COLLEGE OF COMPUTING AND INFORMATICS TECHNOLOGY

MY DOCTOR, DISEASE DIAGNOSING MOBILE SYSTEM

By

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DEPARTMENT OF COMPUTER SCIENCE

SCHOOL OF COMPUTING AND INFORMATICS TECHNOLOGY

A Concept Paper submitted to the School of Computing and Informatics Technology

For the Study Leading to a Project Proposal in Partial Fulfillment of the

Requirements for the Award of the Degree of Bachelor of Science in Computer Science

Of Makerere University

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1.0 Introduction

Health is one of the most essential services required by all people in the country. This implies that, maintaining good health among the people ensures a high standard of living in the nation. Therefore, all possible means have to be adopted so that the welfare of Ugandans is well maintained.

2.0 Background to the Problem

Many people in Uganda face a challenge of high hospital dues incurred to acquire reasonable health treatment. These fees are charged from the time of going to the hospital up to the time of departure. Such charges include hospital registration fees, hospital consultation fees, checkup fee, actual medicine prices and so on. These fees are charged in almost all hospitals within the country and amounts paid range from public to private hospitals. For example, Mengo hospital, a public hospital charges 8000/= for consultation on addition to other charges like blood checkup and medicine fees. ("Inter Press Service," 2017)

As a result, many of the people end up dodging most of these charges and only buy the medicine for the diseases which they think that they are infected with. This has been evidenced by the recent research we made that showed about 70% of the people in Uganda take medicine without first visiting health centers. This has led to death arising from treating wrong diseases never the less wastage of money. (Conrad, 2013)

3.0 Problem Statement

The problem this project will address is taking of wrong medication by the people due to lack of medical guidance from doctors as some patients tend to dodge consultation fees which are charged by the different hospitals. On addition to that, the inadequate number of medical personnel in hospitals which has been reflected by the long queues made by patients in most public hospitals lead to delay of cure to patients who access such hospitals. ("Mengo Hospital," 2017).

Therefore, the system will eradicate the unawareness of diseases that affect people in the country since they can easily identify the signs and symptoms of the diseases as well as providing the essential first aid to the different diseases affecting a patient. Therefore, a user must get certain of what he/she is to do so as to maintain a good health by acquiring appropriate medication.

4.0 Objectives

1. Main Objective

To develop a system that identifies and ranks a disease basing on the signs and symptoms inserted by the user.

2. Other Objectives

To carry out research about the different signs and symptoms of the different diseases.

To design a database that stores the signs and symptoms of the various diseases.

To develop an algorithm that maps signs and symptoms to their respective diseases.

To develop a mobile application that implements the design above.

5.0 Methodology

The system is to be composed of a well-designed and normalized database, a disease ranking algorithm and a mobile application.

Research to acquire information about medication in the health department is to be carried out by issuing out questionnaires, having oral interviews with different medical personnel, browsing online health webpages, reading different health articles, journals and books.

Microsoft Visio is to help us draw the UML use case diagrams and dataflow diagrams that are to reflect the actual functionality of the disease diagnosing system.

We are to develop a MySQL database for storing and retrieving information about diseases basing on the different signs and symptoms.

A disease ranking algorithm is to be implemented in PHP language to effectively rank diseases basing on the signs and symptoms that are in the database. In addition, connection between the mobile app and the database is to be done by PHP and server data formatted in JSON for fast transmissions.

The mobile application is to be developed using XML (for designing the user interface) and Java (for implementing the functionality).

6.0 Outcomes

The project is to produce an artificially intelligent system that can automatically identify diseases basing on the signs and symptoms that are inserted by the user. To a greater extent, this will act as a free medical assistant to people thus saving them from some hospital charges. The system will also provide brief instructions about first aid a patient is to take so that he gets cured.

7.0 References

Conrad, M. (2013). Patient waiting time and associated factors at the Assessment Center, General out-patient. Kampala.

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