PRIMARY HEALTH CARE SYSTEM (e-HEALTH) FOR NAJRAN CITY IN SAUDI ARABIA

ALNAJRANI DHAFER AJAIM H.

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requirements for the award of the degree of
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Universiti Teknologi Malaysia

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“I declare that this project report entitled PRIMARY HEALTHCARE SYSTEM (E-HEALTH) FOR NAJRAN CITY IN SAUDI ARABIA is the result of my own research except as cited in the references. The project report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.”

Signature :
Name : Alnajrani Dhafer Ajaim H.
Date : April 2008

To my beloved parents, wife and my kids

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In the name of Allah, the Most Gracious, the Most Merciful, for giving me the determination and will to complete this study.

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ABSTRACT

The project is to develop a clinical system for primary health care centres in Najran City in the kingdom of Saudi Arabia. Primary health care centres are currently running based on manual system. There are many problems face by patients due to weaknesses in the current manual system. The project analysed related literature to understand and facilitate in the project. This project attempted to analyse, design and develop a clinical system to help primary health care centres to manage the business processes. In order provide a systematic approach for effectiveness of the clinical system for primary health care centres in Najran City. A formal methodology of software development life cycle is adopted to develop the system focusing on prototyping-based development approach. The current system and proposed system are modelled using Unified Modelling Language. It is hoped that this project will make the primary health care centres more effective.

ABSTRAK

Projek ini merupakan pembangunan sistem klinikal untuk pusat penjagaan kesihatan utama di Bandaraya Najran, Arab Saudi. Buat masa ini, pusat penjagaan kesihatan utama dilaksanakan berdasarkan sistem manual. Terdapat banyak masalah yang dihadapi oleh pesakit disebabkan oleh kelemahan system semasa. Projek ini menganalisa maklumat-maklumat berkaitan bagi memahami, menganalisa, merekabentuk dan membangunkan sistem klinikal untuk membantu pusat penjagaan kesihatan utama dalam mengendalikan proses-prosesnya agar cara yang lebih sistematik dani keberkesanan dapat dilaksanakan di Bandaraya Najran. Metodologi yang digunakan bagi membangunkan sistem ialah pusingan hayat pembangunan perisian dengan memberi penekanan kepada pendekatan pembangunan berasaskan prototaip. Sistem semasa dan sistem cadangan dimodelkan dengan menggunakan *Unified Modelling Langguage.* Diharapkan projek ini akan menjadikan pusat penjagaan kesihatan utama lebih berkesan.

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CHAPTER 1

PROJECT OVERVIEW

1.1 Introduction

Health care information systems implementation aims to enable the use of electronic systems to provide better patient, doctor and clinic information delivery. The use of this technology can facilitate health organizations to develop sophisticated methods to change the traditional information systems. Implementing Health information system (HIS) can reduce serious errors, save lives and money, and improve diagnostic and treatment outcome and also can integrate the whole business into a comprehensive and value-making system .

So, through this project, we are going to develop a new system by means and foundation of object-oriented approaches that could help us in future changes and reviews in system.

The continuing sections of the project are categorized into chapters; the literature review, research methodology, initial findings, and discussion and conclusion.

1.2 Problem Background

Primary health care centers in Najran city in Saudi Arabia are currently running based on manual system. There are many problems has been facing by patient due to lack of structured system such web-based clinical center. The problems are:

a. Patient used to get to serials number or appointment time earlier. It's just wasting time.
b. Patient's identities and prescriptions always lost as there is no computer based system.
c. Staffs or doctors can not obtain the patients history.
d. Reports to the management usually did not have enough and accurate information as there is manual system.

On the other hand, the opportunities for the creation of a Virtual clinic center revolve around the fact that while systems are still traditionally manual based, information professionals have had some degree of exposure and training to modern information technology, while the Najran city in Saudi Arabia is planned to establish web based clinical system. There is therefore an awareness of the use and benefits of the technology.

Najran city unique geography demands urgent attention with regards to the establishment of Virtual clinic centers. Some communities, especially those in the hinterland areas, are hardly ever the recipients of up-to-date and provide health service. The basic technological infrastructure does not even exist in these communities.

In fact, Current problems in managing this system and predicting future disadvantages made us seriously plan for developing this project.

1.3 Objective

Based on study and literature review regarding Najran primary health care centers, main objective of this project is to design a web-based Primary Healthcare System for Najran City.

a. To analyze and design primary health care information system based on current business and best process practices.
b. To develop a prototype based on web-based clinical system.
c. To develop an organizational strategic plan for system implementation.

1.4 Scope of the Project

The Project will cover five main scopes as highlighted bellow:

a. Study and analyze about the current system in Najran primary healthcare.
b. System will be design based on latest OOP technology.
c. Design a data base system based on system requirements and best practices.
d. Design a prototype based on web-based clinical system.

1.5 Benefits

The project hopes to benefit patient, staff (clinical and others), doctors, management as well as people of Najran city.

1.6 Project Setting and Questions

The hypothesis of the study is as follows: “Connecting the patient to health care services with web technology and the Internet which will increase the efficiency of health care clinics”. Three research questions were formulated as follows.

a. What are the potential savings due to advanced IC-Technology for the healthcare system in Najran City in Saudi Arabia?
b. Can the system serve more patients with fewer resources.

1.7 Summary

In this chapter, project carried out introduction of project, project objectives, scope, problem background, benefits and Project Setting and Questions has been discussed. A good idea of the organization where the project is going to implemented and why this project will be valuable for them also pointed out. As currently the organization is doing their internal work manually, so it is very time consuming and hard job for them to mange all patient appointment, and manage patient and doctors information. By implementing this project successfully to the organization they will able to mange all patient appoints, manage patient medical history, online messaging, track doctors and other staff records.

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