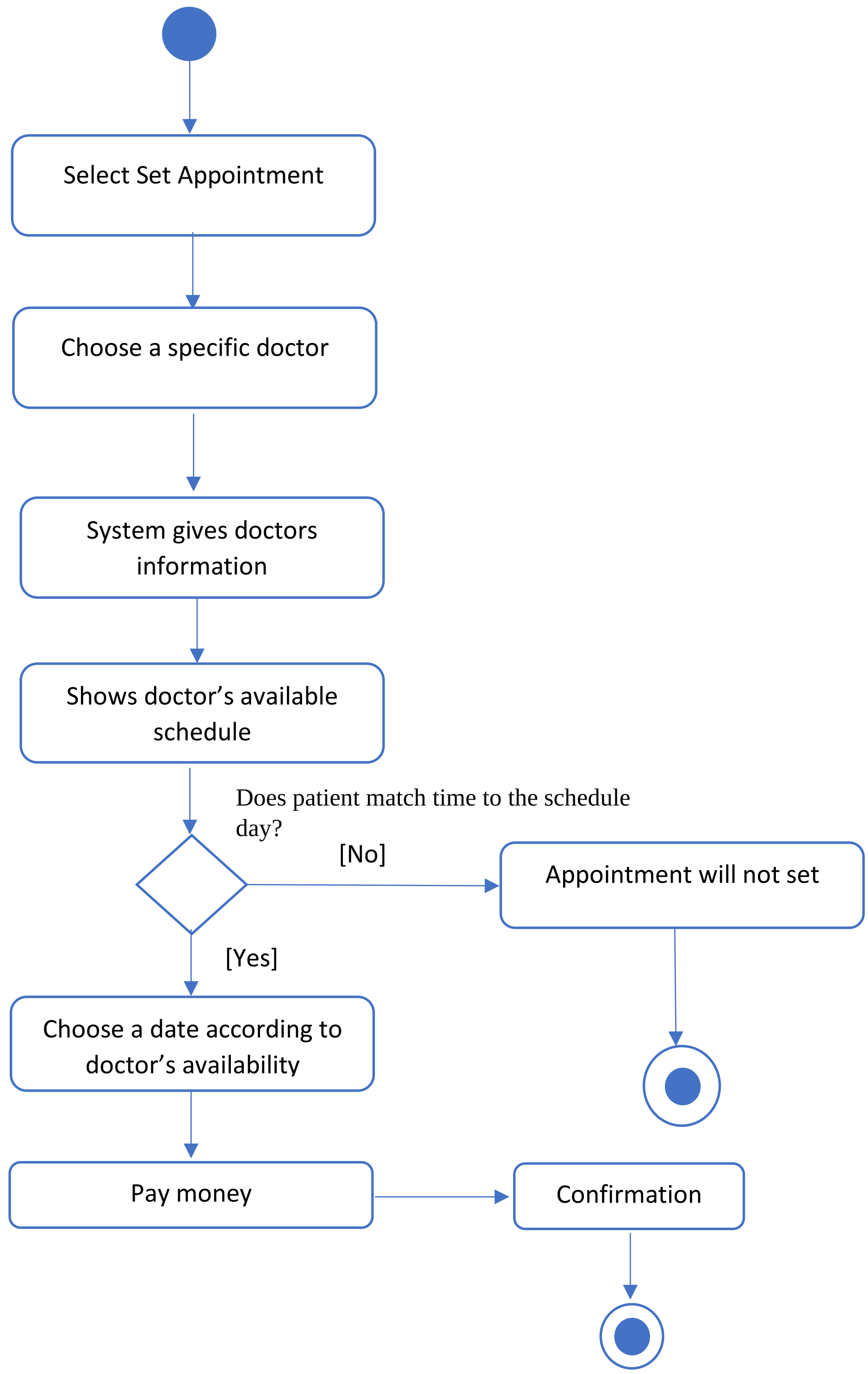
Select Set Appointment
Choose a specific doctor
System gives doctors information
Shows doctor’s available schedule
Does patient match time to the schedule day?
[No]
Appointment will not set
[Yes]
Choose a date according to doctor’s availability
Pay money
Confirmation

Figure 13: Activity Diagram of Set appointment

Add Doctors:

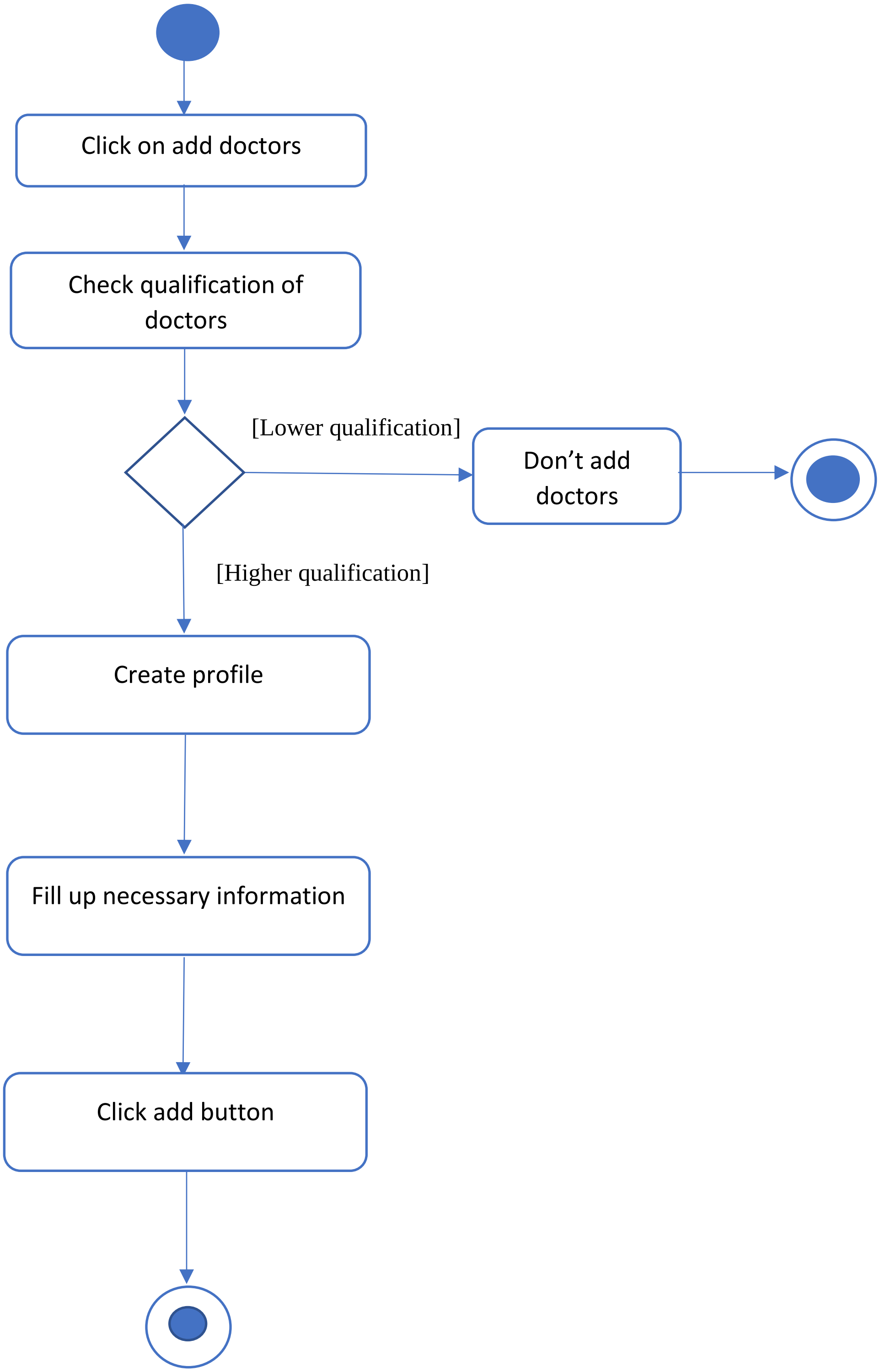

Figure 14: Activity Diagram of Add doctors

Prescribe test and medicine:

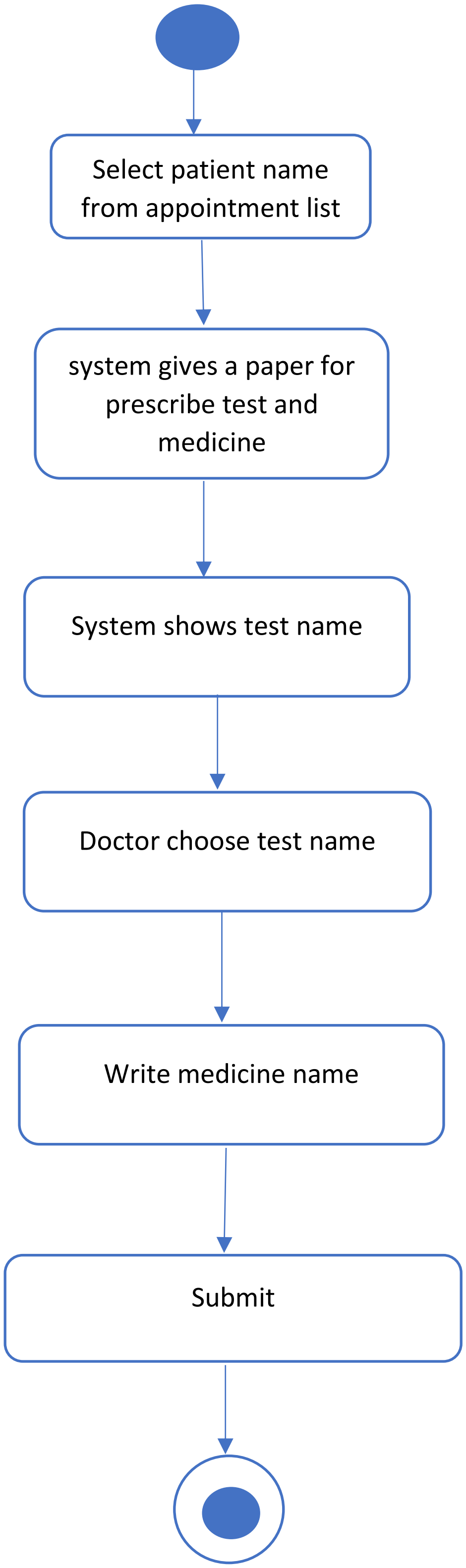
Select patient name from appointment list
system gives a paper for prescribe test and medicine
System shows test name
Doctor choose test name
Write medicine name
Submit

Figure 15: Activity Diagram of Prescribe test and medicine

Update Profile:

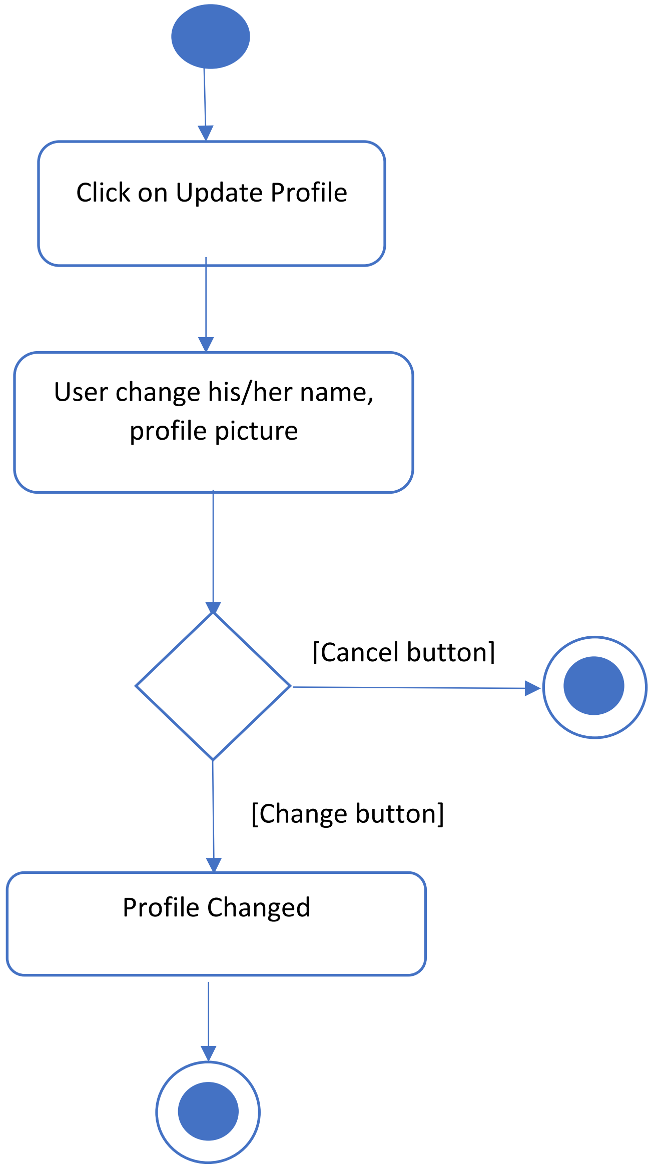

Figure 16: Activity Diagram of Update profile

Register:

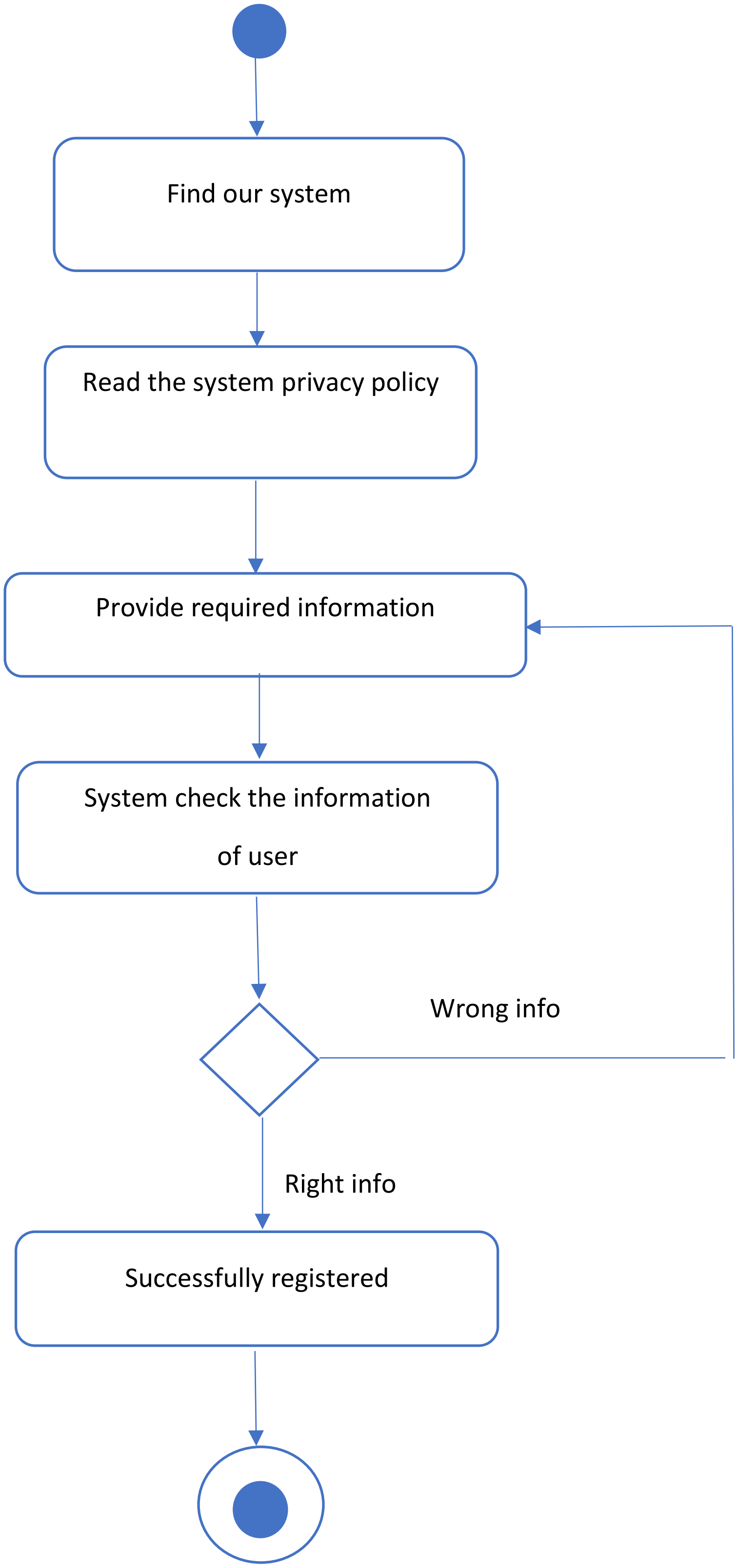
Find our system
Read the system privacy policy
Provide required information
System check the information
of user
Wrong info
Right info
Successfully registered

Figure 17: Activity Diagram of Register

Log in to system:

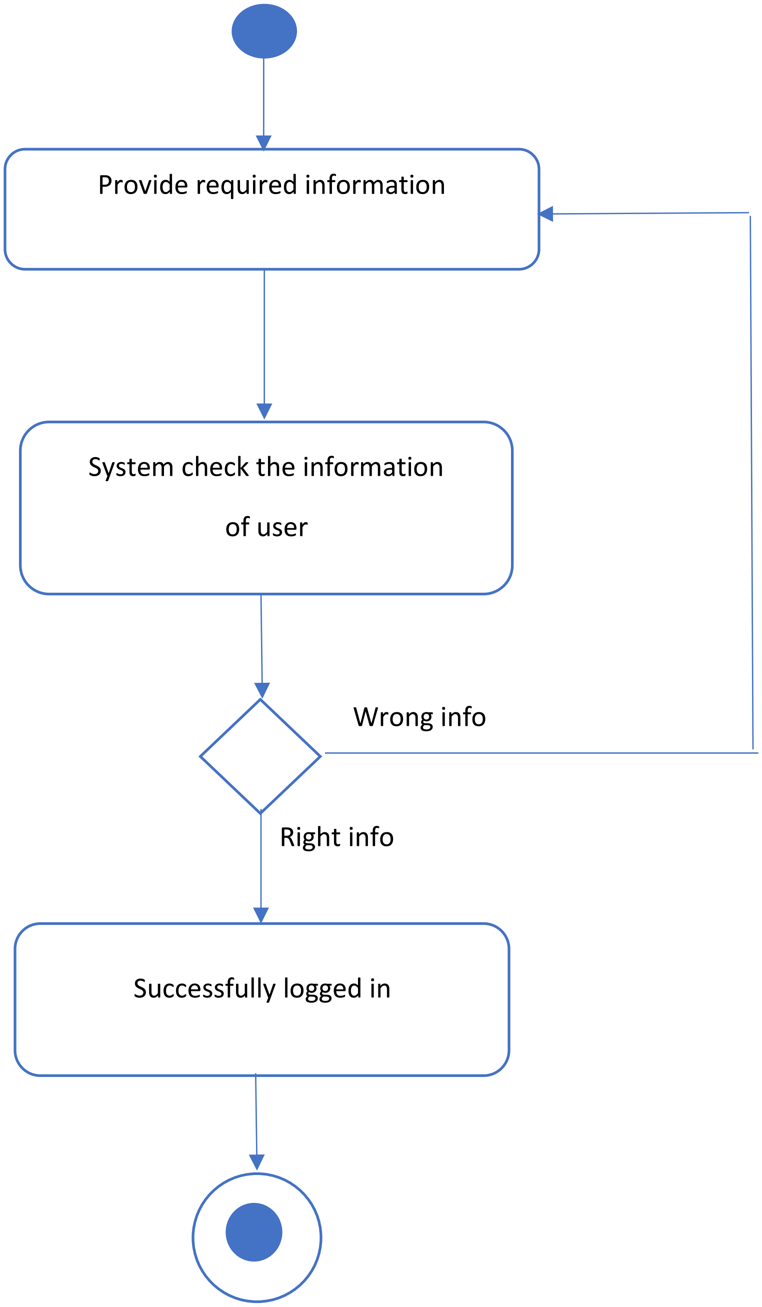

Figure 18: Activity Diagram of Log in to System

Change account and password:

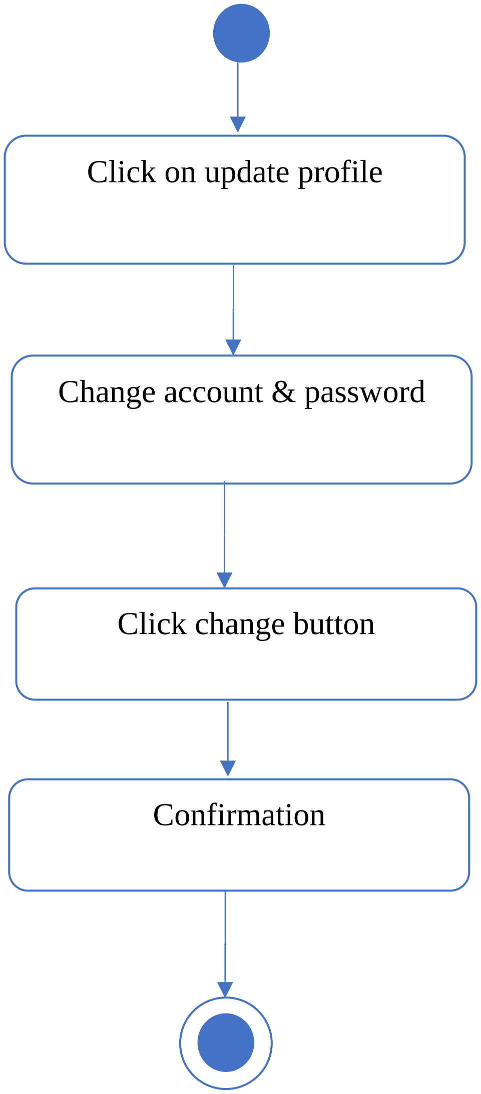

Figure 19: Activity Diagram of Change account and password

Cancel and Update appointment:

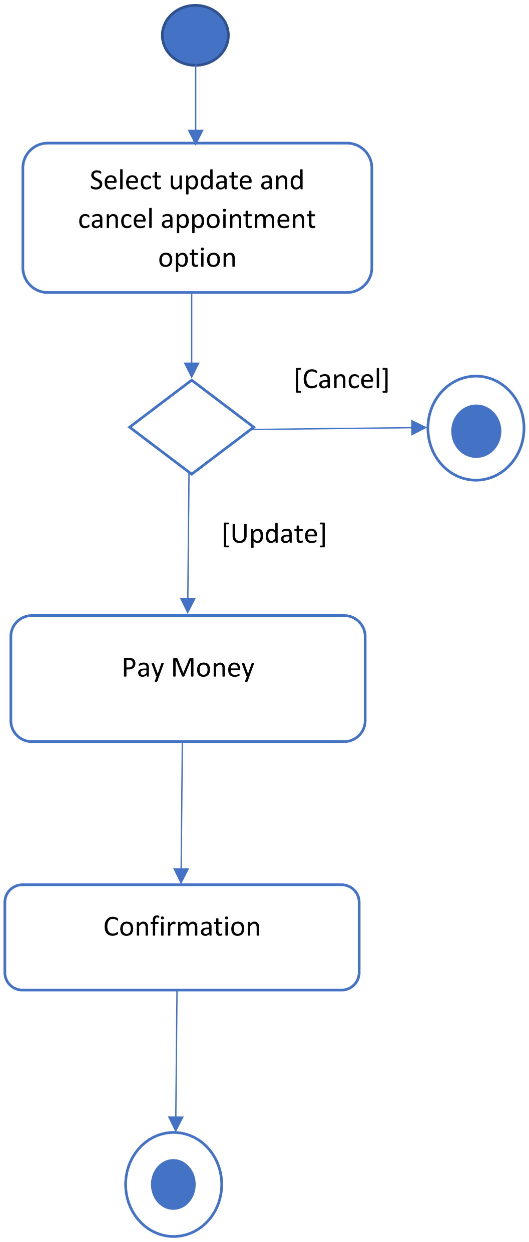

Figure 20: Activity Diagram of Cancel and update appointment