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Library System

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BY

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَمَا تَوْفِيقِي إِلَّا بِاللَّهِ

الأهداء

إلهي لا يطيب الليل إلا بشكرك .. ولا يطيب النهار إلى بطاعتك .. ولا تطيب اللحظات إلا بذكرك .. ولا تطيب الآخرة إلا بعفوك .. ولا تطيب الجنة إلا برويتك

الله جل جلاله

إلى من بلغ الرسالة وأدى الأمانة .. ونصح الأمة .. إلى نبي الرحمة ونور العالمين ..

سيدنا محمد صلى الله عليه وسلم

إلى من كلله الله بالهيبة والوقار .. إلى من علمني العطاء بدون انتظار .. إلى من أحمل اسمه بكل افتخار .. أرجو من الله أن يمد في عمرك لتري ثماراً قد حان قطافها بعد طول انتظار وستبقى كلماتك نجوم أهتدي بها اليوم وفي الغد وإلى الأبد..

والدي العزيز

إلى ملاكي في الحياة .. إلى معنى الحب وإلى معنى الحنان والتفاني .. إلى بسمه الحياة وسر الوجود

إلى من كان دعائها سر نجاحي وحنانها بلسم جراحي إلى أغلى الحبايب

أمي الحبيبة

إلى من لم تبخل بمساعدتي يوم ما..... زوجتي العزيزة.

إلى من أمدتني بالنصح والإرشاد... أختي الكريمة.

إلى كل من دعا لي بالخير

أهديكم ذلك العمل المتواضع.....

الشكر والتقدير

"كن عالما .. فإن لم تستطع فكن متعلما ، فإن لم تستطع فأحب العلماء ، فإن لم تستطع فلا تبغضهم"

وأخص بالتقدير والشكر:

الأستاذ الفاضل أسماعيل صالح عارف

الذي نقول له بشراك قول رسول الله صلى الله عليه وسلم:

"إن الحوت في البحر ، والطير في السماء ، ليصلون على معلم الناس الخير"

كما أنني أتوجه له بخالص الشكر لاستاذ البرمجة وخبيرها في جامعة ديالى

وكذلك نشكر كل من ساعد على إتمام هذا البحث وقدم لنا العون ومد لنا يد المساعدة وزودنا بالمعلومات اللازمة لإتمام هذا البحث واخص منهم رئيس القسم الحاسوب والأساتذة الأفاضل لرعايتهم وتشجيعهم لي خلال مدة الدراسات والبحث

أما الشكر الذي من النوع الخاص فنحن نتوجه بالشكر أيضا إلى كل من لم يقف إلى جانبنا ، ومن وقف في طرفنا وعرقل مسيرة بحثنا، وزرع الشوك في طريق بحثنا فلولا وجودهم لما أحسنا بمتعة البحث ، ولا حلاوة المنافسة الإيجابية، ولولا هم لما وصلنا إلى ما وصلنا إليه فلهم منا كل الشكر.....

Supervisors Certificate

I acknowledge that the project is entitled "Online Library System for Theses and

Graduation projects "prepared under my supervision for computers

Department of Science to the College of Science by (Hassan Yunus Manfi, Hussein Jumaa salman, Saja Kazem Jawad) as partial fulfillment of the requirements

Bachelor's degree in Computer Science Department.

Signature:

Name: Ismail Saleh Aref

Date: / / 2021

Abstract

The Library System on the Internet is a project that aims to develop a computer system to maintain all the daily work of the library electronically.

It is an application on the Internet that was developed to help libraries to have a repository that contains all books in general, including religious, scientific, cultural and political ones. System functions include viewing, downloading, and borrowing book documents. The system uses .ASP.Net with the C# programming language and has been linked to an SQL database to store the results.

The system contains a strong security by requesting information for both the manager and the user, as well as making special features for managers, including approval to add and revise the new book, as well as the ability to approve, reject or modify it, and the user has features for downloading, browsing, and uploading the book to the library

This project is being developed to assist the researcher as well as the library staff to maintain the library in the best possible way as well as reduce human efforts.

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Chapter One

Introduction

1.1 Overview

This study comes within the framework of ESCWA's efforts to encourage fundamental changes in policies to ensure the use of digital technologies in achieving sustainable development in Arab countries. It includes suggestions and recommendations for harnessing these technologies in investing in social, economic and human development opportunities. In it, seven thematic areas of public policy related to digital technology are identified: digital strategies, ICTs, ICT infrastructures, cybersecurity, digital divide, e-applications, and e-government. In these areas, the study analyzes the intersections between the ten-year review of the World Summit on the Information Society and the 2030 Agenda.

The analysis in the various thematic areas stems from a unified approach of four sections: (1) contextualizing thematic issues in terms of their impact on the SDGs; (2) The position of the Arab countries in terms of the adopted policies, measuring the gap compared to the more advanced countries, and anticipating future effects. (3) Defining a vision for the horizons to 2030 and proposing recommendations to amend policies in order to achieve the SDGs; (4) Charting a path for the continuation of things as they are, compared to a path that takes into account the prospects to 2030. The study concludes with a vision for 2030 and an initial perception of policy recommendations in each of the seven areas covered in the study.

In recent years, digital technology has begun to be used in learning and teaching processes. Developed countries, digital technology is not just an educational method, but rather a number of means in one way; Because it performs new functions that cannot be achieved in any other way, it provides an environment. Interactive learning is two-way, digital technology is an introduction or curriculum in the field of teaching and learning. With the development of computers and theories of learning and teaching, this The entrance has become a phenomenon that has repercussions, justifications, and effects on the learning and teaching processes.

1.2 What is ICT and Why

Information and communications technology (ICT) can be defined as: all technologies that are used in communications, broadcast media, smart building management systems, processing and transmission systems, audio-visual and others, as recently used to express the employment of lines of communication, To transmit various types and formats of data, where audio-visual and computer networks are integrated through a common cabling system; Such as providing Internet, telephone, and television services to homes and companies through a single optical cable, which contributes to significantly reducing costs .

The term (ICT), which appeared in the eighties, and became more popular in 1997, can be considered as the broadest synonym for information technology (information technology), because the former includes a focus on unified communications and communications integration; For the purpose of storing and transmitting information.

The ICT system consists of the following components:

- Cloud Computing.
- Software.
- Hardware.
- Operations.
- Communication Technologies.
- Data.
- The Internet (Internet).

Information and communication technology can be used in a variety of fields, including:

Financial services: through the use of credit cards, or e-commerce that includes online purchase and payment, and others. a

Entertainment: By adding more interactive technologies to television programmes, digital cameras, printers, and scanners have enabled more people to experience image production, in addition to developing graphical interfaces.

Public services: where users are able to perform many different activities, such as: paying bills, or renewing official documents such as driving licenses and others via the Internet.

The house: where it became possible to manage the house through a system that controls lighting, home security, air conditioning and others.

Education: through the use of computers, tablets, data display devices, interactive electronic boards, and others in the process of communicating information to students.

1.3 Problem Statements

Currently a paper-based libraries used in universities are not ideal when compared to electronic libraries systems. The use of paper-based library is financially costly compared to electronic systems where it needs an appropriate storage place (libraries) and many working hands to

Digital materials, whether they are text files, movies, or music, have several advantages over others. Materials are often easy to produce, disseminate and distribute to millions at a low cost.

Producing a book in digital format shortens the high costs of paper printing, transportation and distribution. It is sufficient to produce a single digital copy that is placed on a central server and sold to buyers who connect to the server via (the Internet). Therefore, the cost of selling an additional book is close to zero for the publishing company, and everything you earn from selling the digital copy is considered a net profit.

1.4 Research Objective

The aim of this study is to development on-line Web based library system for theses and graduation researches documents to support libraries in many university.

1.5 Expected Contribution / Benefit

The contributions of this study are to provide support to College of Science in Diyala University to implement modernized techniques of College management especially in manage theses and graduation researches documents. The current library system in College of Science the does not support documents saving graduate researches and theses. So adding saving documents feature will facilitate the work and help students in graduation projects.

Chapter tow

Literature Review

2.1 Review of Related Literature

With the advancement of technology, it is necessary to raise all the systems in an easy to use manner. A library management system (LMS) serves as a tool for converting traditional libraries into digital libraries. In traditional libraries, students/user have to search for books which is a difficult process and there is no proper database maintenance about issues/fines. The overall progress of the work is slow and it is impossible to generate a quick report. Librarians have a business dedicated to arranging books in a bookstore. At the same time, they have to check the details of the loan/borrow book and watch with a fine. It is a tedious process to work simultaneously in different sectors. LMS will help librarians to work easily. The LMS supports librarians to address all issues simultaneously. Users do not need to stand in line for a long time to return/borrow a book from the library. A single computer contains all the data in it. Librarians must evaluate the system and provide input into it. Through the LMS, the librarian can find the book in the bookshelves. LMS is built with basic features like librarian can add/view/update/delete books and student details in it. Once in the system, it can modify any data in the database. The complete model is developed with Dot net technology, and uses C# to build a front-end application.

Nowadays, in a high-tech society, human productivity has become more efficient through the development of electronic gadgets. Now, with the emergence of such an update in education, one way to globalize the research process is to realize that technology is advancing at an incredibly fast pace. The use of computers is not limited to entertainment but their role in education is also broad. The library is derived from the old French "libraries" which means "a collection of books". School reading materials are stored in libraries. A library is where books and related materials are kept for use but not for sale.^[1]

2.2 The Library Management System

Libraries rely on library management systems to manage collections of assets as well as relationships with their members. Library management systems help libraries keep track of document inventory, loans, member subscriptions, and profiles, sometimes for multiple physical locations. This type of software can be used by educational institution libraries as well as public or private libraries. Library patrons use library management systems to find, reserve, and lend documents while library staff use them to manage document acquisition, indexing, and inventory.

2.3 Web-based library service

The Due to the tremendous growth and continuous development of technology, the role of library becomes more responsive in making the users techno-savvy. Technological developments have affected not only the formats and sources of the information, but also how and where to provide library services. Libraries and their resources have partially moved to the virtual world of the Internet. As a result, library users can access the resources from outside the physical library. In an effort to reach users accessing the library via their computers, many libraries and library consortia are extending their services to include virtual reference. Technology now allows users to submit their queries to the library at any time from any place in the world. Web Based Services, Digital Library Services, Internet Library Services and Electronic Library Services are terms with similar meanings. As more libraries move towards providing services in a digital environment, the improved access to remote library collections is making the use of electronic information resources more realistic and more attractive. Traditional online services had transformed themselves into internet-based online services using web-based technologies. From traditional online services to today, four generations of information retrieval tools have passed that assist users in searching the World Wide Web^{[2][3]}

2.4 The Automated System Have Following benefits over manual system

Automated system has the following benefits over manual system

An automated system is a combination of software and hardware that is designed and programmed to operate automatically without the need for any human operator to provide input and instructions for each operation. "

Automated systems allow you to monitor your operations in real time and identify problems as they come in, allowing you to make quick adjustments along the way. While manual systems can be difficult to coordinate, similar to the old cliché that “the right hand doesn’t know what the left hand is doing,” automated systems work in tandem on their own.

Data handling: It captures the information from different sources, presents it systematically and organizes its storage for efficient retrieval.

Quality control: Paper work would totally be eliminated in the new system as failure data is directly fed into system. System reliability: System is very reliable as no skipping, missing of data is possible.

Maintenance: No data mismatching is possible due to various checks incorporated in the system.

Accuracy: The data provided by the system will be accurate as all Processing steps are algorithmic and computer based.

Centralized Storage: The data is Processed and stored at central location.

Security: The data is processed and stored using .net framework based application. Hence all the security features related to .net framework are used.

2.5 Software Tools Used

2.5.1 C#

C# is a general-purpose, multi-paradigm programming language encompassing static typing, strong typing, lexically scoped, imperative, declarative, functional, generic, object-oriented (class-based), and component-oriented programming disciplines.

C# was developed around 2000 by Microsoft as part of its .NET initiative and later approved as an international standard by Ecma (ECMA-334) in 2002 and ISO (ISO/IEC 23270) in 2003. It was designed by Anders Hejlsberg, and its development team is currently led by Mads Torgersen, being one of the programming languages designed for the Common Language Infrastructure (CLI).^[4]

2.5.2 Cascading Style Sheets (CSS)

CSS - short for Cascading Style Sheet - is a markup language that gives a website its beautiful look and unique design that will distinguish it from other sites. CSS is a friendly language to HTML, as it is always accompanying it and next to it in the design and creation of web pages. Both of these languages form the basis of every website, HTML is the basis of all web page elements and CSS is the basis of the design and appearance of the site, without which websites would remain plain text on white backgrounds.

Before the start of CSS development in 1996 by the World Wide Web Consortium (W3C), web pages were very limited and simple in form and function. Old browsers used to display web pages as pages consisting of black text with a white background only (text - images - links, etc.) without any design. There was no planning for the date of the launch of the CSS language.

CSS has allowed web pages to be designed and structured in many different ways to be able to capture how creative a person is, such as the ability to:

Determine the lines, margins, and distances for the elements of the site.

Determine the color and size of the elements.

Apply colors to backgrounds.

Move the elements freely and get many movements in the site.

2.5.3 SQL Server

It is a type of database system that allows the user to store, save and obtain scattered data in a quick way with purification in the way the user wants

These systems are divided into two types, the type used for small companies and the second type for large partners

And the SQL Server system is considered from the second part used for large commercial companies.

SQL Server Features

- You do not need a large storage space suitable for small and medium data.
- It is easy to transfer in any way from CD/DVD or USB disk without any transfer problems.
- Easy to follow over the phone.
- It allows processing a lot of data.
- It is allowed to connect more than one system.

2.5.4 ASP.NET

ASP.Net is an initial programming language designed by Microsoft for software development, or it is the latest technology development process from Microsoft in the process of programming Active Server Pages (ASP), and a technology in Visual Studio.NET languages.), is based on building applications in the Internet, whether static or dynamic sites, and can be detailed as follows:

- **Static websites:** They are regular websites on the Internet that contain images and text, or in a simpler form they are websites that have been written in (HTML) so that each page is separated from the rest of the pages and there are no databases.
- **Dynamic websites:** They are websites that allow you to change, delete or add any images or information from the pages easily through the website administrator without going back to the website designer, where the data and information on its pages are shown and entered using atabases. Which allows the pages to be constantly updated and added, which is why they were called "dynamic sites".

Chapter Three

System Implementations

3.1 Introduction

This chapter details the design and implementation of the proposed system.

A library system on the Internet to provide a large and huge group of information sources without the need to provide a large place to store them, and it can provide its services to all beneficiaries at the same time without the need to specify a specific time or place for that.

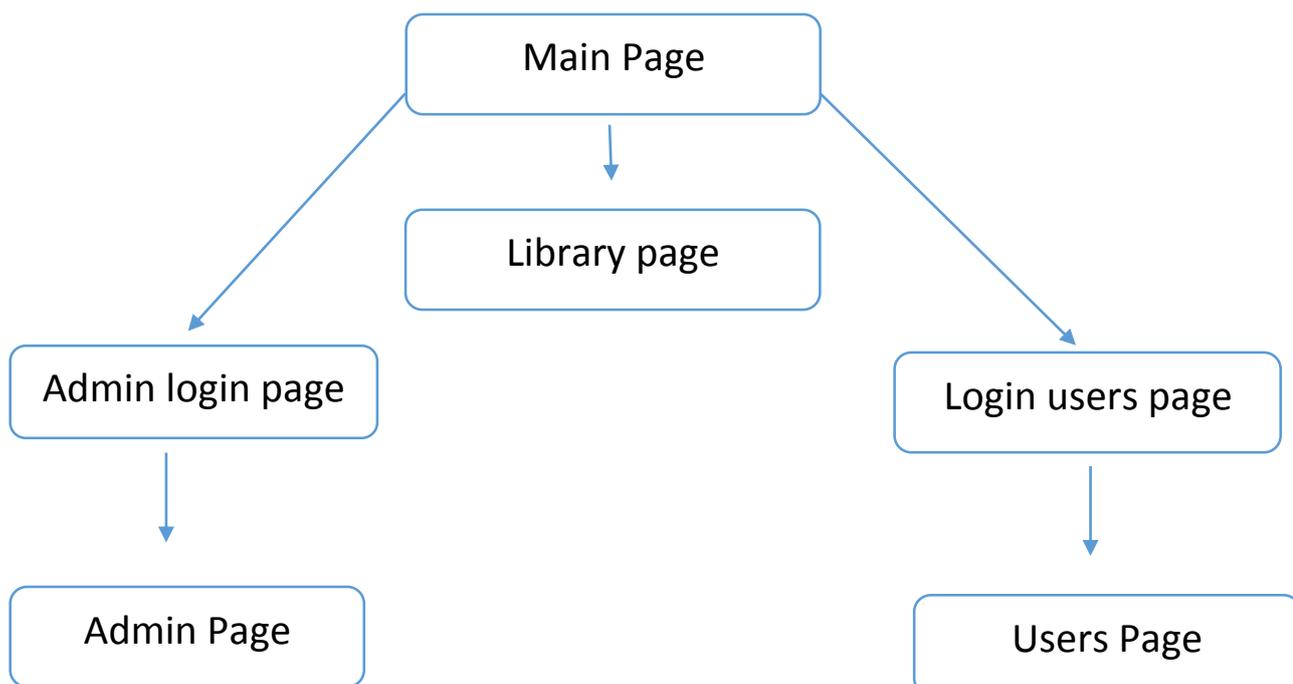
The documents have been tested" in this project to work on any computers, Laptop or PC. The system will operate in a single system environment Under windows using Internet Information Service Server (IIS). The implementation stages are described in the sections below.

3.2 Designs of the System

The system consists of three main parts,

- The first view by all users (shared page) to view and download documents only,
- The second is for members
- The third is for administrators.

Figure 3.1 shows the general flow chart of the system.



3.3 Public Pages

These are public pages that anyone can browse.

which includes the home page (books), library sections, and

Login page.

3.3.1 Home Page

The main page contains book sections, each group

The name is a link that when clicked leads to the books related to this the group.

It also has a login button (which is a link that redirects

customers to the login page), and the new registration button (which is a file

Forward link to register new browser page)

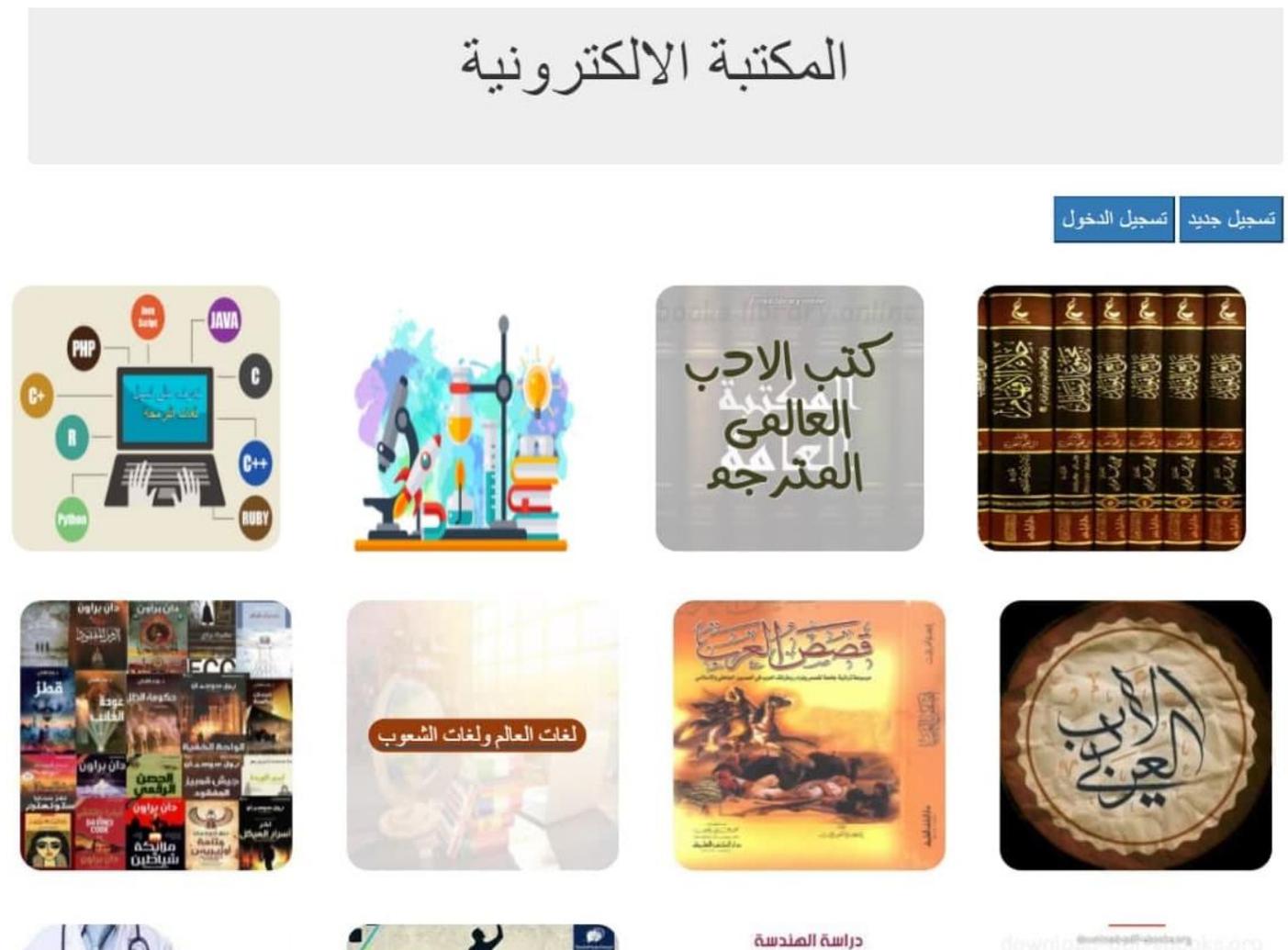


Figure 3.2: home page

When you log in, two icons will appear on the home page. The first contains the email and the second contains the password As well as adding the feature of entering as a manager.

Figure 3.3 shows the login page

Login User Information

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admin

الايمل

الرقم السري

دخول

الدخول كمشرف

When we click New Registration, the information request fields will appear on the main page.

The first contains the name, the second contains the email, and the third contains the password

As well as a field to confirm the password.

Figure 3.4 shows the new registration page

تسجيل جديد

Hassan

Hassan@gmail.com

تسجيل

الاسم :

الايمل

الرقم السري :

تاكيد الرقم السري :

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3.5 After logging in, a button will appear for us to enter my library

Another button to log out

Figure 3.5 shows a page after logging in



3.6 A new book can be added by clicking on the My Library button

An adjective consisting of several fields appears to request information on the book

Including the name of the book, author, section, date of authorship and number of pages

As well as a button to choose and upload the file

Figure 3.6 shows the page of adding a new boo

Chapter Four

Conclusion And

Suggestions

4.1 Conclusions

In this paper, we built a library management system for Generally written using Asp.Net with c#

The application, which added high flexibility in the file storage process Saving data.

Finally, our project is able to arrange documents in a format

Good way so that the document can be selected according to the book group,

. This helps a lot in making the search easier

Process. The user can also add new documents (thesis or graduation

Research or any scientific and cultural books) by registering on the site where they can add and delete a file From the documents they added.

4.2 Suggestions

Our suggestions for future work are:

1. Adding the possibility of a scientific research support system books and lecturers.
2. We would like to develop this knowledge more and make it an application in the mobile to facilitate more use.

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الخلاصة

نظام المكتبة على شبكة الأنترنت هو مشروعٌ هدف إلى تطوّر نظام حاسوبٍ للحفاظ على جُمع الأعمال اليوميّة للمكتبة بصورة الكترونيّة.

هو تطبّق على شبكة الأنترنت تم تطوّرهُ لمساعدة المكتبات على أن تكون لُدّها مستودعٌ يُحتوي على جُمع الكتب بشكل عام منها الدينية و العلمية و الثقافية و السياسية . تتضمن وظائف النظام عرض مستندات الكتب وتنزّلها واستعارتها. النظام يُستخدم ASP.Net. مع لغة البرمجة C# وقد تم ربطه بقاعدة بيانات SQL لتخزّن النتائج.

يحتوي النظام على أمنيّة قوية من خلال طلب معلومات كل من المدير والمستخدم وكذلك جعل ميزات خاصة للمدراء منها الموافقة على إضافة الكتاب الجديد وتنقيحة وكذلك امكانيّة للموافقة على او رفضة او التعديل على المستخدم وميزات للتحميل وتصفح و رفع الكتاب الى المكتبة

يتم تطوّر هذا المشروع لمساعدة الباحث وكذلك موظف المكتبة على الحفاظ على المكتبة بأفضل طرقة ممكنة وكذلك تقلّل الجهود البشريّة.



جمهورية العراق

و وزارة التعليم العالي والبحث العلمي

جامعة ديالى

كلية العلوم

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نظام مكتبة الكترونية

بحث مقدم الى مجلس كلية العلوم – جامعة ديالى – قسم علوم الحاسوب
كجزء من متطلبات الحصول على شهادة البكالوريوس في علوم الحاسوب

أعداد

حسن يونس منفي

حسين جمعة سلمان

سجى كاظم جواد

أشراف

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