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1.0 INTRODUCTION

1.1 PURPOSE

The aim of the document is to provide a detailed report on the system specifications necessary for the implementation of the H Connect Web Application. The requirements are addressed and each detailed. The version of the web app is 1.0.0, the project is the first one of its kind to be developed by the H Connect Company. The details given are for both the subsystems and the whole system, the web application is being created from scratch.

1.2 Intended Audience and Reading Suggestions

The document is intended for the following audiences:

- ✓ **Clients/ customers**

They include the major users of the web application i.e. patients, medical doctors, laboratories, pharmaceuticals and insurance companies.

The document will help them know what requirements are needed to use the web application.

- ✓ **Designers and Developers**

The web application designers need the document to come up with the user interphase and know what features to include in the system. (come up with the apps right look and feel)

The developers need the document to implement the requirements into a working web application system.

- ✓ **Managers of H Connect**

These mangers include the H Connect Project Manager; the document will ensure all users requirements are met; it'll be reference point.

- ✓ **Marketing team**

All specialists involved in the H Connect Company will need the document to come up with the elaborate plan on how to market the company's web application based on the requirements stated.

✓ **Testers and Maintenance teams**

the testers will need the document to prepare for the testing of the web application.
The maintenance team will need the document to plan for future maintenance plans and current plans too.

✓ **Trainers**

The document is necessary for them to prepare materials for end users.

1.3 Project Scope

H Connect's web application is a health awareness web application focusing on connecting its users while offering them services to cater for their needs. The homepage of the web application intends to display health information and link the user to fitness web pages that will connect them to fitness programs.

The web application intends to achieve the goals and objectives stated earlier in the project's proposal.

The main aim of the project is coming up with a complete and quality web application for the purpose of meeting its users' needs.

1.4 REFERENCES

Sample Applications User Guide

Release 2.0.0 April 24, 2015

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2.0 OVERALL DESCRIPTION

In this phase the document gives an overview of the functionality of the H Connect Web Application.

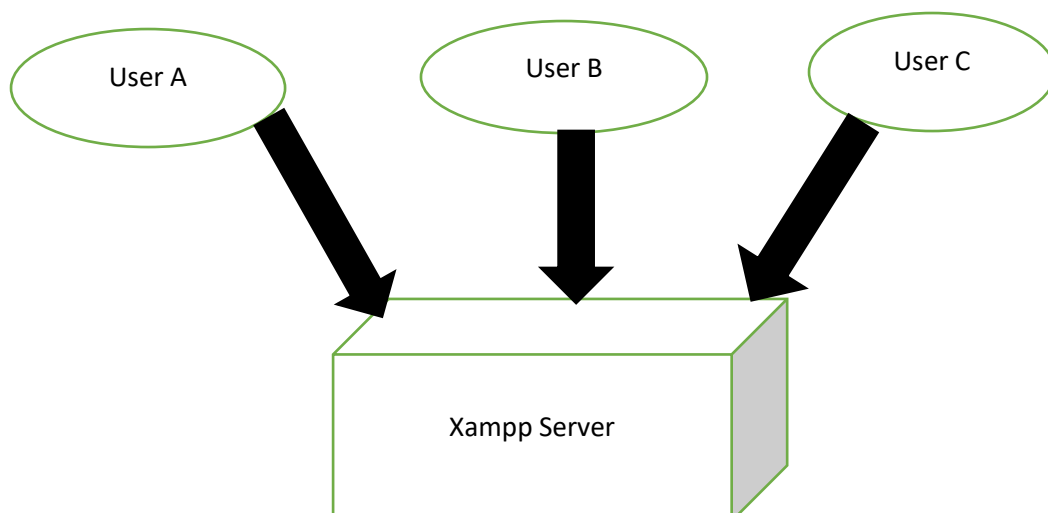
2.1 PRODUCT PERSPECTIVE

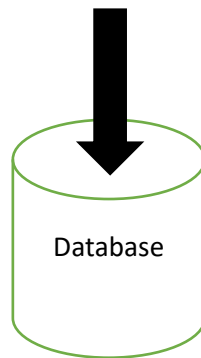
The end product will be open to any user. The product implementation intends to utilize the client-server model. The product is aimed at replacing the current manual system used by the H Connect Company.

Most of the energy being pulled in the project is to come up with an ideal platform to conduct most of the previous tasks and services offered directly from the company's headquarters.

The company lacks branches hence the web application will stand in place of offering services conquering the different geographical disparities.

The diagram below indicates the intended architecture:





The users connect to the web application by use of a web browser, they are expected to have good internet connection. The Xampp server hosts the web application via the MyPHP Admin.

2.2 PRODUCT FEATURES

Indicates the overview features of the H Connect Web Application.

2.2.1 System Interface

The interface includes:

- ✓ Registration and Login interface
- ✓ Admin interface
- ✓ Medical Doctor's interface
- ✓ Patient interface
- ✓ Laboratory interface
- ✓ Insurance company interface
- ✓ Pharmacy interface

2.2.2 Interfaces

1. login Interface

- The system will allow user to register new account
- Allows users to login the system using their credentials
- Users are authenticated before being permitted access, if not access is denied.

2. Admin Interface

- The system will allow admin to login
- Allow the admin to perform CRUD functionalities i.e. Create, Retrieve, Update, Delete

3. Medical Doctor Interface

- Allows medical doctors to log onto system.
- Allows them to update medical specialization.

- Allow them to view patient details.
- Allow the Medical doctors to view appointments and update status
- Allow them to log out of system

4. Patient Interface

- Allow login to system.
- Allow updating profile
- Allow booking of appointments.
- Allow rating of service.

5. Laboratory Interface

- Allow login to system
- Allow viewing of queries
- Allow servicing of queries

6. Pharmacy Interface

- Allow login to system
- Allow user to view and service queries
- Allow users to update profile

7. Insurance Company Interface

- Allow login to system.
- Allow company to view and service queries
- Allow user to update profile and services offered
- Log out of system.

2.2.3 Hardware Interface

The web application is independent of the hardware used, relies heavily on the web browser.

2.2.4 Software Interface

The web application relies on internet connectivity. To access the application only a web browser is needed and a good internet connection.

2.2.5 Memory Constraints

Dependent on the device user is using to get the web application's services.

2.2.6 Operations

The H Connect web application will be made available within all hours of the day

Anytime the user needs to logon to the system via web browser it will be possible.

2.2.7 Site adaptation Requirements

As per the moment no site adaptations are being considered. The developer is solely focusing on ensuring the web application runs efficiently through the web browser first so as to consider other factors.

2.3 User classes and Characteristics

USER CLASS	CHARACTERISTICS for access
Patient	A simple device may be a laptop, mobile device etc. Have a web browser. Very important to satisfy
Medical doctor	May require a bit of storage space for patients' details, no much requirements
Laboratory	Less requirements, functions vary. Depend on other actors
Pharmacy	Highly depends on patients to function
Insurance company	Dependent on patients' needs
Admin	Must have right facilities to accommodate all features needed to run the web application. The user is a high priority for the smooth running on the web application.

We are also considering general visitors who might visit our web application homepage not necessarily to create an account but to view information.

2.4 Operating Environment

The system will be hosted by the company via the Xampp server.

The end user need not worry about the operating environment, only thing needed is a latest web browser software and a good if possible fast internet connection.

2.5 Design and Implementation Constraints

- Commercial constraints: the stated budget and time to establish a working web application might be affected.
- Requirements: As users get to familiarize with system, they may dislike some features and would want new features.
- Compliance to laws and standards or regulations connected with web applications.
- Design style used may fail to favor all clients.

2.6 User Documentation

The various stages involved, from design to development will be documented for the purpose of:

- ✓ Boosting knowledge of the web application system
- ✓ Ensure easy navigation through features
- ✓ Ensure format used is easy to understand.

2.7 Assumptions and Dependencies

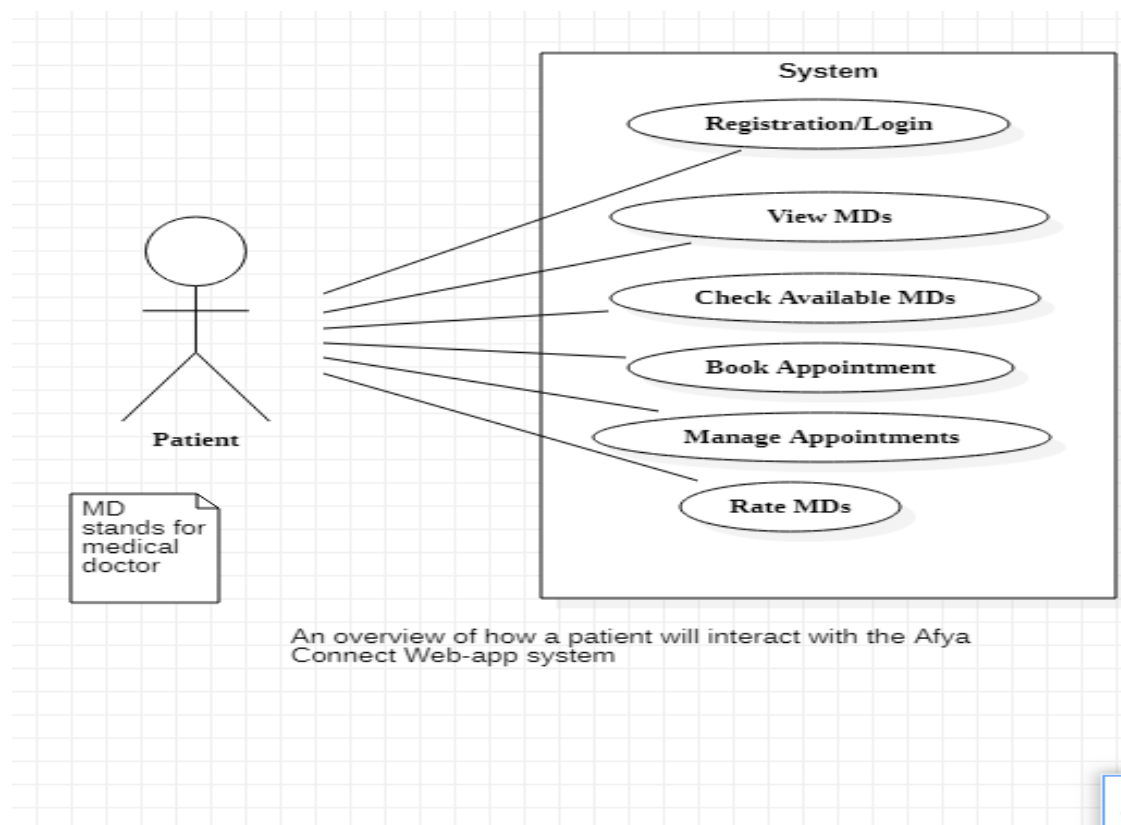
1. The assumption is that technology growth is a per for all users.
2. The infrastructure and facilities available are developed.
3. The architecture and design are well established and permissible
4. The product is assumed to be profitable according to statistics gathered.
5. It is assumed that cost of development of project will not exceed budget.
6. The system depends on the fact that users already have email accounts.
7. Assumption that users are conversant with the features stated.

3.0 System Features

The system features below are a rough indication of how the system is planning to satisfy the requirements.

The features are developed from user stories in mind.

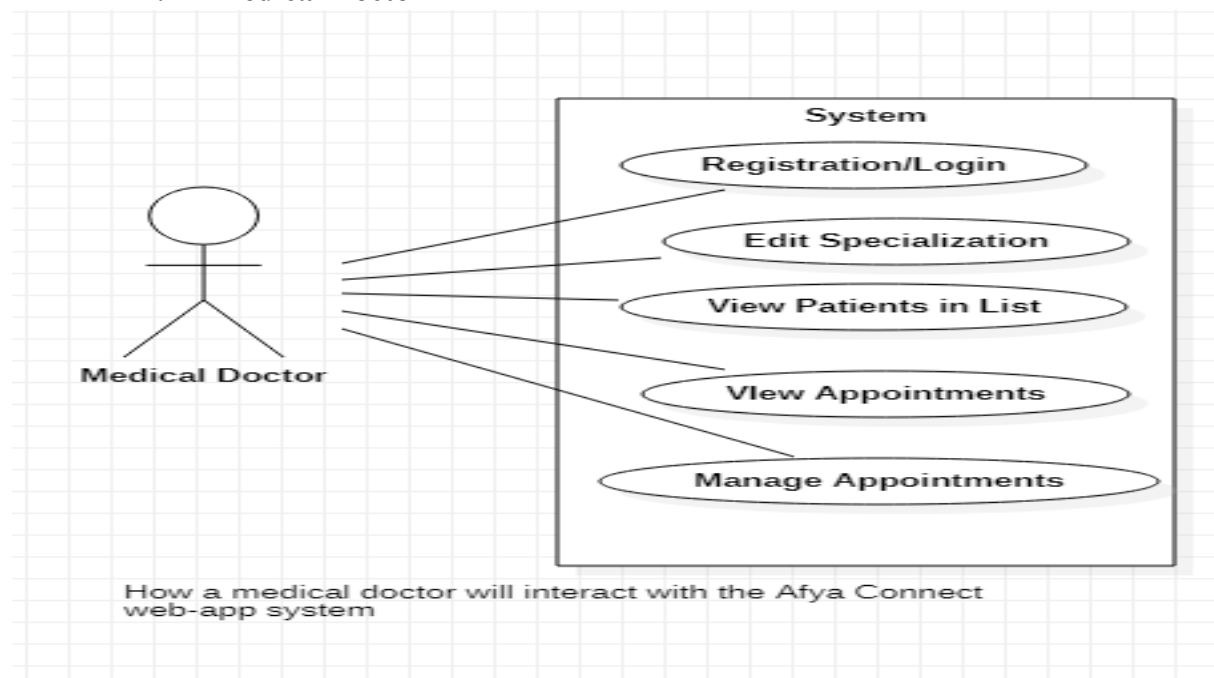
i. Patient



The main priority is to provide patient with ability to book appointments.

Response sequence highly relies on email.

ii. Medical Doctor

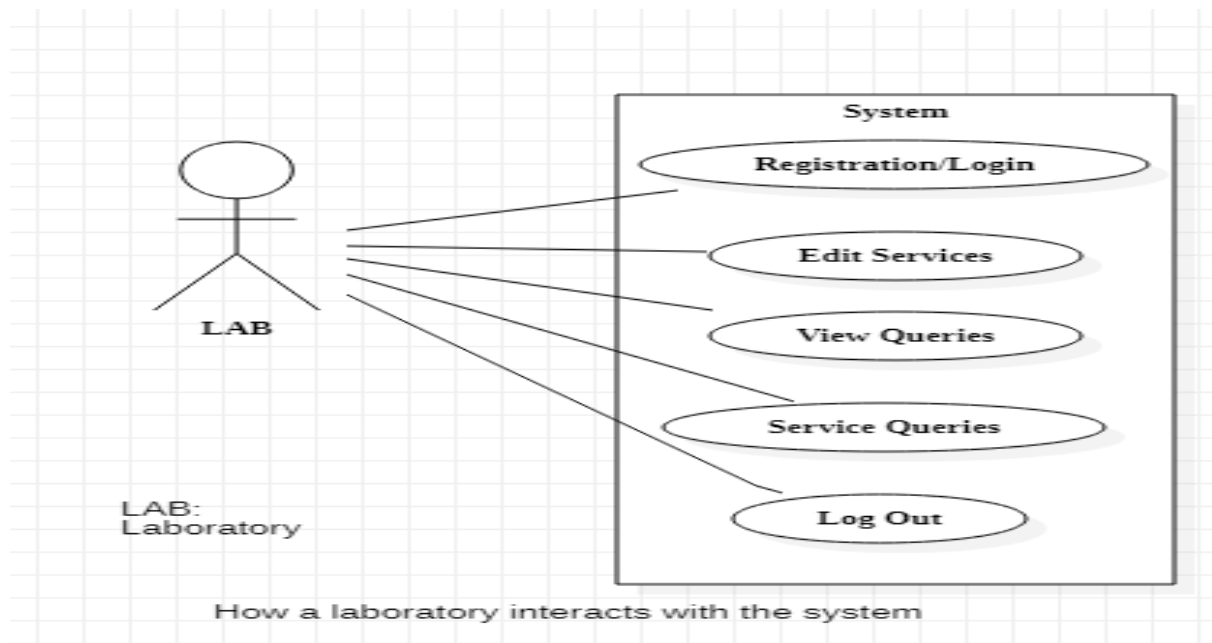


The medical doctor use case encompasses all specialist in their different fields.

Prioritizing the viewing of patients details and viewing appointments.

Response in this case is highly reliant on email

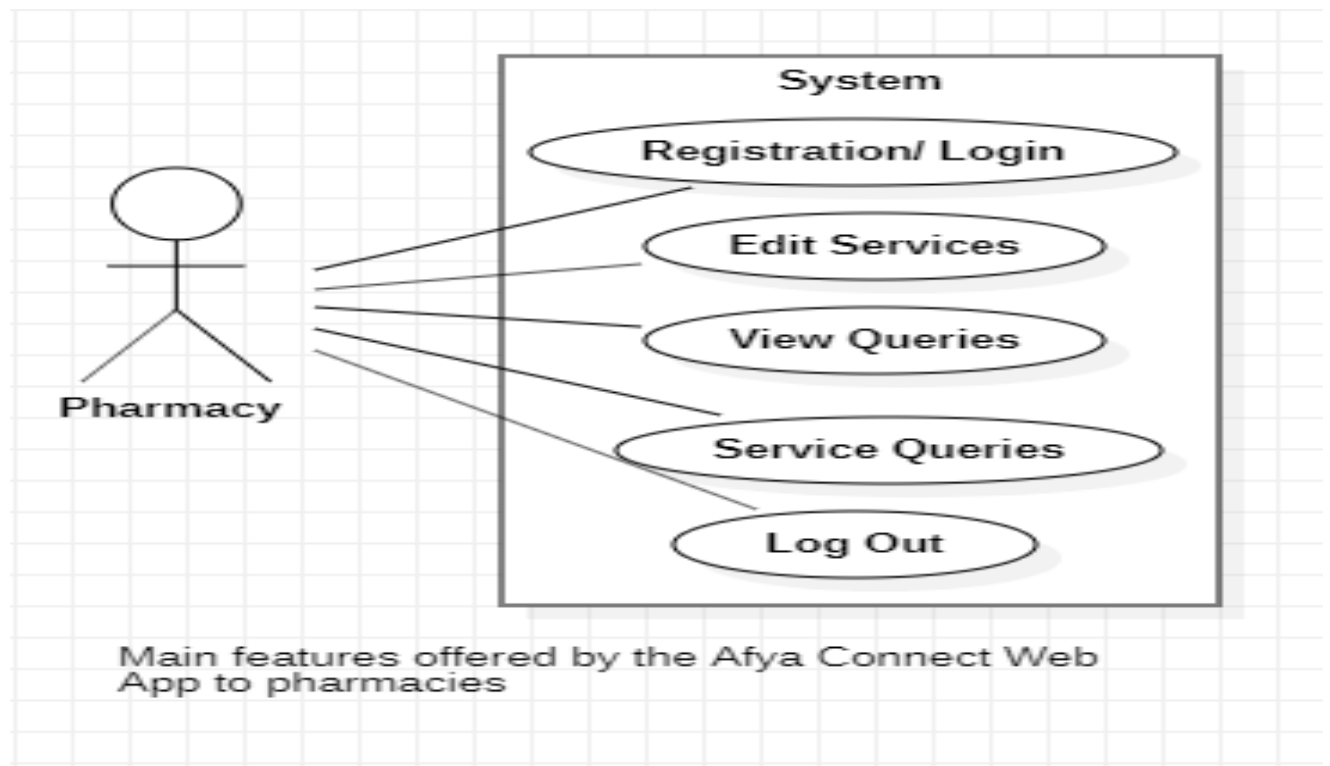
iii. Laboratory



Actors querying are the patients and doctors

Reports are shared through email

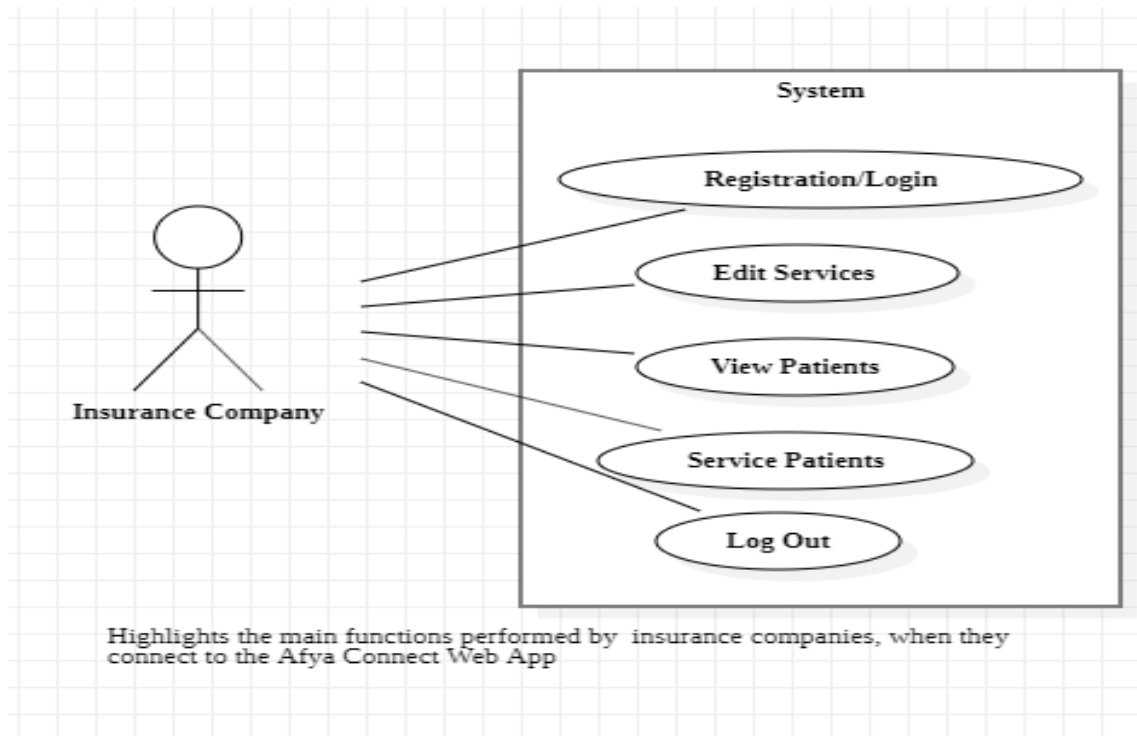
iv. Pharmacy



Performs almost exactly as laboratories.

Queries are from medical doctors and patients

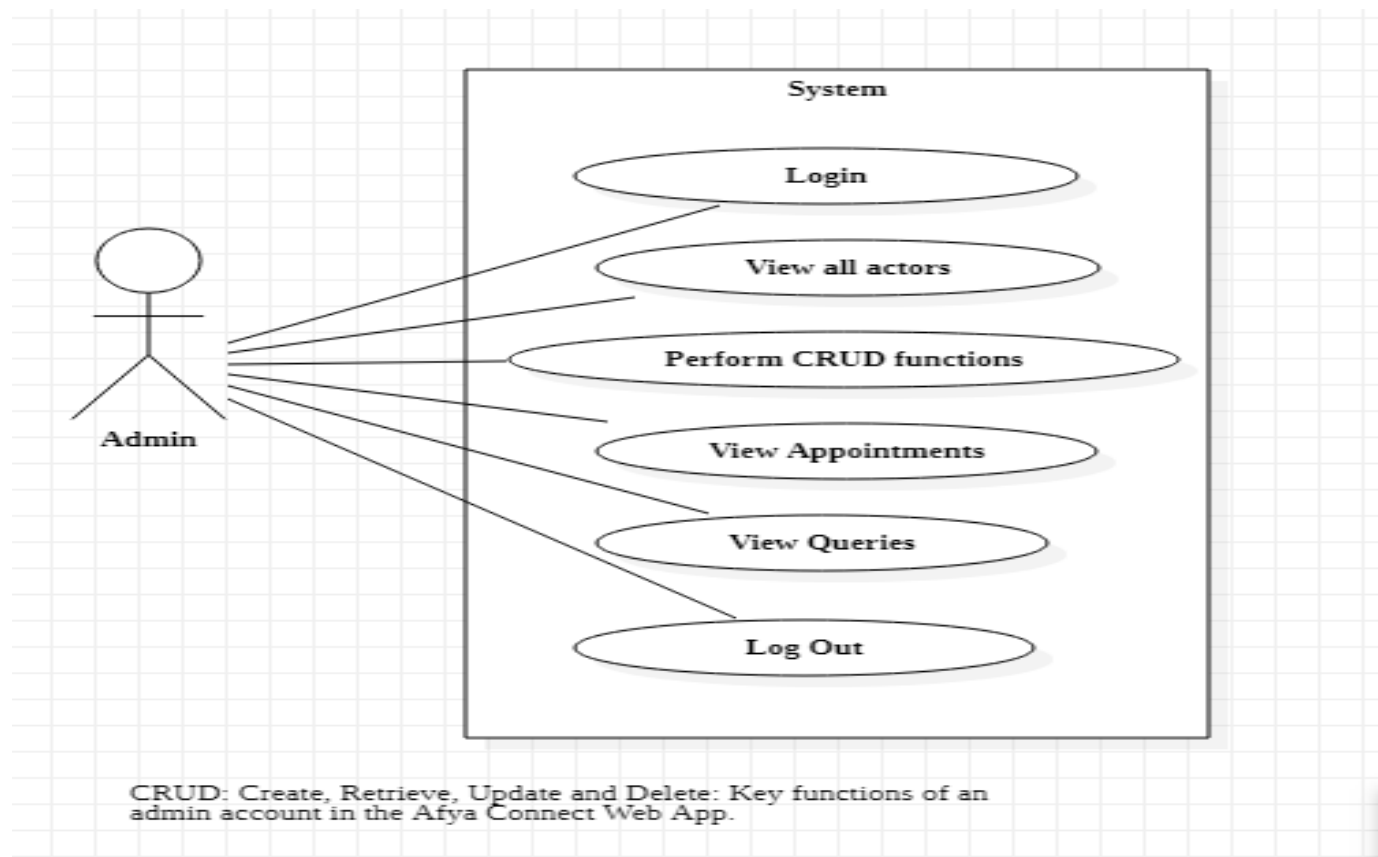
v. Insurance company



Depends on patients' information. An insurance company may opt to create an account so as to relate with patient directly and grab the opportunity to advertise other health insurances policies they offer.

Contact is through mail.

vi. Admin



The admin performs any operations on the data.

The admin can also create accounts for new members.

3.1 Functional Requirements

3.1.1 Registering/ Login interface

REQ-1: The web app system should provide a registering form for new users. (might require filling of 2 forms for the medical doctors, labs, pharmacies and insurance companies)

REQ-2: The system will provide user with a login form

REQ-3: The system will authenticate users, display users' email.

REQ-4: The system will provide a pop message indicating successful login or prompt user to fill in credentials once again in the case of credentials not matching.

REQ-5: The user will be provided with a button to log out.

3.1.2 Patient interface

REQ-1: The system will provide patient with a dashboard containing all functions he or she can perform.

REQ-2: The system will provide buttons to update profile.

REQ-3: The patient will be able to view list of doctors for a particular ailment on clicking a button.

REQ-4: The system will provide the patient with a platform available doctors so as to book appointments. On booking an email should be sent to both the medical doctor and patient.

REQ-5: The system will provide user with ability to cancel an appointment or update appointment status, a form sent to the doctor's email.

REQ-6: The system will display a pop up for a user to rate a consultation on completion.

REQ-7: The patient can be linked to the home page to view health information.

REQ-8 The patient will be provided with a button to logout of the system.

3.1.3 Medical Doctor Interface

REQ-1: The system will provide doctor with a dashboard containing all functions he or she can perform.

REQ-2: The system will enable the doctor to update profile and specialization.

REQ-3: The doctor will be able to view list of patients who have booked an appointment.

REQ-4: The doctor can view appointments, update status: new, continuing, completed and cancel appointments.

REQ-6: The system can link doctor to pages with health information

REQ-7 Provide logout button.

3.1.4 Insurance Company interface

REQ-1: The system will provide user with a dashboard to view functions

REQ-2: The user will be able to update details, this includes services, password etc.

REQ-3: Viewing queries from patients

REQ-4: Will be able to use email to contact the patients

REQ-5: The system will provide the logout button

3.1.5 Pharmacy interface

REQ-1: Dashboard to view functions

REQ-2: Update details will be possible.

REQ-3: View Queries and service them.

REQ-4 Use email to contact medical doctors or the patients

REQ-5: The system will provide the logout button

3.1.6 Laboratory interface

REQ-1: Dashboard to view functions

REQ-2: Update details

REQ-3: Share findings, the system provides mail service

REQ-4 Use email to contact medical doctors or the patients

REQ-5: The system will provide the logout button

3.1.7 Admin interface

REQ-1: The system will provide admin with access rights to all information in the system

REQ-2: The system will provide a form to add users, all actors using the system

REQ-3: The system will allow admin to confirm appointments for patients

REQ-4: A button to log out admin.

4.0 External interface Requirements

4.1 User Interfaces

The main users of this system will be the system administrator who should be literate in computer usage and is conversant with the following: HTML, CSS and JavaScript and can handle a database like MySQL and a back-end language like PHP. The other parties are the

managers of the organization. The mentioned members of the system will have exclusive rights as opposed to other users of the system.

Due to the presence of the graphical user interface (GUI) the user will be able to navigate through the web app easily. The client will have some access to the system in features like filling up forms like when they will be entering their personal information for purposes of registration.

The system will also have controls to limit the user from other privileged features and also avoid the alteration of the system's functionality by the clients who include patients, medical doctors, pharmacies, laboratories and insurance companies.

4.2 Hardware interfaces

The web application supports most of the devices that can support the running of a web browser, there is no specific hardware interface needed.

The interface for running the application's systems is connected to the company. The hardware interface is described in the proposal document.

4.3 Software Interfaces

For the users they only require a web browser and internet connection

4.4 Communication Interfaces

Uses mostly mail services and HTTP protocol.

5.0 Other Functional Requirements

5.1 Performance requirements

It depends on the device being used. There is no specific instruction labelled to be used with this web application.

5.2 Safety requirements

Concerned about hacking, advising users to not share passwords.

Only the system admin has access to all the functions of the system.
Only certain privileges and rights are awarded to specific actors, and still this requires approval.

5.3 Security requirements

Registering and login functions assist system managers know who is using system and for how long. The information of users is stored in databases and is secure.

5.4 Software quality attribute

Maintainability: the system should be easy to maintain

Scalability: accommodate an increasing number of users

Reliability: the availability of the web application at all times. The main goal of the development process.

6.0 Other requirements

- ✓ **Legal policies:** the safety of all data provided by the users is in conduct with the provided policies by the Government of Kenya.
No copyright violations.
Data acquired from other sources will contain high referencing.
- ✓ **Packaging**
Only H Connect Company has access to all the rights of the product
The web application is not commercial but for the benefit of the company.
There will be no sale of any system or sub-system by the company.