Egy Healthcare System
SRS

Introduced by: G16

Name	Date	Reason For Changes	Version
Team	25/11/2018	Initial Release	0.1

Introduction

Executive Summary

"Egy Healthcare System" provides medical services. It should help people identify their medical condition by typing their symptoms or searching for a doctor in the field. It can be used by patients, doctors, companies and schools. It can be linked to hospitals as well. "Egy Healthcare System" is a great place to get your medical treatment.

Document Overview

The purpose of the document is to collect and analyze all ideas that have come up to define the behavior of the system. We are focusing on how this product will be used in order to gain a better understanding of the project, outline concepts that may be developed later, and document ideas that are being considered, but may be discarded as the product develops. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our team and users see the product and its functionality.

In short, the purpose of this SRS document is to provide a detailed overview of our software's functional and nonfunctional requirements.

Abbreviations and Terminologies

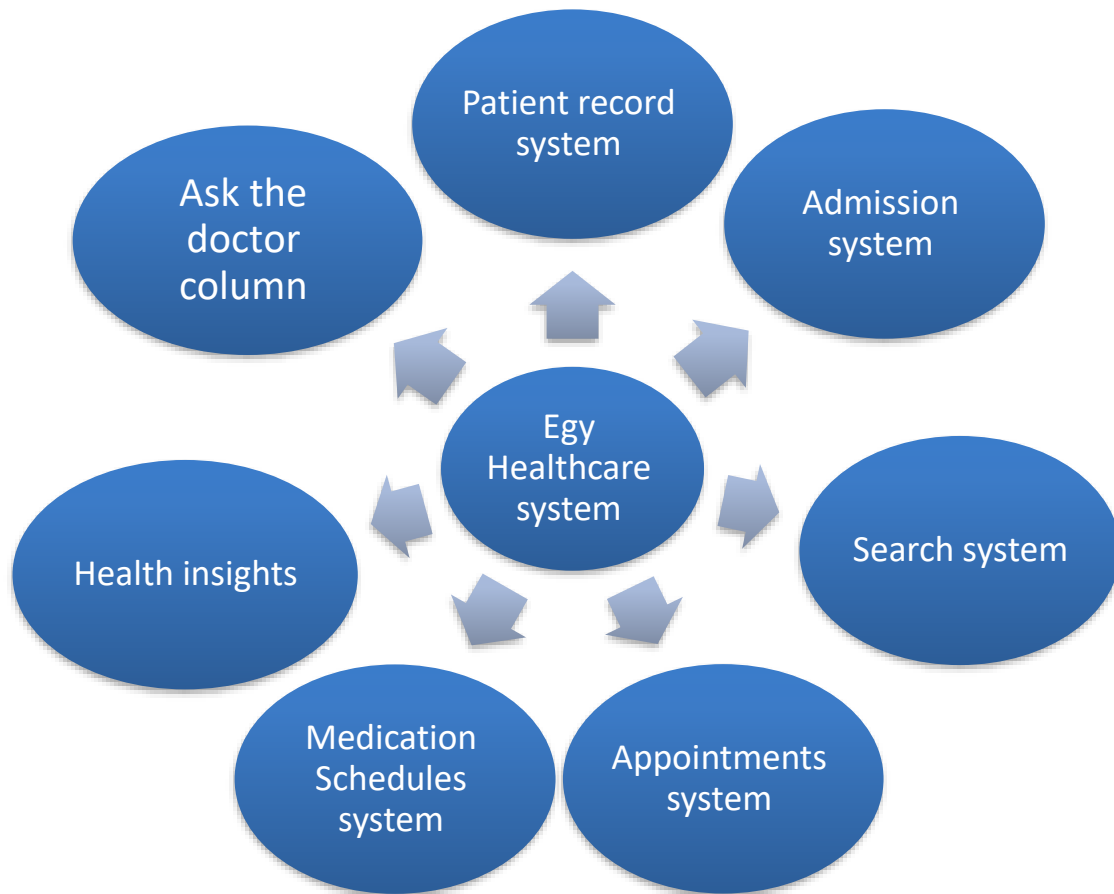| Terminology	Definition
Access	Allow interaction between website and user.
Patient	The person under medical treatment.
Admission	The act of allowing the users to have accounts on our website which they can log into.
Medical record	A chronological written account of a patient's examination and treatment that includes the patient's medical history and complaints, the physician's physical findings, the results of diagnostic tests and procedures, and medications and therapeutic procedures.
Medications	Set of medicines or drugs, prescribed to treat a specific illness.

References

- https://web.cs.dal.ca/~hawkey/3130/srs_template-ieee.doc
- http://www.computing.dcu.ie/~renaat/CA326/srs_template2.doc
- http://www.cse.chalmers.se/~feldt/courses/reqeng/examples/srs_example_2010_group2.pdf
- https://www.oasis-open.org/committees/download.php/14981/EDXLRqmtsSupplement101905.doc
- https://xbsoftware.com/free-srs-template/
- https://www.usamco.com/pdf/glossary.pdf
- https://www.ncbi.nlm.nih.gov/books/NBK436890/
- https://www.ahrq.gov/research/findings/final-reports/iomracereport/reldataapa.html

System Description

Introduction

Egy healthcare system provides full medical and health care for the users. The system is divided into several modules: Admission module where the user sign up to create an account on our system, Searching module where the user can search to find a certain doctor, search for a certain department or find the right department to search for a doctor in by entering his symptoms, Appointments module where the user can book an appointment with a doctor and he can also create a schedule for his appointments so that reminders can be sent to notify him when an appointment is coming up, Medications schedules module where he can create schedules for his medicines -if he takes any- so he can be notified when it's time to take a certain medicine. The user should be able to create a medical profile/record on his account containing his medical history in details. Healthcare insights and tips are regularly sent to users to widen their knowledge about general health.

Patient record system

Ask the doctor column

Admission system

Egy Healthcare system

Health insights

Search system

Medication Schedules system

Appointments system

Users

-Patients:

They are our main users. They should be able to create accounts on
Our website to login their medical history. They are able to search for doctors and book appointments with them, search for departments or find the right department by entering their symptoms. There is also the option of creating schedules for their appointments and medicines. They can post questions in Ask the doctor column.

-Third party users:

They are users who are not signed up to our website. They only have the option to search for doctors, departments or find a department by choosing their symptoms.

Modules

-Admission system:
The users are able to sign up by filling forms or login to their already existing accounts.

-Patient record system:
The users create profiles on their accounts, containing their full medical history.

-Search system:
The users are able to find doctors either by: searching for a certain doctor by his name or by profession and preferred area, choosing a department to search in it for a doctor or choosing their symptoms which directs them to the right department where they can find the right doctor for them.

-Appointments system:
The users can book appointments with doctors. They can create schedules with their doctors' appointments to be notified when an appointment is coming up.

-Medications schedules system:
The users can create schedules with their medications to notify them when it's time to take a certain medicine.

-Health insights:
Health tips and insights are regularly sent to the users on their accounts to Widen their knowledge on different health aspects.

System Users

For our system, there are two different types of users: patients and third-party users.

Because this is a healthcare system, our primary users are the patients. As to our studies, they will be expecting several services to be offered by the website. It should help people identify their medical condition by typing their symptoms, searching for doctors available in the field, or reaching out for a specific doctor. They don't need do sign up to access these services, unless they want to have a view of their medications and doctor appointments.

Throughout the development of this website, we are collecting information for our doctor's database to ensure we are choosing the best doctors.

Our third-party users could be companies or schools who would like to use this website for this website for fast medication or as a database for doctors. The users could also be website creators that would like to have a view of how a healthcare system website looks like and works.

System Modules

Patient Record System:

Registered users can login to their accounts and create a full medical record of past injuries, or illness; previous appointments & their medicine schedules.
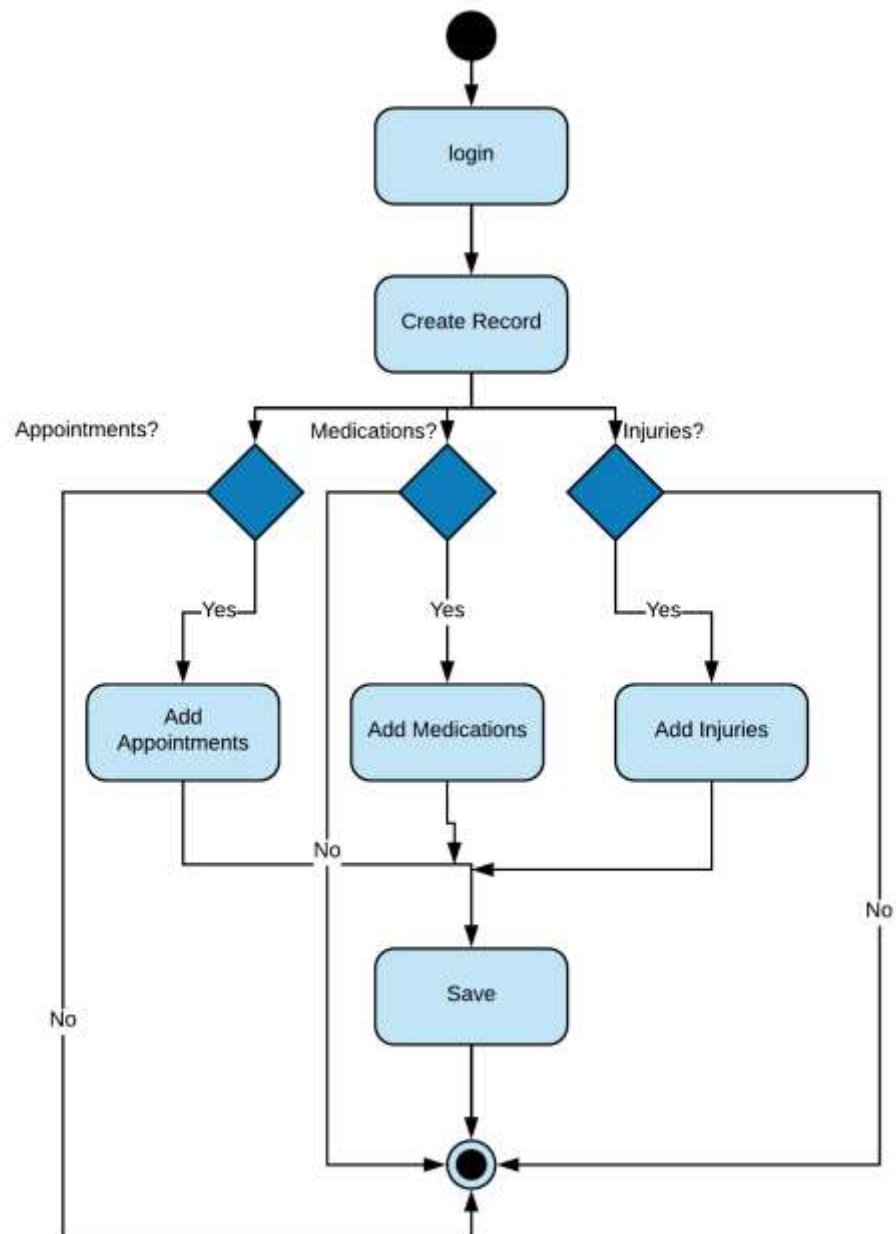
Activity Diagram of Patient Record System

Admission System:

Users can easily create accounts or login to their already existing accounts. Creating accounts facilitates keeping track of the user's records, searching for doctors or making appointments. While unregistered users don't have access to use these features.
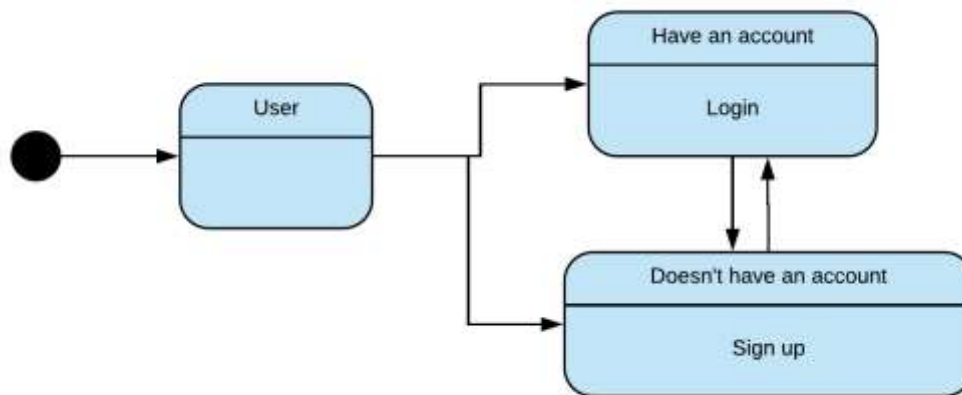
State Machine Diagram of Admission System

Search System:

Registered users are able to search in our database for doctors either by: searching for a certain doctor by his name or by profession and preferred area. Users can search through our departments' area, or they can choose their symptoms which direct them to the right department where they can find the right doctor for them.

Appointments System:

This module facilitates to the user to book a doctor's appointment. Users are also able to create schedules with their appointments to be notified when an appointment is coming up.
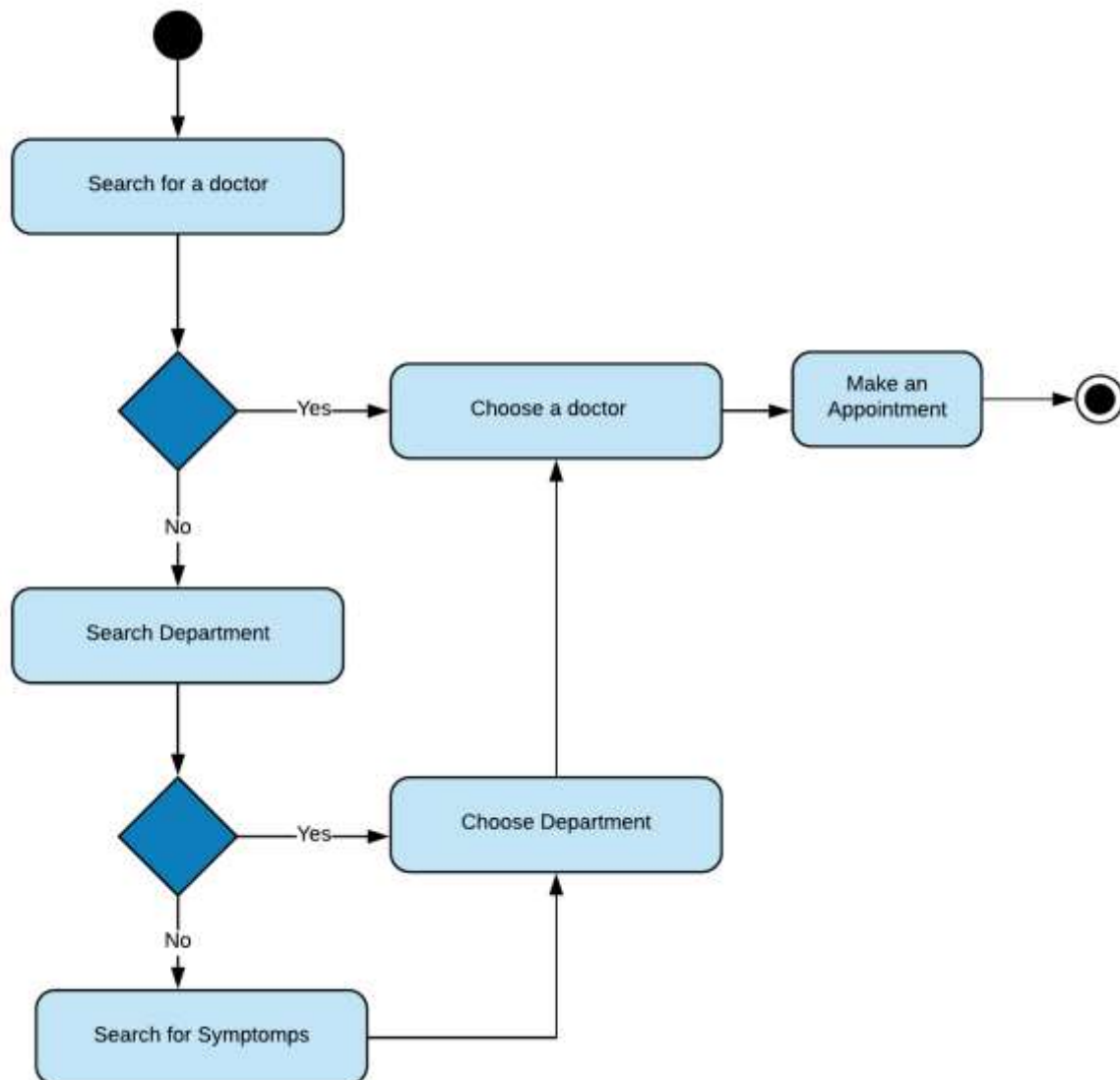
Search and Appointments Activity Diagram

Medication Schedules System:

Users can create schedules with their medications and they will be notified when it is time to take a certain medicine.

Health Insights:

 Health tips and insights on various medical topics are sent regularly to the users to widen their knowledge on different health aspects

System Functions

Modules Functions

Admission System Module

-Sign up Function:

Description: Take form's information from the user to create an account.

Inputs: First name, Last name, Password, Email, Gender.

Outputs: User Account Page.

Pre-conditions: On clicking "sign up "button.

Post-conditions: Save Password.

-Sign in Function:

Description: Enable the user to log in to his existing account.

Inputs: Email, Password.

Outputs: User Account Page.

Pre-conditions: On clicking ''Already have an account" button.

Post-conditions: Save Password.

Search System Module

-Search by area and profession

Description: Enable the user to search for a doctor by providing the doctor's profession and desired area.

Inputs: Profession, area.

Outputs: result containing the doctors that have the profession and area entered by the user.

Pre-conditions: Click "search" button.

Post-conditions: Showing the results.

-Search by Name

Description: Enable the user to search for a doctor by providing the doctor's name.

Inputs: Doctor's name.

Outputs: result containing the doctors that share the name that the user has entered.

Pre-conditions: Click "search" button.

Post-conditions: Showing the results.

-Search by Department

Description: Enable the user to search for a department by choosing its name.

Inputs: Department's name.

Outputs: result containing the doctors in this department.

Pre-conditions: Click "search" button.

Post-conditions: Showing the results.

-Search by Symptoms

Description: Enable the user to find the right doctor according to his symptoms.

Inputs: Symptoms.

Outputs: result containing the right department to search in for a doctor.

Pre-conditions: choose a symptom.

Post-conditions: Showing the results.

Medications Schedules System Module

-Medicine Schedule Function

Description: Create a medicine schedule for the user.

Inputs: Medicine's name, Time of each medicine.

Outputs: Table containing the medicines' name and its timing.

Pre-conditions: On clicking "create schedule" button.

Post-conditions: Showing the schedule.

Appointments System Module

-Booking an appointment Function

Description: Allows the user to book an appointment with the doctor.

Inputs: Time of the appointment.

Outputs: Telling the user whether he successfully booked the appointment or not.

Pre-conditions: On clicking "book an appointment" button.

Post-conditions: An alert telling the user whether he successfully booked the appointment or not.

-Appointments Schedule Function

Description: Create an Appointments schedule for the user.

Inputs: Time of the appointment, the doctor's name.

Outputs: Table containing the appointments.

Pre-conditions: On clicking "create schedule" button.

Post-conditions: Showing the schedule.

Patients record System Module

-Medical Profile Function

Description: Allows the user to record his medical history.

Inputs: User's medical history.

Outputs: Organized profile of the user's medical history.

Pre-conditions: On clicking "create medical profile" button.

Post-conditions: An alert telling the user whether he created the profile or not.

Health insights Module

-Health insights Function
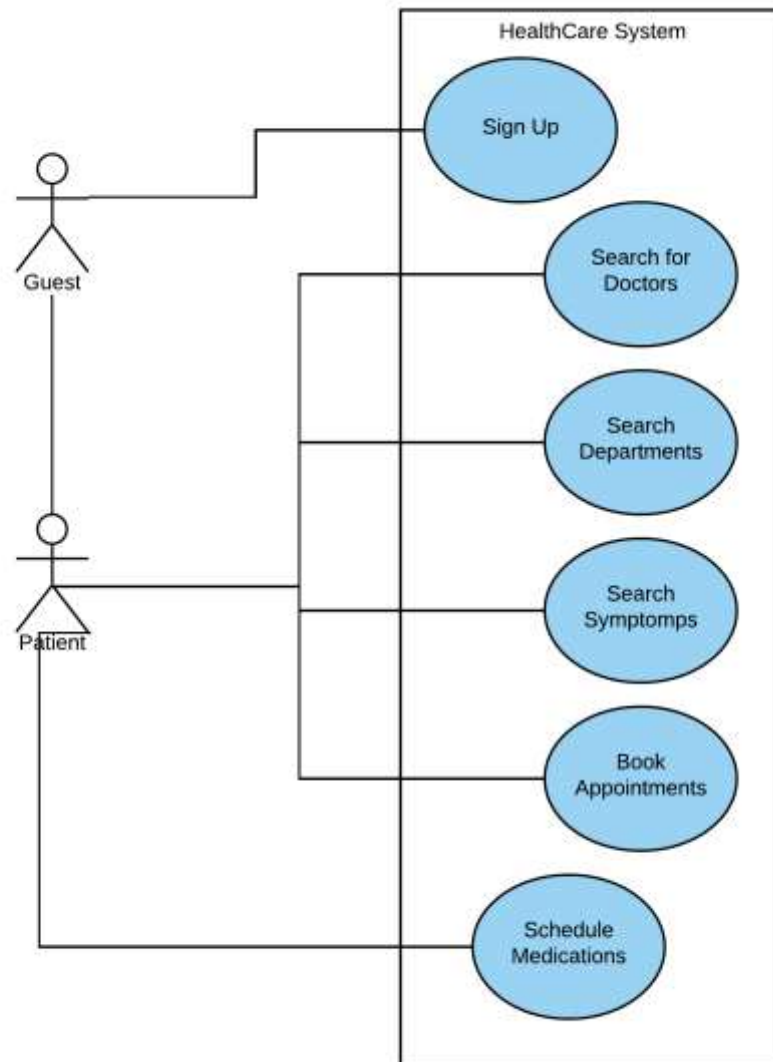
Description: Sends the user regular insights about health.

Inputs: None.

Outputs: Regular insights sent to the user.

Pre-conditions: On clicking "Allow health insights" button.

Post-conditions: An alert with the insights.

System Models

Use Case Diagrams

Sequence Diagrams
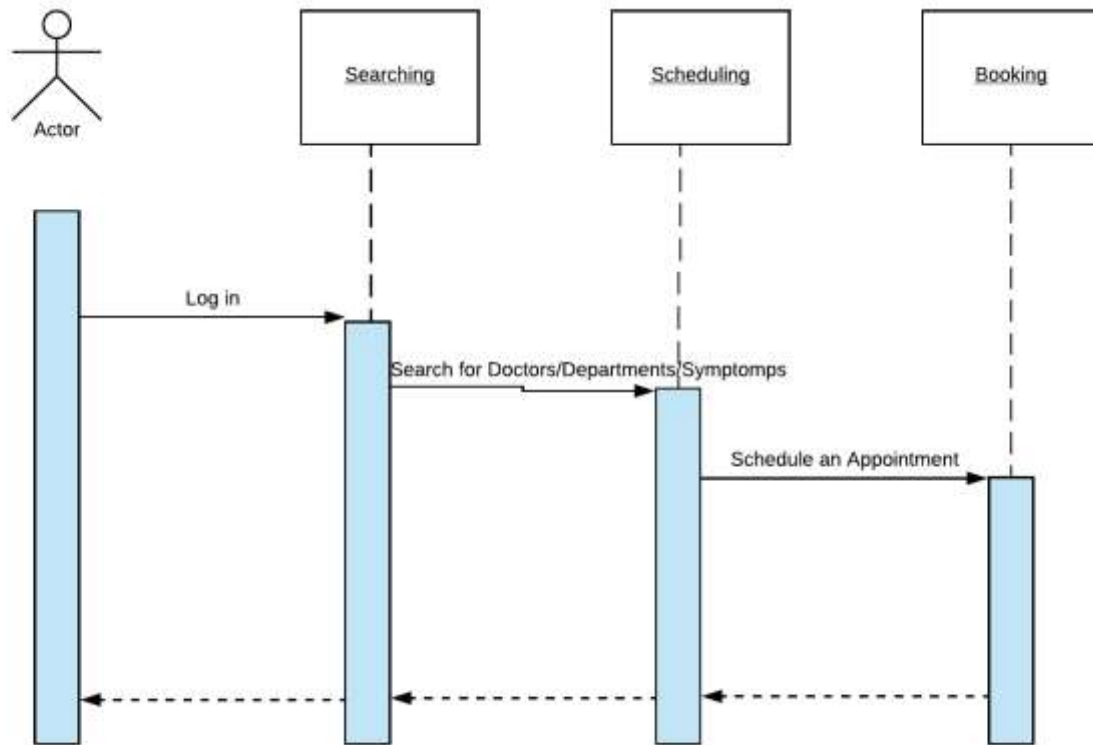
Non-Functional Requirements

Security Requirements

We provide mild security for our system, by allowing the user to have a password for his account. During the signing up process, the user repeats the password he has chosen to be reassured that the password for his account is the password that he has chosen for his account.

Usability Requirements

The system should be easy for the user to interact with. The navigation labels should be clear and concise and should tell the user exactly where the user will be taken in case of clicking. The website should be clearly divided into easily understandable sections and use headings to clearly label each section.

Performance Requirements

The system must be interactive and the delays involved must be as small as possible. The time required to access the database for information and the time to get the required information should be as small as possible. The loading time of the page should be as small as possible.

Technology Requirements

The system should be adaptable to new technologies. The system should be reliable and should not depend on other systems.

Delivery Requirements

The system should be delivered only once at the date approved of by the doctor. Initial versions of the work can be uploaded to ensure that the work is flowing correctly.

Domain Requirements

Domain Requirements

Departments' domain Requirement

The system should take into account the different departments of the medical field and the symptoms related to each department to help the user find the right doctor to treat him.

Symptoms' domain Requirement

The system should be able to identify different symptoms and relate them to the correct medical department.

System Interfaces

User Interfaces

The UI should be easy to manipulate without additional training. The user should be able to interact with the system in any of the languages available in the language menu. The pages should use a ZUI graphical environment, should be built with a good sense of color and contrast, and should be printable, using keys. All pages of the system should be accessible from any page.

Home page

"About us" page

"Registration form" page

Full healthcare system

User ID	1
First Name	Smith
Last Name	Jill
Email	useremail@hotmail.com
Gender	Male

About

Medicine
Schedule

Appointment
Schedule

"User's account" page

∿ EGY Healthcare   Home   About us   Sign up/Login

Full healthcare system

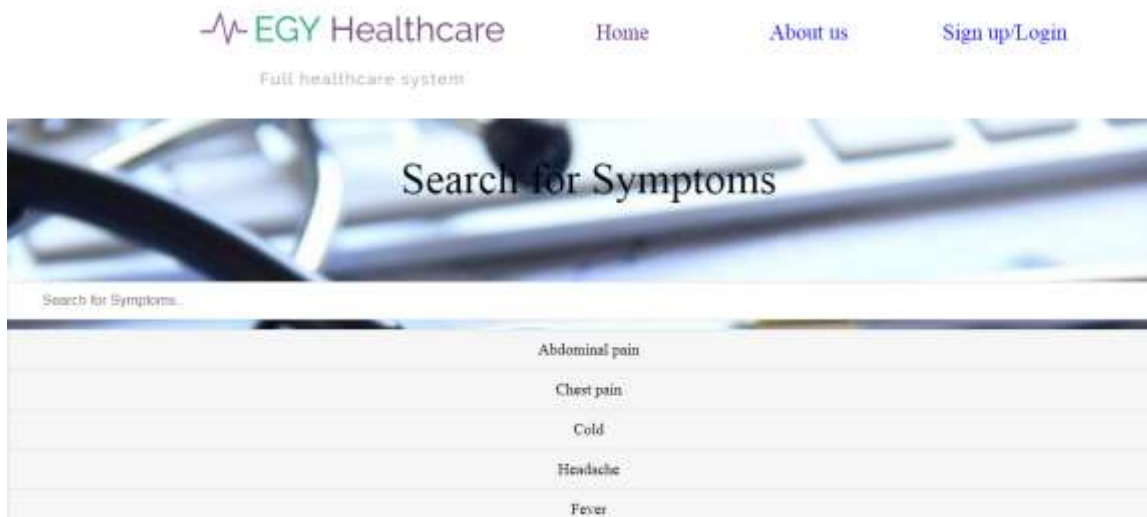| Medicine	Time
Medicine 1	After lunch
Medicine 2	Before bed

Edit

"Medicines schedules" page

"Appointments schedules" page

"Search for a doctor" page

"Search for a department" page

"Search for symptoms" page

Communication Interfaces

Our Egy Healthcare system supports all web browsers. It shall use the HTTP protocol for communication over the internet.

Hardware Interfaces

All server-side components must execute on server-class computers. All client-side components must execute on workstation-class and personal-class computers.

Software Interfaces

Our website can run on several operating system such as Windows (XP, 7, 8, 8.1) or Mac OSX (Tiger, Leopard, Snow Leopard, Lion, Yosemite).
It will work on several web browsers as well such as Google Chrome, Internet Explorer (ver. 8 or later), Mozilla Firefox and Safari.