Republic of Iraq Ministry of Higher Educationand Scientific Research University of Diyala College of Sciences Department of Computer Sciences



Clinic management system

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BY

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بسم الله الرحمن الرحيم

قال تعالى: (اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ * خَلَقَ الْإِنسَانَ مِنْ عَلَقٍ * اقْرَأْ وَرَبُّكَ الْأَكْرَمُ * الَّذِي عَلَّمَ بِالْقَلَمِ * عَلَّمَ الْإِنسَانَ مَا لَمْ يَعْلَمُ)

صدق الله العظيم

سورة الأعلى اية (1)

الاهداء

الى رمز الحب والحنانالى القلب الناصح بالبياض

(والدتي الحبيبة).....

الى من كلت انامله ليقدم لنا لحظه السعادة....

الى من حصد الأشواك دربي ليمهد لي طريق العلم

الى القلب الكبير (والدي العزيز).....

الان تفتح الأشرعة وترفع المرساة لتنطلق السفينة في عرض بحر واسع مظلم

هو بحر الحياة....

وفي هذه الظلمة لا يضيئ الا قنديل ذكريات اشخاص جعلوا لنا الحياة امل وسعادة...

الشكر والتقدير

الحمدلله الذي ذكره شرف للذاكرين وشكره فوز للشاكرين وحمد عز للحامدين وطاعته نجاه للطائعين . والصلاة والسلام على خاتم الانبياء و المرسلين محمد و على ال بيته الطيبين الطاهرين . اما بعد .فعن رسول الله()

كما أتقدم بفائق شكري وتقديري الى رئيس قسم علوم الحاسوب والاساتذة الافاضل لر عايتهم وتشجيعهم لي خلال مدة الدر اسة و البحث .

و أقدم شكري وامتناني الى النور الذي نور دربي الى من قدم لي العون والمساعدة والراي السديد والدي و والدتي الأعزاء.

Supervisors' Certificate

I certify that project entitled (*clinic management system*) was prepared under my supervision to computer science department to science collage by (*Methaq Taher Hussain, Ayub Abd alameer krji, Doaa Ali Mahdi*) as a partial fulfillment of the requirements for the degree of B.Sc.in computer science Department.

Signature:

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Abstract

Clinical Management System is a system that aims to assist physicians in managing their medical clinics through a set of options. This application will be installed on a desktop or laptop computer that contains a set of windows.

This system was built using a set of programming languages and programming platforms, and C Sharp language was used to build the interface, as well as SQL to build the database for the purpose of storing data, all of this using the Visual Studio platform.

This project is being developed to help the doctor, secretary, the administration of the pharmacy as well as the administration of the analysis laboratory.

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Introduction

Introduction

1)) Overview

The world is living now in a new world revolution, information revolution which is connecting with technology information age and the center of the world moved from revolution in to knowledge. Today, the human society's base on knowledge on ton wealth, then the knowledge became the center of progress and extensive information dos not mean anything if society cannot use this information wisely [1].

The gap between advanced countries and developing or growing countries become a knowledge men gap because of huge information in revolution information technology and telecoms. The information became an important resource to the person and society; the electronic chips begin to play a basic role such a coal which is a basic thing in the past when the industrial revolution was so important. A technology gap approach to why growth rates differ [2].

The modern technology contains the digital technology in twenty-first century. This advanced shorten the time between any two areas on the earth because of using electronic network. The information revolution is connecting with information technology through using computer system and telecom system [1].

Introduction

2)) what is MCM (Medical clinic management)? And why?

The medical clinics management program is considered one of the best and easiest methods of managing clinics and medical centers in all their specialties. Therefore, the clinic management program is the ideal solution to help doctors in organizing the management of medical clinics.

where the clinic management program provides assistance to the doctor to manage his own clinic by himself, in a simple and easy manner away from the many complications and details, and to save time used for registration because it is characterized by ease of use and installation, as most of the clinic program is dealt with using the mouse and the program does not need computers with high specifications.

3)) Problem Statements

Medical clinics currently are not ideal when compared to online medical clinics. Among these reasons is that it contains a set of routine procedures that need time to implement. It also needs more manpower, as well as material materials (papers) and others.

But when using the electronic medical clinic, we only need a set of computers to run the medical clinic. When using the electronic medical clinic, we store all documents, prescriptions and patient information that the doctor can see at any time in order to follow up on patient's condition.

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Introduction

4)) Research Objective

The aim of this study is to develop and build a system that manages the medical clinic through an internal network and this system contains a set of characteristics, the most important of which is preservation of patients' prescriptions as well as preserving patient visits.

5)) Expected Contribution / Benefit

The electronic medical clinic system provides an important set of features and commands that the doctor, secretary, or pharmacy owner, as well as the laboratory owner, need in their work.

Among these features, for example, is the preservation of information and the date of the patient's visits, as well as the medicines that the patient takes, and this allows the doctor to follow up on the patient's health condition.

Literature Review

Literature Review

2.1 Review of Related Literature

The clinic is a medical care center that provides routine preventive medical care for healthy people, and medical care for patients.

Clinics are often smaller than hospitals, and are visited by less sick people who do not need to stay in the hospital often, and often requires booking an appointment before the review. [4]

The success of any clinic or medical center comes first from its interest in patients, secondly to development, and to the difficulty of combining the two.

It is necessary to provide time for each of them, so we succeeded in the B-Creative program for the management of clinics to save time and know all the details of the patient history that was recorded through the statements he made in Medical center in different clinics with x-rays and analyzes. [5]

Literature Review

2.2 Software Tools Used

1. Microsoft Visual Studio platform

Microsoft Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps. Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.

Visual Studio includes a code editor supporting IntelliSense (the code completion component) as well as code refactoring. The integrated debugger works both as a source-level debugger and a machine-level debugger.

Visual Studio supports 36 different programming languages and allows the code editor and debugger to support (to varying degrees) nearly any programming language, provided a language-specific service exists. Built-in languages include C [7] C++, C++/CLI, Visual Basic .NET, C#, F# [8] JavaScript, TypeScript, XML, XSLT, HTML, and CSS.

Literature Review

2. SQL Server

SQL Server is a database server by Microsoft. The Microsoft relational database management system is a software product which primarily stores and retrieves data requested by other applications.

SQL is a special-purpose programming language designed to handle data in a relational database management system. A database server is a computer program that provides database services to other programs or computers, as defined by the client-server model. Therefore, a SQL Server is a database server that implements the Structured Query Language (SQL).

3. C# language

C# is a language targeted at developers for the Microsoft .NET platform who have already worked with a C-like language such as C, C++, or Java. Unlike previous versions of C or C++ for the Microsoft Windows platform, C# Code runs under a managed execution environment. Microsoft portrays C# as a modern and innovative language for .NET development and continues to deliver on that with new features such as Language Integrated Query (LINQ).

System Implementations

System Implementation

3.1 Login interface.

Through this interface, the user can log into the system by entering the user name and password. Either you are a doctor or a secretary. Show figure 3.1



Figure 3.1

3.2 Admin Panel

The management panel interface contains the first three parts. Create a new account that contains the username, password, real name of the user, and the type of user (doctor, secretary, etc.) and add some notes. The second part contains a list solution by searching for existing accounts or existing members. The third section contains a display of accounts and information, phone number and type of account holder as well as additions notes. And the date of creating this account. Show figure 3.2

System Implementation

Ceate New Acc	count :	Find Account :	View Account :	VXT
User Name	Enter User Name	Name /phon	Account ID	
Password :	Enter Password	listBox2	User Name	V
Name :	KYKA	XX	Name :	
	Enter Name		BOB :	
Type :	Enter User Type 🗸 🗸	A	Phone :	
Notes :	Add Note		Туре :	
			Notes :	
				11
		<	Created on	
		A MARK		
			A A	a the second
	Create	Close Back	Dela	ete

Figure 3.2

3.3 Secretary Panel

The reservations creation interface contains four parts.

The first part: an amendment to the account intended for the secretary's account. The second part is responsible for displaying the patient's file or profile. The third part creates new reservation. The fourth part shows the reservations. Show figure 3.3.

System Implementation



3.4 Doctor Panel

This interface contains two parts, the first part is to display the stored doctors' accounts in system, and the second part is the amendment to a specific account. Show figure 3.4



Figure 3.4

System Implementation

3.5 Create reservations

Through this interface, we can add a new reservation to the system by adding the patient's name and some medical. Show figure 3.5

2 Create Reservation	
Find Account	
Name /phone : Enter Name or phoneNum to find Account	
listBox1	
Select Slot :	
Date : Saturday , July 3, 2021	
Resave Slo	
Slot :	
Close Back @ pixers	17 James
The All All All All All All All All All Al	X7/X

Figure 3.5

3.6 Edit reservation

This confrontation contains. Amending the details of the reservation, the date, notes and other modifications, in addition to deleting the reservation permanently. Show figure 3.6

System Implementation

🖳 Edit Reservattion				- • ×
Platient				
riddollt .				
Secretary :				
View Date :	Saturday ,	July 3,	2021	
Visit Slot :			~	
Data				
Date .				
Edit Reservation	Close	Back	Delete R	eservation
		<u>Duck</u>		

Figure 3.6

3.7 View Reservations

The reservations display interface contains three sections, the first section is to search for a reservation or visit through the date of the visit or by name or phone number. As for the second section used to display the search result display. As for the third

Section, it is used to view, amend and add a new reservation. Show figure 3.7

System Implementation



Figure 3.7

3.8 Edit file.

This interface contains the user's hands, the user's name, the real name, as well as the user's number and type if he is a doctor or a secretary, as well as the date the file was created. Show figure 3.8.

System Implementation

EditProfile		
Account ID :		
User Name :		
Name :		
DOB :	Saturday , July ~	
Phone :		
Type :		
Notes :		
Created On t		
Created On :		
Close	Edit Account	Back

Figure 3.8. 3.9 Manage Patients Profiles

This panel interface contains the first three parts. Create a new account that contains the username, password, real name of the user, and the type of user (doctor, secretary, etc.) and add some notes. The second part contains a list solution by searching for existing accounts or existing members. The third section contains a display of accounts and information, phone number and type of account holder as well as additions notes. And the date of creating this account. Show figure 3.9.

System Implementation



Figure 3.9.

3.10 visits

The visitor interface contains three parts divided as follows. The first section is to add a visit and contains the diagnosis by the doctor, the causes of the disease and other notes and we can also add and print a visit. The second section displays previous visits in the system. The third section contains the details of the visit, including the visit number, the name of its secretary and doctor, and other details. It is also possible to edit visit information

 Chapter Three
 System Inglementation

Figure 3.10

3.11 break time

This interface is for free time.

Contain a Google search engine for information in the spare time of the doctor or secretary. Show figure 3.11



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Chapter Four

Conclusion and suggestions

Chapter four conclusions and suggestions

4.1 Conclusions

In this paper, we built a system for managing medical clinics using Microsoft Visual Studio platform and the C# programming language, which added high flexibility in the process of storing files and ease and smoothness in dealing with interfaces. Finally our project is able to arrange the work of the medical clinic manager by creating accounts for workers in this system from a secretary and a doctor and modifying or deleting these accounts as well as the secretary's tasks from creating a new reservation for the patient, modifying or deleting a particular reservation that has already been stored, as well as Facilitating the work of doctors.

4.2 Suggestions

One of the most important suggestions that is recommended is adding a special interface to the pharmacy to manage the pharmacy and dispense medicines and to facilitate the management of the pharmacy.

In addition to that, adding an interface to the laboratory analysis for all types of laboratory analyzes. In order for this system to become an integrated health and medical system in all respects. And also link the program on the Internet in order to make the reservation online

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