

# Designing an electronic program to record students' absences

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## Abstract

At this paper we designed and described the work of a program to record the absence of students electronically where the program was designed by using the languages of ASP.NET + C # to design the Web pages and Sql Server to link databases, the design of the interfaces is easy and clear to users, and the program was uploaded on the site of the College and to reach that through the web at any time. This technique used to record absences allows teachers to easily and quickly record absenteeism and provide management with reports and absenteeism. The student or his guardian can see the number of absences days by accessing the college site where the program is available.

## Keyword

Sql Server, C # language, electronic management.

## الخلاصة

في هذا البحث تم تصميم ووصف عمل برنامج لتسجيل غيابات الطلبة إلكترونياً حيث تم تصميم هذا البرنامج باستخدام لغة ASP.NET + C# لتصميم صفحات الويب و Sql Server لربط قواعد البيانات ، يتميز التصميم للواجهات بالسهولة والوضوح للمستخدمين ، وتم رفع البرنامج على موقع الكلية ليتم الوصول اليه عن طريق الشبكة العنكبوتية في اي وقت . هذه التقنية المستخدمة لتسجيل الغيابات تتيح للتدريسين السهولة والسرعة في تسجيل الغيابات وكذلك تزود الادارة بالتقارير وعدد الغائبين من غير جهد، كذلك يمكن للطالب او ولي امره ان يطلع على عدد غيابهات عن طريق الولوج الى موقع الكلية حيث البرنامج موجود وبكل سهولة.

## الكلمة المفتاحية

غيابات الطلبة ، ادارة الانظمة الالكترونية ، لغة سي شارب ، سيرفر ال Sql

## **1. Introduction**

The conditions of the digital age its undeniable changes make it imperative that we make great efforts in the completion of the work to keep abreast of the rapid changes in all areas, the successive and perhaps the positive interaction with these variables, especially in the field of information technology management would lead to innovation and creativity in business, including improvement in management performance and the ability to pace. The experience of countries that have taken the lead in the advantage of the development of information technology management, but to respond to the changes of the digital age and the use of management information technology and its applications, led to the emergence of sophisticated modern methods and standards of management differ from those of the traditional ways of practice, this may be the end of both developed and developing countries alike, to work large investments in the establishment of the necessary infrastructure to facilitate the use of information technology management, the shift toward electronic administration, management information technology has become an essential element whatever in all institutions of

various kinds of reference as being an important tool in the completion of the work in an efficient and accurate and fast, as well as their ability to meet the new challenges posed by the information revolution, which leads to a real increase in the efficiency and effectiveness of the institutions of society.

Since the late 20th century and the beginning of the twenty-first century, there has been a quantum leap in the field of technology at the global level, resulting in the need for the use of all types of modern administrative institutions cope with this technological development, these patterns emerged from what has become known as the electronic administration which enabled many of the institutions, including universities and to address the administrative operations of the electronic documents, which led to the decline of paper-based transactions, the abandonment of the traditional management methods to be replaced by electronic administration. Thus, increased, the need for comprehensive changes in the methods and structures and legislation of the traditional administration, to provide opportunities for the application of electronic administration . In order to keep pace with modern developments, education institutions and benefit from the

data of the times, modernization of the university administration, to take advantage of information technology and the adoption of modern management methods are rigorous and flexibility on all administrative levels through mechanization of food plants, Academic management and administrative functions of the local and global computer networks, in order to achieve the speed of achievement and at the same time the quality of administrative performance. Therefore, the problem is in the difficulty of the research department of student absences and issuance of reports and alerts in the traditional manner in which require time and effort to facilitate this task has been the use of electronic management through the building of a program to manage all the absences of students electronically.

The shares of recent technological advances in the development of methods of administrative work in recent years also provided an opportunity to improve the administrative means of communication which would provide effective administrative climate, which helps reduce the time and effort, which requires the achievement of targets, so the universities to benefit from the technological progress in the development of the administrative work so that all the administrative

processes of the paper to the nature of the operations of the electronic nature using various electronic techniques in management. Highlight the importance of the search through the dealt with the concept of the electronic management in universities and applied through the building of a management program for student absences.

## **2. The concept of electronic management**

In modern times the term management information technology and proliferation in administrative work in all sectors, many States have taken these techniques and worked on changes in institutions, and the Declaration on the application of electronic administration, according to the plans drawn and specific targets, but the use of these techniques help to achieve the desired goals in the administrative work, without the availability of the human element that is capable of use and benefit from them, and transparency in dealing with the administrative information[1].

The concept of electronic administration is one of the modern concepts in contemporary management thought, it is a new pattern, leaving the technological implications on the

management of institutions and their strategies and functions, in fact, these effects are due not only to the technological dimension of digital technologies, but extended also to the administrative dimension of development management concepts that had accumulated over several decades, and is working to achieve greater administrative flexibility in the administrative empowerment[3].

Perhaps the idea of the electronic management far beyond the concept of mechanization of labor departments within the institution, to the concept of the complementarity of the various data and information and the use of such data and information in directing the policy and procedures of the organization toward achieving its objectives and provide the flexibility needed to respond to successive variables, either internal or external. Thus include the electronic management of all components of the Department of planning, implementation and follow-up and evaluation of the stimulation, but with the ability to Synthesize knowledge continuously and develop the infrastructure of informatics within the institution to achieve the integration of vision, this is what a lot of the theorists of the contemporary administrative thought to consider it as the completion of the

administrative functions efficiently and effectively using information and communication technology to achieve the goals of the Organization.

The electronic management system that relies on the use of electronic means in the conduct of their transactions and communicate with their clients or beneficiaries of the services, or communication between employees, regulators, with a view to facilitating the implementation of administrative and regulatory actions by the commensurate with the evolution in the field of information technology. Therefore, the electronic management of the following features:

- 1- It is an administrative process benefit from the possibilities of the Internet and thereby achieves high speed in the completion of the administrative processes.
- 2- It depends on the transfer of the management of things to the Department of Physiotherapy.
- 3- It means the transition from the organization hierarchy to networking.
- 4- Failure to comply with the limits of time or place.

- 5- Reliance on the smart management information systems, using computerized systems and techniques include the ability to think and vision, learning, and understanding, and develop the general thrust of the context of the information produced.
- 6- The shift from functional central to decentralization and flexible organizational structures based on the information and work through the task forces not only through the individual, regardless of talent.

### **3. The characteristics of electronic administration**

Electronic management of Electronic Management a pattern of administration that were raised by the various organizations and areas of its work, particularly the operations of creating or reforming the organizational structure which reflect the depth of radical change, whom the application of electronic administration, with several characteristics made [3] as follows:

- 1- The transition from independent computerized information system

of computerized information system to the retina, where computerized information systems that were operating in the form of independent organizations to networked information systems benefit from the advanced techniques in the field of communication networks and electronic data exchange.

- 2- The transition from traditional management information systems to smart management information systems, in the sense that the electronic management can use computerized systems and techniques include the ability to devise the general thrust of the context of the information produced.
- 3- The transition from traditional analytical processing systems to immediate analytical processing systems, from traditional processor systems no longer fit the fast-changing nature of the work requires continuous updating of data and productive continuous information.
- 4- Work through the networks, where the electronic management of

information systems and modern communications technologies such as the Internet, Intranet and Extranet.

- 5- The transformation of the organizations of the central structures functional organizational structures and flexible decentralization based on the information and work through the task forces not only through the individual, regardless of talent. Thus, these technological changes have contributed to the task of creating a new style of modern administration, and also the techniques of information and communication technology contributed to the change of the contents of the functions of the traditional administrative process to fundamental changes in the organization and decision-making posts.

#### **4. The rationale for the shift toward electronic administration in educational institutions**

There are a number of justifications or reasons that push governments to seek the application of electronic administration, caused a group of developments on the level of the world - especially with the beginning of the third millennium. in the emergence of what has become known as the administering Power, which is seen by many specialists as modern management philosophy imposed by the digital revolution and trends of globalization, democracy, and get together these factors in a number of justifications for the shift from traditional to electronic management in most organizations, depending on the challenges of the age variables, and the whole world to many researchers that there are a lot of justifications for the shift toward electronic administration can be summarized as follows.

1. The acceleration in technological revolution and knowledge imposed itself on the various areas of human life, including the sectors of education.
2. Adjustment with the requirements of the surrounding environment in educational institutions and avoid isolation and underdevelopment of the challenges, keep pace with the times and therefore seek to achieve administrative efficiency appropriate qualitative and quantitative

contemporary technical administrative thought.

3. The openness and integration among human societies, the openness created by the globalization of information through the technological revolution, and attempts to link between the members of the humanitarian community as a whole through the Internet and cyberspace and digital tools.

4. The shift toward e-education, and the emergence of the so-called smart schools that require the computerization of all operations within these schools, including the administrative aspects.

5. Continuous pressures on governments of citizens and beneficiaries in the year in order to meet the increasing demands for educational services, because of the growing number of the population, and the desire to improve the quality of the service, and speeding up the delivery of administrative services relating to educational institutions, and the elimination of red tape and bureaucracy.

6. Go to the recruitment and use of technological dependence on information technology in management decisions.

7. The increased competition between educational institutions and the need for

the existence of mechanisms for excellence within each organization seeks to compete.

8. Response to the need for continuous communication between workers in the educational sector with the widening of the scope of the work and the complexity of the sort.

9. The current conditions of employment which requires the applicant to administrative work in the institutions of education and understanding of modern technology and how to deal with it, adapt administrative and educational problems effectively.

10. The increase in the number of students, and manpower working in the school, which requires the presence of an electronic system to facilitate dealing with them.

## **5. The application of electronic administration in educational institutions**

Electronic applications include in educational administration a number of administrative services provided by application software and electronic commerce department in educational institutions, in response to the needs of the schools to develop administrative

work, in line with the requirements of the age, and the use of information technology management, to cope with the revolution of information and communication technologies, which are known to the world, and the transformation of traditional management to electronic administration, there is a set of applications that serve the electronic transformation of management in educational institutions, including the affairs of students and teachers, and finance and accounts, Warehouse Management System and procurement.

With regard to student applications include computer applications and school schedules and distribution of health records and information chapters student distribution and the initial statements to students and communicate with the parents of the students admission and registration system and the system of attendance and correcting tests school activities and follow-up to the transfers, as well as a system of examinations and follow-up steps to correct the tests and results and periodic reports to the students, in addition to the electronic management of educational school check to enhance communication between school and home through communication across the network and get all the information related to gain academic and

exchange information electronically, and achieve a higher level of communication between teachers, parents and educational guidance and administration of libraries, production and administrative publications everyday office work and the establishment. All this is done through the management, storage, and handling of all data and information for students.

There are administrative applications for teachers and staff: These include the initial data applications for teachers and staff, data and job descriptions and scientific qualifications and entitlements, performance reports, career and health situation of the annual business reports the appointment, and follow-up of the academic program and absenteeism and delays and holidays and training courses.

There are sources of learning applications and libraries that include computer applications and networks to provide a database to search for books and reference sources, organizing metaphor visit.

And in addition to the services provided by the electronic management of educational institutions, there are also other areas of electronic communication between universities and institutions of the local community, the Department of Education of educational institutions to be



interaction and communication and exchange of information with them electronically.

## **6. Therequirementsofthe application of electronic administration**

The electronic management like any draft that could be established, it must provide the creation of many of the requirements for the implementation of this project on the ground they represent a comprehensive shift in the concepts, theories and methods and practices and structures and legislation which the traditional administration and, therefore, is a complex process, an integrated system of human and technical components and informatics and financial, legislative, environmental and other, thus providing a range of application impose numerous requirements and integrated which allows them to access into practical implementation efficiently to achieve the goals that have been applied for.

And because the application of electronic administration means the electronic transformation of the E-Transformation of the traditional model to the default model based on computers and the Internet, knowledge and default, qualified human elements to deal with these techniques, this requires a strategic change in the components of the activities of the work of

the Organization, and the Organization's traditional physical links to digital works on the basis of communications technology, and that this imposes a series of requirements which are as follows:

### **6.1: Administrative Requirements:**

Electronic Administration needs to electronic administrative leaders are aware of the supports the development and change and is supported by the efficient dealing with information technology, capable of innovation and re-engineering of organizational culture, Decision-making knowledge, besides, the chief administrative officer should get rid of the cumbersome bureaucratic procedures and routine for the development and innovation in the methods used in the management of organizations. The electronic administration also need to further develop and streamline the procedures and steps of action, which would alleviate the administrative burden of linking all the services so as to ensure easy and flexible deal between the school and the public dealt with, and higher management, e-governance requires a modern and flexible organizational structure, together with the existence of network architecture based on the technical base and informative, sophisticated organizational culture center on the value of innovation

and initiative and creativity in performance and business efficiently and to make individuals aware of the usefulness of the importance of applied in schools. In addition, the need to resolve the existing problems in the traditional administrative reality, before moving to the electronic environment, Governments must provide the necessary information on its citizens through the Internet, in the light of a policy by which to deal with all the documents and information electronically via the internet. Thus, there should be legislation and legal texts which facilitate the work of the electronic management and gives it legitimacy and credibility and all the legal consequences of it.

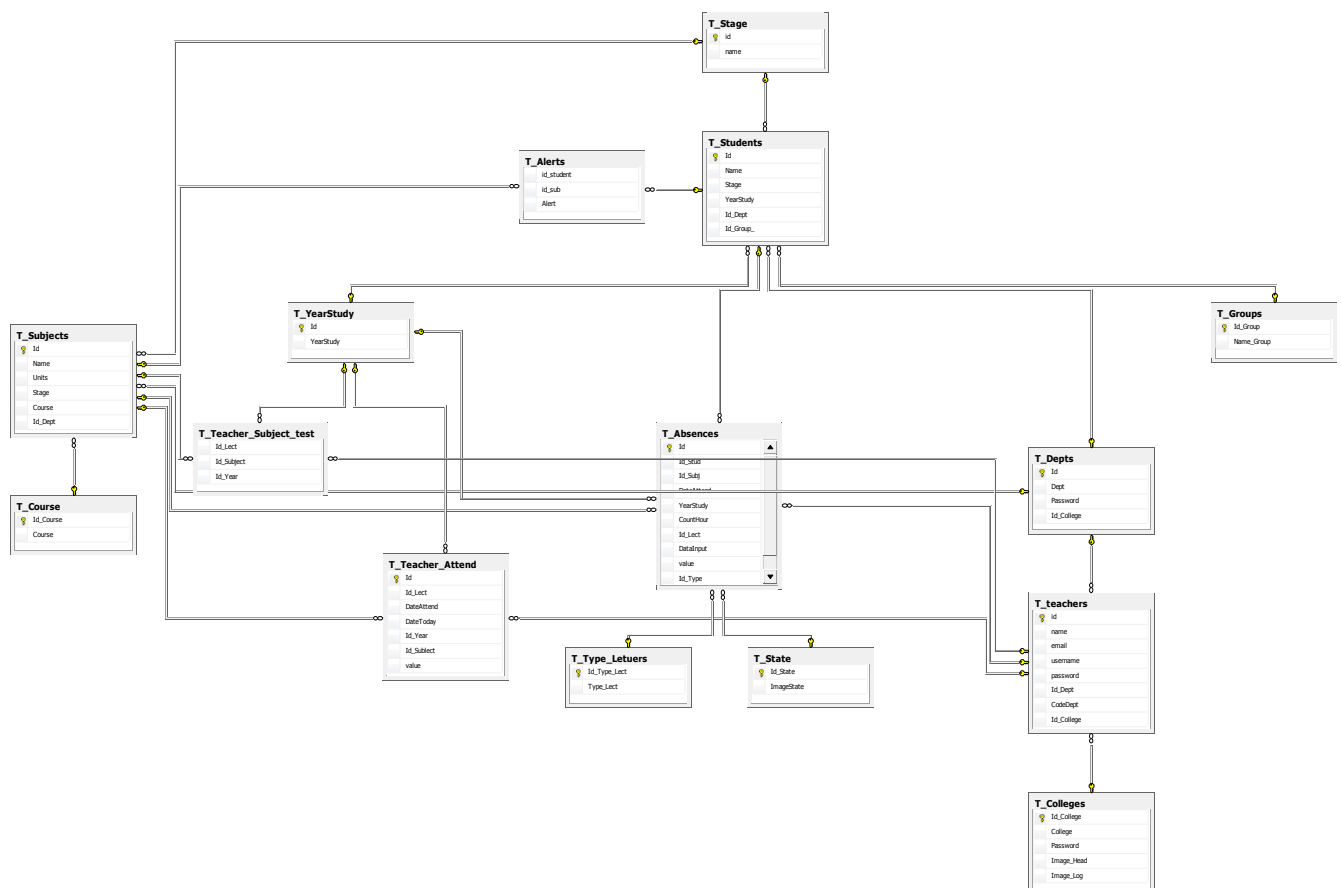
## **6.2: Technical Requirements:**

The electronic administration is newly administrative approach aims to develop the performance of organizations in the administrative work, but this modern approach requires the provision of appropriate infrastructure for the application of electronic administration, therefore, there must be a reconsideration of the basic hardware and software infrastructure and equipment for the purpose of updating commensurate with the provision of the Administrative Service of electronic commerce, it is important to

note in this side of the need to link the school of electronic management of all modern electronic systems and communications networks and information of high quality, because it is one of the important and necessary elements for the success of their applications, digital technology is rapidly evolving high as patterns vary, which imposes on the administrative leaders need to link their services, systems and information technology and techniques of modern electronic networks such as the Internet, Intranet and Extranet [1]. To achieve this, we must take into account the following:

1. Provide the necessary electronic infrastructure, a switch to electronic administration requires a suitable level that did not transfer high infrastructure, which include a modern network of communications, data and a well-developed infrastructure of telecommunications to be able to communicate and transfer information between the administrative institutions themselves, on the one hand and between institutions and citizens on the other hand.

2. The availability of electronic means to take advantage of the services provided by the Department of electronic commerce, including personal computers,



mobile phone and networking, Scanner (Scanner) , printers, and other devices to enable communication global network or internal and achieve the maximum benefit from their services.

3. The availability of a considerable number of Internet service providers, in order to open up the largest possible number of citizens to interact with the electronic administration.

## 7.1: Design steps and linking the databases:

Been to study and analyze more of the program in the electronic management and study the common aspects of the purpose of the hub to design commensurate with the needs of the faculties in Diyala University and providing ease of use by users, taking into account the simplicity in design to reach the efficiency of use.

The program has been programed through the use of ASP.NET + C# Design web pages and Sql Server databases to link the following outline illustrates the process of linking the Tables

## 7. The design of the program Absences students:

The code for linking web pages to the database

Using System;

```

Using System.Collections.Generic;
Using System.Linq;
Using System.Web;
Using System.Data.SqlClient;
Using System.Data;
Using System.Configuration;

Namespace
TeachingTable2016.DataBase
{
    Public class DataAccess
    {
        DataTable dt = new DataTable();
        Private string ConnectionString))
        {
            String str =
ConfigurationManager.ConnectionStrings[
"ConnctionDb"].ConnectionString;
            Return str;
        }
        Private SqlConnection
_Sqlconnection;
        Public SqlConnection Sqlconnection
        {
            Get
            {
                If (this._Sqlconnection == null)
                {
                    This._Sqlconnection = new
SqlConnection(this.ConnectionString));
                }
                Return _Sqlconnection;
            }
        }
    }
}

```

```

Public void Open))
{
    If (SqlConnection.State !=
ConnectionState.Open)
    {
        This.Sqlconnection.Open));
    }
}

//Close Connection
Public void Close)
{
    If (SqlConnection.State ==
ConnectionState.Open)
        This.Sqlconnection.Close));
}

}
}

```

## 7.2 : Web Design educational platform:

The main entry screen:



Several options include the college:



Several options include registration as a department or register or log in as a student of Professor



Through full of Required Fields for the information of the College and the chief of the section and choose a user name and password



Through full of Required Fields for the information of the College and the Department and lecturer's password .  
Special settings screen with section



Teaching can be may add to the data base by the head of the Section through the following screen



As well as study material can be may add to the database through the following screen



This program enables the Chief of Section withdraw as in the following screen



The Absences for teaching body



Choose Add TARDINESS as well as if there is an error of tardiness could be deleted or updated

To Add Absences Students selected by the school year and curriculum, and then press the following option



As in the following screen you must select the correct options section of the stage with the hall seminar and then pressing the following option



Article seminar selection screen and history of lecture and then pressing the next Option or if the information was not accurate



Tardiness is entered by pressing the option is absent if the student is absent (also allows selection of all students are absent or collection of teaching students present to invest time) and then the pressure should be on the option of the peacekeeping operations and the tardiness of the reservation or if the information was not accurate



الاسم	الحضور	الغياب
2	حاضر	غائب
3	حاضر	غائب
4	حاضر	غائب
5	حاضر	غائب
6	حاضر	غائب
7	حاضر	غائب
8	حاضر	غائب
9	حاضر	غائب
10	حاضر	غائب

Students can withdraw the special report or absences recorded by teaching as in the following screen



## 8. Conclusions:

- 1- Most universities rely on the electronic management as one of the Foundations in managing educational programs.
- 2- There are many Arab institutions started relying on the use of e-

management and to develop mechanisms for education.

- 3- There are successful attempts of the Iraqi educational institutions in the use of e-commerce programs in the department.
- 4- The design of the program is the tardiness of this first attempt at Diyala University in through the implementation of the electronic management programs for Iraqi Universities, relying on programming and design, and not on the import of electronic management programs are ready.
- 5- The idea of electronic administration programs of technological developments which, if implemented widely within the Iraqi educational institutions will lead the Iraqi institution to wider spaces in the area of education in terms of ease of use and regulate the costs and the investment of time.

## 9. The recommendations

- 1- He urged the rest of the faculties of the Diyala University and other universities in our beloved to use programs provided by the student



- absences to reduce cost and speed and ease the introduction of student absences and follow-up by the administration or student himself.
- 2- The adoption of electronic administration programs as tools for the management of educational institutions and the rest of the institutions of the State.
  - 3- The preparation of the teaching staff and users of electronic management programs to deal with the electronic programs in management, through the opening of the educational courses and workshops and seminars on the use and management of tariff electronic administration programs.
  - 4- He urged teachers and students to take advantage of electronic administration programs, which will be presented by their universities.
  - 5- He urged the designers and programs to design and programming electronic management programs as one of the most important ways of modern administrative management task.

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