Design and implementation Website Family Doctor Home Advisor

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Abstract

Today, websites are efficient tool of communication within society. For example, when people need information about a company or an organization, most of them will almost instantaneously think of its website. In this paper the website is based on creating a database and storing a list of diseases and its diagnosis and medications, to allow the users have these information. And also let the user to ask the doctor about medical information and get the answer about them. The administrator of the website will be a Doctor; He will control the website by adding Diseases, Diagnosis and Medication to the database and answer the question of the users.

تصميم وتنفيذ موقع النصائح الطبي للعائلة

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الخلاصة

اليوم، المواقع هي أداة فعالة للاتصال داخل المجتمع.على سبيل المثال،عندما يحتاج الناس المعلومات عن شركة أو منظمة، ومعظمهم من سوف يفكر على الفور تقريبا عن موقعها على شبكة الانترنت . في هذه البحث يستند الموقع على إنشـاء قاعــدة بيانات وتخزين قائمة من الأمراض و التشخيص والأدوية. للسماح للمستخدم الحصول على هذه المعلومـات.والسماح أيضـا للمستخدم أن يسأل الطبيب عن المعلومات الطبية للحصول على الجواب عنها. والمسؤول عن الموقع أن يكـون طبيبـا، وانـه سيسيطر على الموقع بإضافة الأمراض والتشخيص والأدوية إلى قاعدة البيانات والإجابة على السؤال المستخدمين.

Introduction

Virtually all businesses, corporations, and organizations today utilize the internet and websites as means to communicate, broadcast and interact with their broad spectrum of users. As computer and internet resources grow larger and larger, the opportunities and possibilities a website brings can prove invaluable [1].

Most recent efforts of Web database developers are directed towards exploring the specifications of the structure and content of Web sites on how to get useful information quickly from Web databases. Efforts have been made on modeling the Web as an infinite, semi-structured set of objects and providing a set of language for managing and restructuring data coming from the Web [2].

Along with the tremendous growth of the World Wide Web (WWW) over the past decade, there has been growth and transformation in the nature of services accessible over the web. Many new services are web sites that are driven from data stored in database. IN the past, the only way to get a medical advice is to go to the concern place where the doctors' clinics or hospitals. Nowadays, internet services are available everywhere, so we used this service to let the patient get advice even when they are at home through project's website [3].In this paper the Family Doctor Home Advisor system is used to store and share the medical information. The patient can benefit from this web-site by get medical information and medication and also can get an advice from the doctor after asking him even when they are at home. The doctors also can benefit from this web-site by sharing and updating the medical information between them.

2. Web-Based Application Requirements

Almost all of the work of Web applications takes place on the server. A specific application, called a Web server, will be responsible for communicating with the browser. A relational database server stores whatever information the application requires. The Web server has what seems to be a fairly straightforward job. It sits there, running on top of the operating system, listening for requests that somebody on the Web might make, responds to those requests, and serves out the appropriate Web pages. In reality, it is a bit more complicated than that, and because of the 24/7 nature of the Web, stability of the Web server is a major issue. There are many Web servers out there, but two Web servers dominate the market. They are (Apache) and Microsoft's Internet Information Server (IIS)see in Figure (2.1)[6].

A databaseis a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing, managing, searching, and replicating the data it holds. Other kinds of data stores can be used, such as files on the filesystem or large hash tables in memory, but when professionals talk about databases they mean a standalone application such as Oracle or SQL Server.[7]
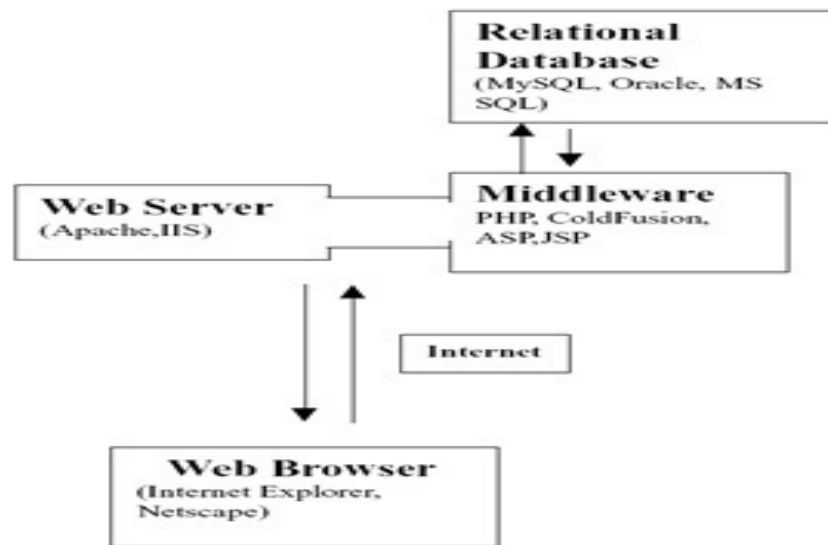

Figure (2.1). Architecture of Web Application [6]

3. Healthcare Systems

During the last 10 years, more and more initiatives have been taken at the international and national levels in order to strengthen national health systems as the core components of the global health system. Having this scope in mind, it is essential to have a clear, and unrestricted, vision of national health systems that might generate further progresses in global health. The elaboration and the selection of performance indicators are indeed both highly dependent on the conceptual framework adopted for the evaluation of the health systems performances.

Like most social systems, health systems are complex adaptive systems where change does not necessarily follow rigid epidemiological models. In complex systems path dependency, emergent properties and other non-linear patterns are under-explored and unmeasured, which can lead to the development of inappropriate guidelines for developing responsive health systems. An increasing number of tools and guidelines are being published by international agencies and development partners to assist health system decision-makers to monitor and assess health systems strengthening including human resources development using standard definitions, indicators and measures.

In response to a series of papers published by members of the World Health Organization's Task Force on Developing Health Systems Guidance, researchers from the Future Health Systems consortium argue that there is insufficient focus on the using of internet to ease the contact between doctors and patients as everyone now have internet connection in his house. New health care technologies, medications, treatments, and procedures are being developed rapidly, and clinicians are expected to incorporate them into their daily practices. But today, computer systems exist that can help clinicians meet each of these challenges. Medical informatics deals with all aspects of understanding and promoting the effective organization, analysis, management, and use of information in health care[4].

As individuals take a larger role in managing their own healthcare, more consumers are independently seeking out health information via the Internet. Health professionals are also turning to the Internet to keep informed and interact with their patients. Given the vast amount of healthcare data available on the Internet, there must be some ways to promote quality health resources online and to ensure that consumers and professionals are able to find reliable information online.[5]

4. Implementation of Family Doctor Home Advisor

4.1 Website Design

The design of pages consisting of two types of components HTML components and PHP scripts and each page has header that belong to a header file of HTML Format. The system contains 6 pages as main pages and there are an action pages which execute the PHP script and also there are a pages that support these main pages which are diagnosis entry page and treatments entry See in Figure 4.1 website structures
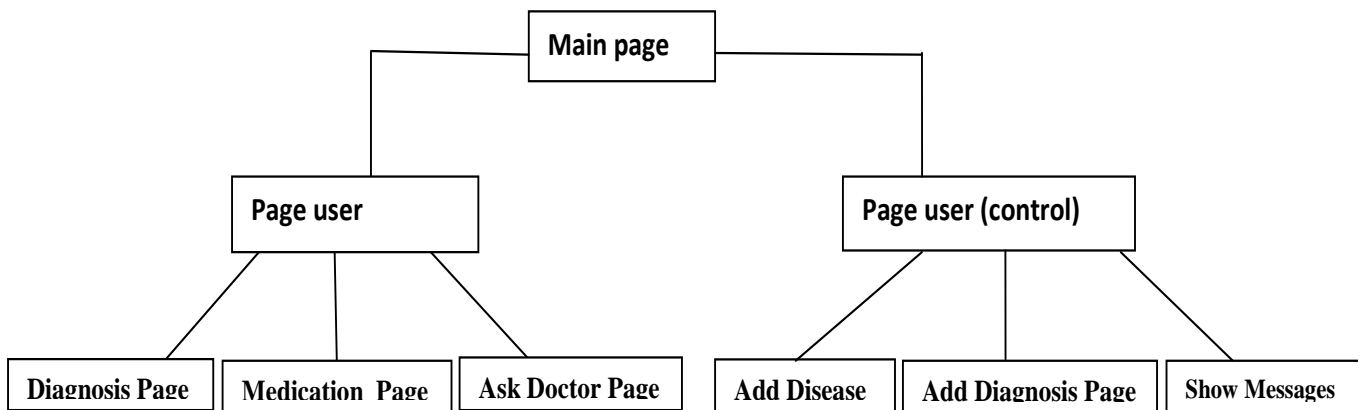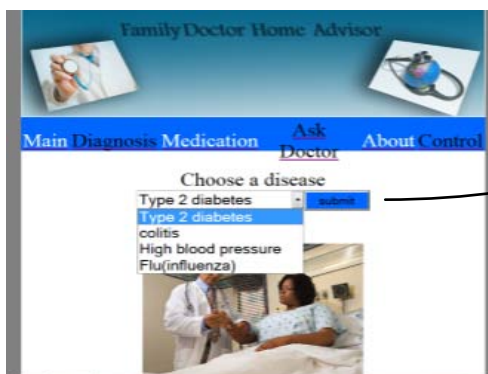
Figure. 4.1 website structure

4.1.1 Diagnosis Page

Diagnosis page contain the output of diagnosis entrance page its use is very simple the user just need to choose the disease and press submit to get the diagnosis result. And its work also based on actions page that contain the code. See in figure .4.2 Diagnosis page.

Figure.4.2 Diagnosis page

4.1.2 Medication Page

Medication page's work is the same as diagnosis page, the user choose the disease and then press submit button, to get the medication result. This page is also connected to an actions page. See in Figure.4.3 Medication Page.

Figure.4.3 Medication Page

4.1.3 Ask Doctor Page

The questions page consisting of email and textbox for sending messages to the doctor then the doctor can open the messages and send reply to it by the email. The message is going to the database after being sent by the user, while the doctor's reply is send by email. See in Figure.4.4 Ask Doctor Page.
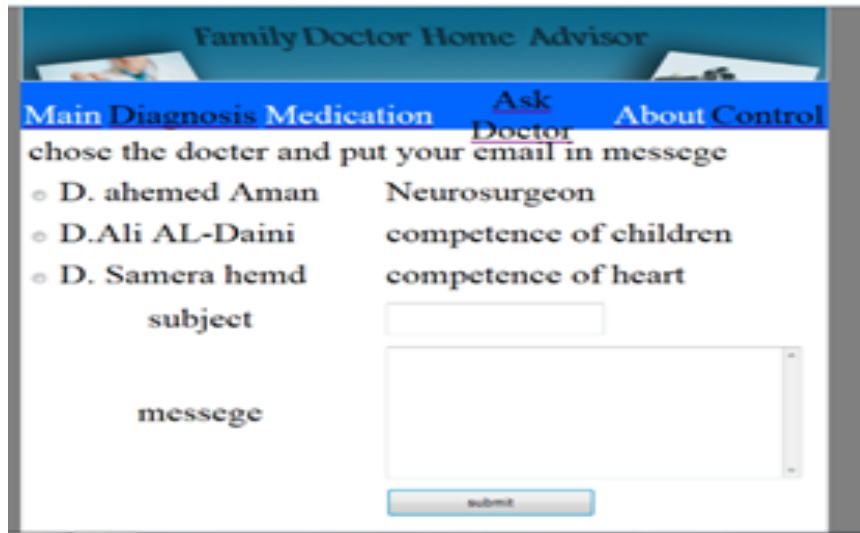

Figure.4.4 Ask Doctor Page

4.1.4 Login Page

The login page is used to ask the administrator (The Doctor) to enter his user name and password to enter to the control page see in Figure.4.5 Login page.

Figure.4.5 Login page

4.1.5 Add Disease Page

This page has the responsibility of entering new diseases to the system and a medications for it, it has a submit button that is redirect the form to the actions page for inserting data, it also has two links for guiding the administrator to insert diagnosis page and to redirecting him to messages page, the header of the page can also lead the administrator to any other page in the system see in Figure.4.6 Add Diseases & Medication Page.

Figure.4.6 Add Diseases & Medication Page

4.1.6 Add Diagnosis Page

The add diagnosis page is used to insert diagnosis to the available diseases, so the Doctor select disease and add diagnosis to it see in Figure.4.7 Add Diagnosis Page.

Figure.4.7 Add Diagnosis Page

4.1.7 Show Messages Page

The Show messages page let the doctor to see the patient messages read it and reply by Email see in Figure.4.8 show Messages Page.
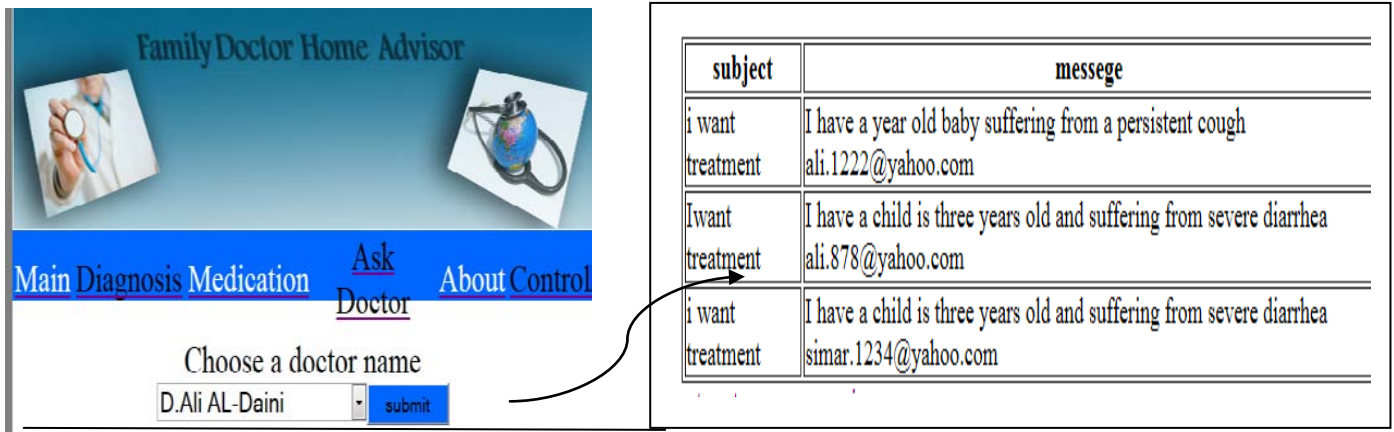

Figure.4.8 Show Messages Page

4.2   Database Tables

Four tables are created:
1. **Diagnosis Table:** It consists of 3 columns (ID, diseases, and diagnosis of diseases) see figure 4.9.
2. **Medication Table:** It consists of 3 columns (ID, diseases, and medication of diseases) see figure 4.10.
3. **User Table:** is used to authorize the administrator to enter to the control page. It consists of 3 columns (ID, name, and password).
4. **Messages Table:** is used to store user messages.It consists of 3 columns (ID, name,subject, and message) see figure 4.11

disease	diagnosis
Type 2 diabetes	a lifelong (chronic) disease in which there is a high level of sugar (glucose) in the blood. Type 2 diabetes is the most common form of diabetes.
colitis	In patients with abdominal pain and diarrhea, it is important to find out when the symptoms began, how long they have lasted, whether they come and go
High blood pressure	is defined as high pressure (tension) in the arteries, which are the vessels that carry blood from the heart to the rest of the body
Flu(influenza)	Typical flu symptoms in children and adults include a fever (100 F - 103 F), chills, cough, sore throat, stuffy or runny nose, headache, muscle aches,

Figure (4.9).

name	medication
Type 2 diabetes	The goal of treatment at first is to lower your high blood glucose levels. Long-term goals are to prevent problems from diabetes.
colitis	Initial therapy, regardless of the cause is to stabilize the patient's vital signs and helping control pain, if needed. Rehydration may occur by mouth, however, for those
High blood pressure	It is beneficial to add potassium to the diet. Studies show that people who consume more potassium have lower blood pressures.
Flu(influenza)	OTC medications. Cough drops and cough syrup can be taken to suppress a cough. If a person's symptoms continue worsen, they should seek medical care.

Figure (4.10).

name	subject	messege
D.Ali AL-Daini	i want treatment	I have a child is three years old and suffering from severe diarrhea simar.1234@yahoo.com
D. ahemed Aman	Headache	I suffer from headaches in my head sam.123@yahoo.com

Figure (4.11).

Conclusions

1. The system is practical and easy to use because it was designed with clear and friendly user interface.
2. The patient and the Doctors can benefit from this website by getting medical information.
3. The administrator controls the website by adding new diseases, medications and diagnosis.
4. The patient getting an advice by sending questions to the doctor by using ASK DOCTOR page and get the answers on Email.
5. This website controlled by a Doctor to guarantee that the medical information inside it is right information.
6. PHP is an easy to learn language, and suitable for implementing this type of projects

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