KINGDOM OF SAUDI ARABIA
Ministry of Higher Education
Al-Imam Mohammad University
College of Computer & Information Sciences

المملكة العربية السعودية
وزارة التعليم العالي
جامعة الإمام محمد بن سعود الإسلامية
كلية علوم الحاسب والمعلومات

Second term 1441/2020

Software Engineering (CS-310)
BSCS- Section: 171

Project-Phase No: 1
Diagnosing Diseases App (Bot)
(Software Requirements Specification)

Submitted By

Sultan mohammed Alzrair (438011441) – Coordinator

Anas wlead Bajunayd (435021105)

Abdullah saad Alswailem (438011158)

Aref mansoor Alotaibi(439027005)

Rayan saud Alshanabah(438012286)

Supervisor

Dr.Sultan Saud Alqahtani

Date: 01/03/2020

Revision History

Description	Version	Date
Software Requirements Specification	Phase.1	20/02/2020

Table of Contents

1.0 Introduction

Recently we have seen an increase adoption of smartphone-based diagnostic tools and one of the most promising directions in medicine is finding new and improving old methods of medical diagnosis, There are many different ways to diagnose and treat diseases, Diagnosis Diseases App designed to help both doctors and patients, Patient can be diagnosed by asking them necessary questions, based in his answers the bot will reducing the other symptoms until determine the disease.

1.1 Purpose

The purpose of this App is to help the patients and reducing effort to the doctors. by using this app, the patient will be able to diagnose the disease easily and reducing the crowding on the hospitals, the bot can suggest the treatment for the patient, And the bot is available 24/7.

1.2 Overview

It is a bot for the future in the general of the healthcare it help in diagnosing the diseases for the patients the bot can reduce the time for the patients, they don't need to go the hospitals if the bot can diagnose the patient completely, if the disease for the patient require any physical diagnose or blood test the bot may suggest any near hospitals for the patient, the bot can create a hospital file for the patient.

1.3 Scope

Our goal is to helping patients and doctors by using an app that asking a related question to the patient by a (Bot) this bot have a great ability to analyze the answers until he can define the disease. The conversation between the patient and the bot (Chatbot), is non-waiting response. Meaning to say that the bot will analyze the answers within a short time. Providing the information or suggesting the cure for the patient all through the conversation and it is a great using of the technology and the strategy framework.

1.4 Definitions, Acronyms, and Abbreviations

Term	Definition
Patients	The person who came to be diagnosed by the Bot.
Bot	The system that we will develop to be able to analyse and do the requirements.
Doctors	The person who is responsible for the health of the patient after the diagnose.
Chatbot	The conversation between the patient and the bot.

2.0 General Description

2.1 Product Perspective

This App will serve users and systems, it uses a simple user interface so the all of society can interact with the bot.

The hospitals and doctors will be in charge of the bot if there are any new system software info. After releasing the app, it gives first time for free and for the next diagnose session there will be subscriptions options low-cost.

Since the app is depends on the information that came from the user(patient) there will be serval database one is for analysing the information coming from the user and one is for providing the diseases names for the user.

2.2 Product Functions

The Application will be providing a huge amount of utilities. Diagnosing the disease without effort, witch it’s an app it can serve all type of the society anywhere they are, the bot will have the ability to suggest the cure if the user is diagnosed completely and it’s a new diagnosing method.

2.3 User Characteristics

The bot has the ability to speak and type more than one language, and it can respond within a short time and on the critical ssituation the bot can contact the ambulance as soon as possible.

2.4 General Constrains

The application is constrained by internet connection because it will need to evaluation and compare from the database about information that given, because of database the user won't wait for diagnose diseases. However, the number of diseases is limited by our medical knowledge.

3.0 Functional Requirements

3.1 Bot questions to patients

Introduction: The bot will ask questions to diagnose disease**.**

Input: questions**.**

Action: Based on database symptoms the bot will get questions from already known symptoms disease that been collected and organized in database. and the patient will have the choices to answer**.**

Output: Answer.

3.2 Adding diseases

Introduction: adding disease that been diagnosed to database.

Input: symptoms of diseases.

Action: This function will be in database. Only the admin who have access to database and adding or edit symptoms of the diseases. All symptoms of diseases will add based on information from medical sites. We may have medical consultant in future.

Output: Disease.

3.3 Suggesting the cure

Introduction: The bot may suggest a treatment to the patients.

Input: patients answers.

Action: The bot may suggest the cure or the treatment for the patient after the bot fully diagnosed the patient the bot will give the patient prescription based on the patient's answers.

Output: prescription.

3.4 Great help for those have fear from doctors

Introduction: well for those who have iatrophobia this app can help them.

Input: none.

Action: people who have iatrophobia it may can be difficult for them if they get sick. they fear from seeing the doctors so this app can help them to diagnose.

Output: reducing the fear from going to the doctors.

3.5 Sending Hospitals Location

Introduction: the bot can send the nearest hospitals location for patient.

Input: none.

Action: sometimes when the bot cannot full diagnose the patient by requiring blood testing or physical diagnosing etc. or if the bot detected that the patient requiring surgery the bot will send the nearest hospitals location for the patient.
Output: sending hospitals location via google maps.

3.6 Downloadable App on Mobiles

Introduction: it can be installed by the user mobile/tablet.

Input: none.

Action: It can be downloaded by the user either if he has a phone or a tablet and its available for Android.

Output: Diagnosing Diseases App**.**

4.0 Non-Functional Requirement

- The app has extensible in the future for upgrade, code and document can be modified easily for any new function needed.

- Any update will be fixed on the backend and a notice will be announced for the user.

- The app will provide secure connection when the user linked to the database.

- The app has user friendly interface and will be easy to use

6.0 Conclusion

At the end, this Application is recommended for patients. As we describe and documented in this phase. the app will be able to preliminary diagnosis diseases. in future we may have team of medical consultant.