



**AUTOMATION OF ADMINISTRATIVE AND EDUCATION OPERATIONS
AT THE E-SCHOOL THROUGH MODELING, DESIGN AND
IMPLEMENTATION OF AN INTERACTIVE ADMINISTRATIVE SYSTEM**

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August 2015

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IMPLEMENTATION OF AN INTERACTIVE ADMINISTRATIVE SYSTEM**

**A THESIS SUBMITTED
THE GRADUATE SCHOOL OF NATURAL AND APPLIED
SCIENCES OF
ÇANKAYA UNIVERSITY**

**BY
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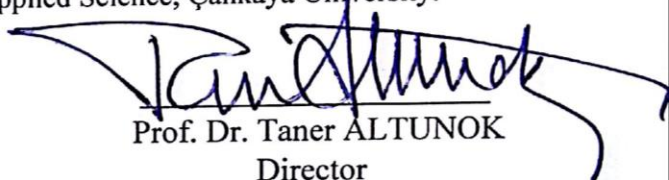
**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF
MASTER OF SCIENCE
IN
THE DEPARTMENT OF
MATHEMATICS AND COMPUTER SCIENCE
INFORMATION TECHNOLOGY PROGRAM**

August 2015

Title of Thesis: **AUTOMATION OF ADMINISTRATIVE AND EDUCATION OPERATIONS AT THE E-SCHOOL THROUGH MODELING, DESIGN AND IMPLEMENTATION OF AN INTERACTIVE ADMINISTRATIVE SYSTEM.**

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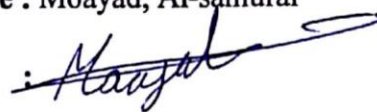
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ABSTRACT

AUTOMATION OF ADMINISTRATIVE AND EDUCATION OPERATIONS AT THE E-SCHOOL THROUGH MODELING, DESIGN AND IMPLEMENTATION OF AN INTERACTIVE ADMINISTRATIVE SYSTEM

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M.Sc. Department of Mathematics and Computer Science

Information Technology Program

Supervisor: Prof. Dr. Taner ALTUNOK

August 2015, 51 pages

Al-Hassan Bin Ali secondary school is one of thousands of schools in Iraq that still used the paper work in administrative and education. In addition, those schools were refused to use information technology in education or use any of new E-learning or E-management techniques. In this study, the main purpose is to eliminate or reduce the paper work at this school by designing and constructing a web site with three main portals for student, teachers and parents. The website has been designed to diagnose and address the problems mentioned above.

The tools are based on designing and managing the website by using *Microsoft Visual Studio 2010*, and *ASP.Net*, which includes the *Visual Basic.NET* language. Moreover, *SQL Server* was also used to build the database of some pages. Therefore, the objective of this work, which is to automate the work at the school, has been

accomplished properly. Finally, each teacher has the ability to upload homework and lecture as well as exam grades and absents to the students whose have the ability to download and upload the solution.

Keywords: Website, Website Management, Automation, Website of School, Schools in Iraq.

ÖZ

İTERAKTİF BİR YÖNETİM SİSTEMİNİN UYGULANMASI, TASARIM VE MODELLEME YOLUYLA E-OKUL'DAKİ İDARİ VE EĞİTİMSEL İŞLEMLERİN OTOMASYONU

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Yüksek Lisans, Matematik – Bilgisayar Anabilim Dalı

Bilgi Teknolojileri Bölümü

Tez Yöneticisi: Prof. Dr. Taner ALTUNOK

Ağustos 2015, 51 sayfa

Al-Hassan Bin Ali Ortaokulu Irak' ta halen idari ve eğitimsel işlemler için kâğıt evrak işleriyle uğraşan binlerce okuldan yalnızca bir tanesidir. Bunun yanında, bu okullar eğitimde bilgi teknolojilerini kullanmayı veya yeni e-eğitim (elektronik öğrenme) ve e-yönetim tekniklerini kullanmayı reddetmektedir. Bu çalışmadaki ana amaç öğrenci, öğretmen ve veliler için üç ana portal içeren bir web sitesi tasarlayarak ve hazırlayarak bu okuldaki kâğıt evrak işlerini azaltmak veya ortadan kaldırmaktır. Web sitesi yukarıda bahsedilen sorunları tanımlamak ve çözmek amacıyla hazırlanmıştır.

Araçlar *Visual Basic.NET* dilini içeren ASP.NET ve *Microsoft Visual Studio 2010* kullanarak web sitesini tasarlama ve yönetmeye dayanmaktadır. Buna ek olarak, bazı sayfaların veri tabanlarını oluşturmak amacıyla *SQL Server* da kullanılmıştır. Böylelikle, okuldaki işleri otomasyona geçirmek amacı taşıyan bu çalışma başarıyla tamamlanmıştır.

Son olarak, okuldaki her öğretmen sınav sonuçları ve öğrenci devamsızlıklarının yanı sıra ev ödevi ve dersleri web sitesine yükleyebilmekte öğrenciler ise bu bilgileri indirebilmekte ve ev ödevlerini yükleyebilmektedir.

Anahtar Kelimeler: Web Sitesi, Web Sitesi Yönetimi, Otomasyon, Okul Web Sitesi, Irak Okulları.

ACKNOWLEDGMENTS

In the beginning, I would like to thank my supervisor Prof. Dr. Taner ALTUNOK for his continuous support, encouragement and advice in writing my thesis and also for the academic staff in the department of mathematics and computer science for their efforts throughout the study period.

I would like to dedicate this effort to the soul of my father and for my mother for continuous supporting along the period of my study also I would like to dedicate this effort for my wife and my kids. I would like to thank all my friends who stood with me throughout the study period.

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LIST OF ABBREVIATIONS

ASP.Net	Active Server Page
CMS	Content Management System
CSS	Cascading Style Sheets
DBMS	Database Management System
HTML	Hyper Text Markup Language
HTTP	Hypertext Transfer Protocol
IS	Information System
JS	JavaScript
PDF	Portable Document Format
PHP	Personal Home Page
SQL	Structured Query Language
URL	Uniform Resource Locator
XHTML	Extensible Hypertext Markup Language
XML	Extensible Markup Language
WCMS	Website Content Management System
WMM	Website Management Model

CHAPTER 1

INTRODUCTION

After the rapid development in the Internet and e-learning technology in the last 20 years, the web site has already become the main medium for fast information distribution and the exchange of information between institutions, companies and governments [1]. The fast growth of the Internet supports huge sharing of information. Moreover, web sites have become the main gate for entry to most institutions and firms.

The establishment of web sites for a school arise from the real need for the existence of academic sites representing the school to keep up with the progressing in this field in the developed countries [2], where web sites and networks are integrated with faculty administrations through fast communications and responses to different requirements which have become the real scale for measuring performance of any school in the world today. The measuring of website performance depends on its ability to responding rapidly to users' requests and need for information, in addition, ensuring security and stability.

Nowadays most schools use web sites to gives students an interactive system which speed up communication to increase of knowledge in any field of study. Students are able to access systems from any part of the world and access any material using the Web [3]. Moreover, parents can monitoring and follow up them sons' grades and attendance through this website.

This study will include design and managing new web sites for the secondary school as well as improving the usability of web sites and providing activities and services to the end user.

1.1 Scope of Study

Al-Hassan Bin Ali secondary school for boys is one of Iraqi estate schools located in Diyala province in the east of Iraq about 65 kilometers away from Baghdad. It was established in 1963 as an elementary school. In 1980 it evolved to become a middle school and at 2010 it became a secondary school. In high school it provides two branches: scientific and literary. Al-Hassan Bin Ali secondary school accepts students, from boys only, who finished their elementary stage with grade over than 70 %. Since all administrative work until now is a paper work, the students or parents have to come to the school in order to filling the admission form. Then they come to the school building again and read on the bulletin board to see the interview date and the date of receipt of the books as well as the start of the study. And because of the difficulty of the situation in Iraq and the bombings it became necessary to find alternative solutions to the mechanism of acceptance and Report students and parents to these appointments through the website.

Al-Hassan Bin Ali secondary school is an academic institution which aims to combines traditional educational methods with e-learning technology to upgrade the educational level of students in addition to developing the skills of teachers. Moreover, it takes in consider the reality and future outlook by guarantee high quality and academic support to help improve education at different stages of education.

A proposed system can achieve the automation to administrative and educational works in the school through transfer some of paper works to electronic works, such as admission, homework, evaluation and academic calendar. Moreover, we will discuss a web site design and the ability of managing web site contents as well as improving the usability of a web site and providing services and activities for users.

1.2 Advantages and Challenges of the proposed web site

The advantages

The educational purpose is to provide services and activities to students and teachers. Second advantage is to reduce paperwork and replace it by electronic work. Another advantage is to enhance communication between school and the directorate of education via the webmail service to deliver of formal papers between administrative of school and the directorate. Moreover, it gives parents a chance to follow up their children from home or the workplace, in addition to their participation in the opinion and advice.

The challenges

- This web site requires a specialist with experience in designing and managing web site content.
- Due to the high cost of hosting, the new web site is not available online. This problem can be solved by budget allocations by the directorate of education.
- The difficulty of achieving user requirements like quality of information and services where necessary.
- The quality of the Internet Service Provider and the quality of the server which hosts the website effects on speed. Especially, when web site contents are updated.

1.3 Problems of Study

In this study, a diagnostic of the problems of the school and the way in which it managed and the traditional work mechanism. Besides, it did not get benefits of fast progress in the e-learning technology. Moreover, parents could not follow up their sons unless they go to the school or in parents meeting. Furthermore, the mail and official books are still hand-delivered by a postman. The e-mail service represents the point of communication between the school and the Directorate of Education in addition to being a communication service between students and teachers of the school.

1.4 The Purpose of the Study

This study aims to automation the administrative and educational work in the Al-Hassan Bin Ali secondary school through the creation of a website which is considered as an Interactive interface for communication between both the student and the teacher, in addition to parents by using *Microsoft Visual Studio 2010 Ultimate* and *ASP.net "Active Server pages"* which has many useful tools to help the designer to design and manage web content easily and more flexibly. The goals are the treating of the existing problems of the old fashion works and try to enter new techniques to improving management of school. Moreover, enhancing the communication between students and teachers through creating accounts for each of them in order to deliver information to students, such as curriculum, courses schedules and exams results. The use of e-learning techniques has become a necessity in modern schools, which helps to develop education through improved teacher skills Wu students and raise their ability to use these techniques and the most important of which is the use of web sites and look at everything new, which allows users to browse sites pages on the Internet without difficulty or complexity.

Finally, providing a gateway to parents through which they can follow up their children without bothering to come to the school in addition to communicating with the administration and the teaching staff through e-mail for each of them.

1.5 Importance of Study

The main portal to any school or institute is through its web site, which represents a connection point between that school and the outside world. The web site is expected to provide services to people, especially to students and teachers. The importance of the study can be summarized as follows:

- The educational purpose through delivering activities and services to students, teachers and parents.
- Insurance of communication between school and directorate of education via the e-mail service of the web site, especially operations of sending and receiving formal papers.

- Activating the role of the school activity through the dissemination of events and activities related to professional sports and cover school science fairs that are held by the school or the Directorate of Education.
- Access to advanced centers in the classification of web sites through the establishing of an integrated web site that meets the requirements related to the educational operation..
- Establishing special accounts for the school in social media networks, such as *Facebook*, *Twitter* and *Google Plus* and publishing the activities and events of the school by placing links of web sites onto social media sites.

1.6 Contribution to the Field

In this study we address the automation of administrative and educational work in the Al-Hassan Bin Ali secondary school – General Directorate for Education in Diyala for the purpose of the transformation of the classical school to electronic school by using specialized software such as *Visual Studio 2010* and *ASP.Net* to deal with databases through insertion, updating and retrieval of data.. Moreover, we will use one of *Content Management System (CSM)* in order to control website content. CSM does not needs to a professional person to manage the website. The main advantage of webmail is to exchange the information and formal papers between school and Directorate of Education as well as creating new accounts for each teacher to maintain contact with students. Additionally, one can create an account for the school web site on social media sites such as *Facebook*, *Twitter* and *Instagram* and publishing all activities and events that occur at the school. The assessment of the web site is depends on the quality of the information and services that are offered to users, especially students and teachers.

The questions arising from the aim of the study are as follows:

- How we can design the web site of the School?
- How we can manage and modify the web content?
- How can we achieve automation?
- How can we empower parents to follow their children?
- How can we take advantage of the E-learning techniques?

CHAPTER 2

BACKGROUND AND LITERATURE REVIEW

2.1 Background

Automation is the deletion of human intervention in totally or in partially in the execution of industrial or domestic, administrative or practical tasks, word of automation appeared at the mid-thirties of the twentieth century to express all operations managed human use of mechanical machines to do it instead of him. After that it was developed to use in electronic systems [4]. Website Management Model can be defined as a framework for arranging the activities such as ease of use, accessibility and security of site administration. Therefore, it can specify the processes, people, technology and other resources you need to support a website [5].

Content Management System "WCMS" is an application platform site constituent to design the site and the distribution of information; it is also a tool to help develop the website [6]. It allows the programmer to quickly develop, manage and maintain the high performance dynamic website [7]. This study includes possibility design and manages website contents by using software ASP.Net that is part of "Microsoft Visual Studio 2010 environment.

ASP.Net is a web application framework developed by Microsoft which enables programmers to construct dynamic page and static page of websites as well as allows using full facility of programming language such as visual Basic to construct web applications easily [8]. Moreover, it contains many tools which enable the programmer to design and manage the website contents easily and more flexible.

The database of website will establish by using ASP.Net in addition to SQL Server which enables user to design and manage of website's database.

2.2 Literature Review

A literature review is read and summaries knowledge from all the related studies with topic of thesis where review should evaluate, describe and explain this literature as well as to support a theoretical base for the thesis.

In this section, we will focus on the scientific references that specialized in automation of administrative works and educational works at e-school. Moreover, we will discuss the researches about management and development the websites of schools and universities or institutes in addition to the user-friendliness of website and prospect of accessing to site pages. There are many studies in this fields some of these studies are for schools and the other studies for universities and institutions. The following is a summary of each study in terms of its purpose, importance and the conclusions reached by.

2.2.1 Literature review which have relation with website management

There are many studies interested in the websites administration specially the educational websites. In this part it can know methodology to website management through what come in the literature review [9], [10], [11], [12], [14] and [15].

The main purpose of study [19] is ability of finding solutions for processing the defects and restrictions of classical website management, in addition to using of specialist software in the design and mange websites contents like Microsoft Visual Studio ASP.Net, PHP and Microsoft SQL Server. Moreover, the method of website management is the unavoidable trend in schools website establishing and management. This is the efficient way to raise the website management level.

To sum up, this study are addressed the website group management model that contains new generation and independent work in the designing and management website of school or university. In addition to execute project of website group platform that solved most of administrative challenges by classify the administrator into system administrator and secondary administrator where allocation the tasks for each administrator.

System administrator represented on the upper level of the managers where observe the flow of works and the distribution of jobs. Another kind of administrator called “sub website administrators” in charge of modifies, update and delete the website contents.

The purpose of study [10] is enhancing website management through using web content management system, this system contains three layers are: frontend layer, backend layer and graphical layer. Frontend layer manages the web through structure and presents the content that reacts with the user. The backend layer manages content of web by database management system “DBMS” through deploying and storage content.

The last layer concerned with visional design and information strategy. On the other hand the software platform use for constructing of websites and web applications, also create and showing different pages dependent on users demands and needs.

This study was focused on the easy managing of the website contents are comes from classification of administrative tasks to more than one team under the surveillance of web content management system. Moreover, flexibility in terms of content submission, content updates and custom functionality should be taken in considered when select the web content management platform. The working principle of a content management system on the Internet enables the user to access information in a flexible manner through usable graphical user interface.

The main purpose of the study [11] is to meet the demands of users through the creation of a flexible system. In addition, the process of building a specific site must be characterized by the speed and easily in terms of determining the quality of the information required by the user. Beside that support the website by important and basic software that help to execute of most types of files, such as adobe flash player and PDF that user does not require installing extra program, which making the system use and management is very suitable. Finally, it is focused on usability and flexibility in navigate the website pages. To sum up this study, the main idea of content management system CMS is the separation between the design and content management. Design of Page is saved in the template where the content is saved in a database. Give a safety to system data from unauthorized login by its support for a

secure system site to be more trusted. Page rank algorithm means if reference was made to this page in many other web pages, are expected to be important page. This page does not recur in spite of the reference, but is considered as an important reference page.

In the study [12] a group of university students by using "wiki" whom were able to design and implement the site which is a web site that allows for cooperation of a group of users who can change, delete, add, and modify the content of web pages into the site through the establishment of small Website, for instance, the website of the School and student Club, Inc., the site has at least eight of web pages using a fixed navigation system. We can infer from this study that using sites that specialized in building and designing websites, such as “Wikis” which considered helpful for improve the student ability to design and manage traditional website however, incapable to design huge website. In conclusion there are many educational sites specialist in the designing and management the website where considered useful for beginners’ designers that using to construction the small sites, but does not supply all tools to building perfect sites.

The goal of study [14] the programmer has ability to manage the pages of websites easily by using WCMS. In addition, WCMS can consider as one of the famous content management systems. Characterized by flexible architecture and its ability to meet the webmaster needs.

It can conclude from this study that WCMS has a very good reputation for its security, constancy and ease of use as well as the WCMS assume as a basic tool of establishing the website for education, governments, firms and media. It supplies a conjoint solution for all webmasters levels.

In the study [15] WCMS program supports editing tools that enables users with little knowledge of programming to easily design, create and manage content on the Internet. The non-technical staff in certain restrictions of rules, workflow to create and processes manages, edit, and control a large, dynamic collection of web content such as HTML documents, video, audio, and images.

In conclusion of this study WCMS embrace three layers of technical structure to design and manage the website, which composed of presentation layer, persistence layer and business logic layer.

Presentation layer is responsible for providing the user interface to react with the applications by providing model data.

Persistence layer can supports ability for data modification and retrieval, database connection pooling, management of transaction, programmatic also declarative entity relationship management, and declarative queries.

Business logic layer or services, the last layer, this layer enable interfaces for interaction with other layers, adding some flexibility between the presentation layer and the persistence layer, managing dependencies among business level objects.

2.2.2 Literature review which have relation with usability of websites

There are many studies related with website usability especially the educational websites. In this part it can know methodology to website usability through what come in the literature review [13], [16], [17]

The main objective of study [13] is elucidating the usability of website and easily of navigation website pages by using simple user interface. The estimation of schools websites in Jordan has dependent on the convenience of educational websites through classified into three parts. The first one is employed in identifying usability problems are evaluator-based methods, user-based, the last one is tool-based method. Moreover, the usability can achieved the domain to which a website can be used by particular users to fulfill concrete objectives with effectiveness, efficiency, and satisfaction in a specified context of use.

It can extrapolate from this study that appraisal of the usability of schools websites and to find out the powerful and poor design. In addition to examine usability of educational websites from the opinions of students, and ask them to report qualitatively what they disliked and liked in connection with the design of the examined websites. Finally, the usability measured by different basic elements like easy of navigation, accessibility, powerful designing, creative architecture and contents of website.

The study [16] address the usability of websites by making a study that includes 41 questions were carved out. This questions had been accumulated under 6 key factors; learnability, controllability, helping, appearance, performance and satisfaction. From

other side the education level dependent on the number of student whose use the website and how the interaction occurs between student and the web site.

It could be concluded from this study that improved of distance education websites to achieve the usability concepts for the website is very useful to the students' efforts to learning. The aim of this study is analyzing the kind of relationship between students' imagining of distance education in relation to gender and age, as well as calibrates the website's usability level. The results of this study dependent on the demographic characteristics of the students participating in the study by making statistics included participants by gender, age, classes and geographic region of living.

The aim of the study [17] is addressing the usability issues and the impact of the email system that evaluates the language used as well as offering some suggestions for the website. However, usability denote to the ease with which visitors can use a website where most of visitors aimed to find out sufficient information that they need.

It can extract from this study that most of website usability dependent on providing the following basic elements:

- Designing of pages and the interface should be compatible particularly when selecting the colors, font size, font type and harmony between the contents of the site.
- The website which supports more Languages and expressions mean this website will be more readable to many users around the world which is very necessary for the users to understand the content of the website
- Smoother transitions between pages of the site and easy access to information.
- Using of email in order to achieve the communication and as an interactive tool for website.

2.2.3 Other Studies

The other studies [18] and [19] talked about websites performance as well as websites' designing. The purpose of the study [18] is to assess the quality of the Web site that depends on the model of the process of evaluating this model focus on activities that will be achieved to finish website quality assessment. However, the quality of website could be measured through its ability to support the usability and accessibility to the contents of website. The websites should gain the end-user satisfaction, in addition the quality of the site depends on the quality of services and how much information to be exchanged with the end user.

It can infer from this study which Highlighted on the issue of supplying a framework to give a fantastic basis for a website quality assessment process. From other hand, discovering the problems of assessment website quality through a concept based on a model of the quality of services as well as, identifies and analyses the quality divide and give a convenient solutions.

The main purpose of study [19] User-based design is a probably the main idea for designing a website whose final target is to construct a user-friendly interfaces which are simple and appropriate for many classes of users to work on. The ideal design based on an achieving the next terms: ease of use, type of contents and prospect of accessing to information. Beside, selecting the colors, font size, font type and coordination between the site contents. We can conclude from this study through the progress stages, the writers have adopted the idea of user based design with the collection and analysis the information, also gives services and activities for the end user. To understand the contents of the site by foreign users, the language used and the terms should be very clear, readable and uncomplicated. Therefore, most academic sites had been supported by more than one language in addition to main language.

2.3 Discussion

In accordance with analysis to the preceding studies and looking at the experiences and the details of the techniques used in upgrading and management websites where reached to the following conclusions.

we can accept what came in studies [9], [10] and [11] about adopting a certain solutions for challenges of classical management through using of WCMS which facilitate working and tasks for content management, as well as, its scalability, powerful architecture, and flexibility can well meet the webmaster needs.

In the study [12] is beneficial for training the student to design and manage ordinary website however, this website “Wikis” incapable to design big sites because it does not support all tools to establishing huge sites.

It is axiomatic to agree with sources [14] and [15] especially in the procedure of distribution the administration jobs as well as adopt last technical to administer and design the website furthermore division between site contents and probability of easily accessing to pages. It gives a promising solution for all webmaster's levels.

In resources [13] and [16] it is obvious they are focused mainly on the usability which is very significant for website assessment where based on the quality and quantity of information which user needs for. The source [13] based on making a comparison among nine websites of schools where the usability was the base of evaluation for these sites.

In study [16] it relied on the wipe which was contained set of questions for assessment the websites in addition, distance learning websites established on the regards to the ease of use concepts and that will be helpful to the students learning.

In studies [18] and [19] we see that both of them highlighted on the designing and type of information which using to construct an educational sites as well as addressing and analysis the quality gaps and introduce suitable solutions. Those studies might be helpful for assessment of the schools' sites.

The study [17] might be the best among preceding studies, where it explained most of the principles that will help in the designing and management of school s sites in addition; it had highlighted the basic concepts that will help in the establishment of comprehensive educational site.

Due to the above, it is considered typical in overcoming the difficulties facing the school website management operation therefore, the building of website and the analysis the problem of the study through using of the right tools and the components, Hardware and Software, to reach the desired goals in the management and development of the website of the school are the best successful strategy.

In spite of that, there are some difficulties that may face the building of website such as technical, financial and human obstacles. These challenges can be overcome and achieving school website by some training courses for the admins about website management.

CHAPTER 3

METHODOLOGY

In this study, we will propose a new website application for Al-Hassan Bin Ali secondary school – General Directorate for Education in Diyala and constructs pages for this site. It an accomplish this process in three stages. First stage is including the site interface designing by using *Microsoft Visual Studio 2010 and ASP.Net*. The second stage is constructing pages of the website that comprise static pages and dynamic pages.

By using of two programming languages these pages would be constructed, the first one is ASP.Net, It is considered as the more famous language and most useful approach to develop interchanged web applications. Besides, it contains most helpful tools for constructing interactive websites from logic of programming. At this layer, we will use *Java Script* programming language codes. *ASP.Net* is one of the *Microsoft Visual Studio* applications that include a program editor, a compiler to find out errors and a designer in order to construct web sites [20].

The another language is Hypertext Markup Language (HTML) which is responsible of the computer language coding that transform the normal text into suitable text for show and use on the Web [21].

The last stage is constructing a database for some of web sites pages by using SQL server, which has many facilities that gives the user an ability to design and manage databases smoothly and more flexibly.

3.1 What are the Benefits of a Web site?

It can be summarized basic reasons why most of the people visit the websites by the following:

- To access information needed by a user.
- For educational, recreational or commercial purposes.
- For communication and exchange of information.

3.2 The Basic Elements of Building a Web site

- **Hardware:** This part comprises all devices and stuff, like computers, printers, scanners, cameras, routers, servers, which support designing and implementation of web sites. Hardware can range from personal computer to a single computer in a group of computers or a set of computers.
- **Software:** involve different types of software, such as ASP.Net, PHP, HTML, CSS, Java Script, SQL Server, which used in the design and management of web sites. This software has many tools to design static pages and dynamics pages in addition to tools to build databases for data storing.
- **People:** This part includes the group of web designers, web developers, administrators and end users who work simultaneously to manage and develop the contents of the web site as well as testing and updating the site on a daily basis. The web site developers are predicted to communicate with end-users and understand their needs.
- **Information:** It can be considered as the most important in web site construction because the value of the web site is dependent on the type and quantity of information and the importance of the database through interactions with end-users also providing the site with all information that users required. The database of the web enables the user to access information flexibly through an easy graphical user interface.
- **Procedures:** This element represents the rules and instructions which manage and design the web site. The administrators who run the database need to document any procedures on how to store and retrieve data and information.

3.3 Requirements Analysis for the Database of a Web site

This is determined according to the actual needs of the school. The important issue in building a database of the web site is in meeting the needs of the school and the end-user. However, we can analyse the construction of a web site through what came in previous studies which were mentioned in Chapter 2. These studies depended on designing and managing web site contents. Firstly, this entailed designing the interface of the web site and building the pages according to web site requirements.

Secondly, controlling the web contents by was carried out by using a content management system, such as updates of the site, adding new pages or removing pages. Finally, a database for a web site includes the essential information that meets user needs.

3.4 Web site Management Model

Web Site Management Model “WMM” is a framework for the organization of all the contents and activities of site administration. That is, it determines the users, processes, technologies and other resources needed to support and develop the web site. [6]

A set of management jobs includes:

- Web site Development
- Web site Maintenance
- Web site Infrastructure
- Web site Governance

To introduce the model, we will start with a summarized overview of the elements from which it is composed. These elements considered as the basic structure to construct an integrated web site.

3.4.1 Web site Development

This section contains the set of designers, programmers and technicians who are in charge of adding, modifying and deleting the contents of the web site, in addition to examine and updating the site on a daily basis [6].

Web site developers are expected to communicate with end-users and understand their needs.

3.4.2 Web site Maintenance

This section composed of a group of engineers, technicians and specialists in processing any technical problems as well as testing the software and improving web site performance in order to ensure the operational integrity of a site [6]. The committee of maintenance is responsible for fixing all technical problems such as

service quality and speed of response in addition to repairing devices, conductors and other parts of the system.

3.4.3 Web site Governance

This object is one of the most critical elements for the creation of any web site where the presiding elements of maintenance and development in addition to controlling and monitoring of all activities and events through supervising on the workflow procedure is considered to be important [6]. The objective of Web site governance is to ensure a controlled approach to site management – from planning and design through to maintenance and infrastructure.

3.4.4 Web site Infrastructure

To build any web site, the infrastructure has to be available which includes all tools and requirements, such as hardware, software and laboratories [6]. Web site infrastructure includes all activities, resources and staff skills and experience, all of which lead to constructing an integrated web site. Without infrastructure, it is impossible to introduce a perfect web site as a response for all user requirements.

3.5 Description and Structure Design the Web site

Before starting to design a site interface, the basic tools and software should be included:

- *ASP.NET*, an open source server-side Web application framework designed for Web development to produce dynamic Web pages. It was developed by Microsoft to allow programmers to design and build dynamic web sites, web applications and web services. [20]
- *Cascading Style Sheets (CSS)*, a style sheet language used for describing the look and formatting a document written in a markup language while most often used to change the style of web pages and user interfaces written in HTML and XHTML [21] to help designers to build and design web site interfaces.
- *SQL Server* to build the database of a web site.

3.6 Web site Structure

3.6.1 Headers

The header can be likened to miniature versions of the main page that sit atop each page and do many of the things that home pages do, but in a limited space. Headers provide site identity and global navigation, with search, logo and other tools according to the type of web site. The web site header of the School should consist of the following fields (as shown in figure 1):

- Name of School;
- Login for Admin;
- Webmail button;
- Student Portal;
- Teacher portal;
- Parent portal;
- Menu bar.

In Menu bar we will see many useful commands that have met the needs of end users such as *Home, About School, Topics, Admission, Academic Calendar, Staff, Schedule* and *Contact Us*.

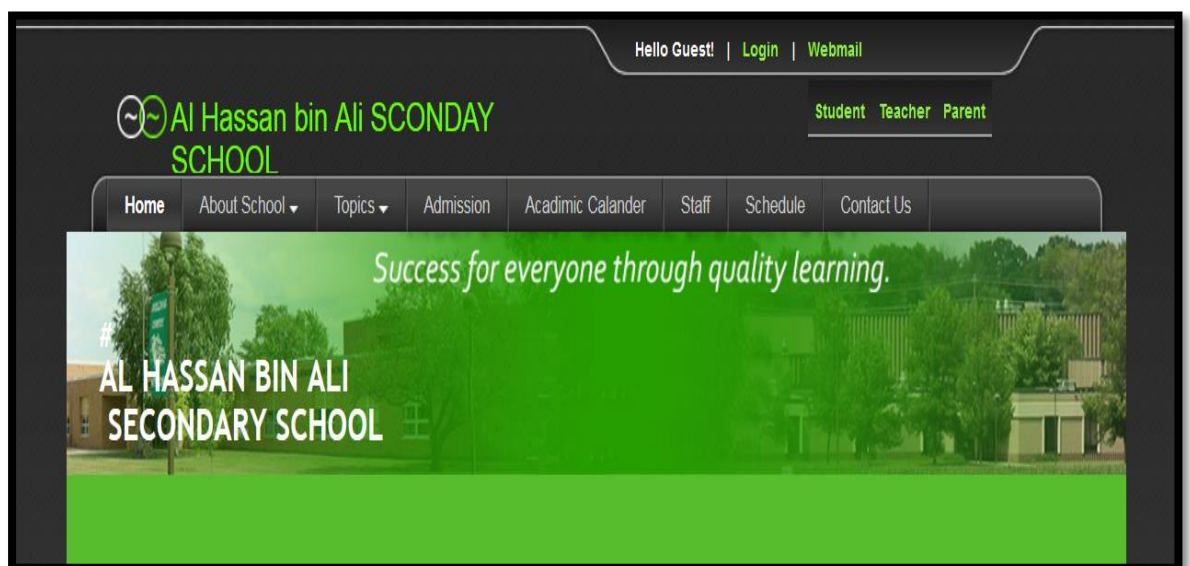


Figure 1 Header of Website

3.6.2 Body

These areas include vertical templates, fields, photos, ads and a set of links which interact with the end-user.

The web site body almost contains the following fields:

- Vertical templates, including the latest news of the school and updated events and activities subtitle of the school in addition to, Read more command to display the hole of the news or events and quick links.
- Animation or dynamic pages that include all advertising related to the School and General Directorate and a set of rapid news at the bottom the moving pictures, as shown in Figure 2.

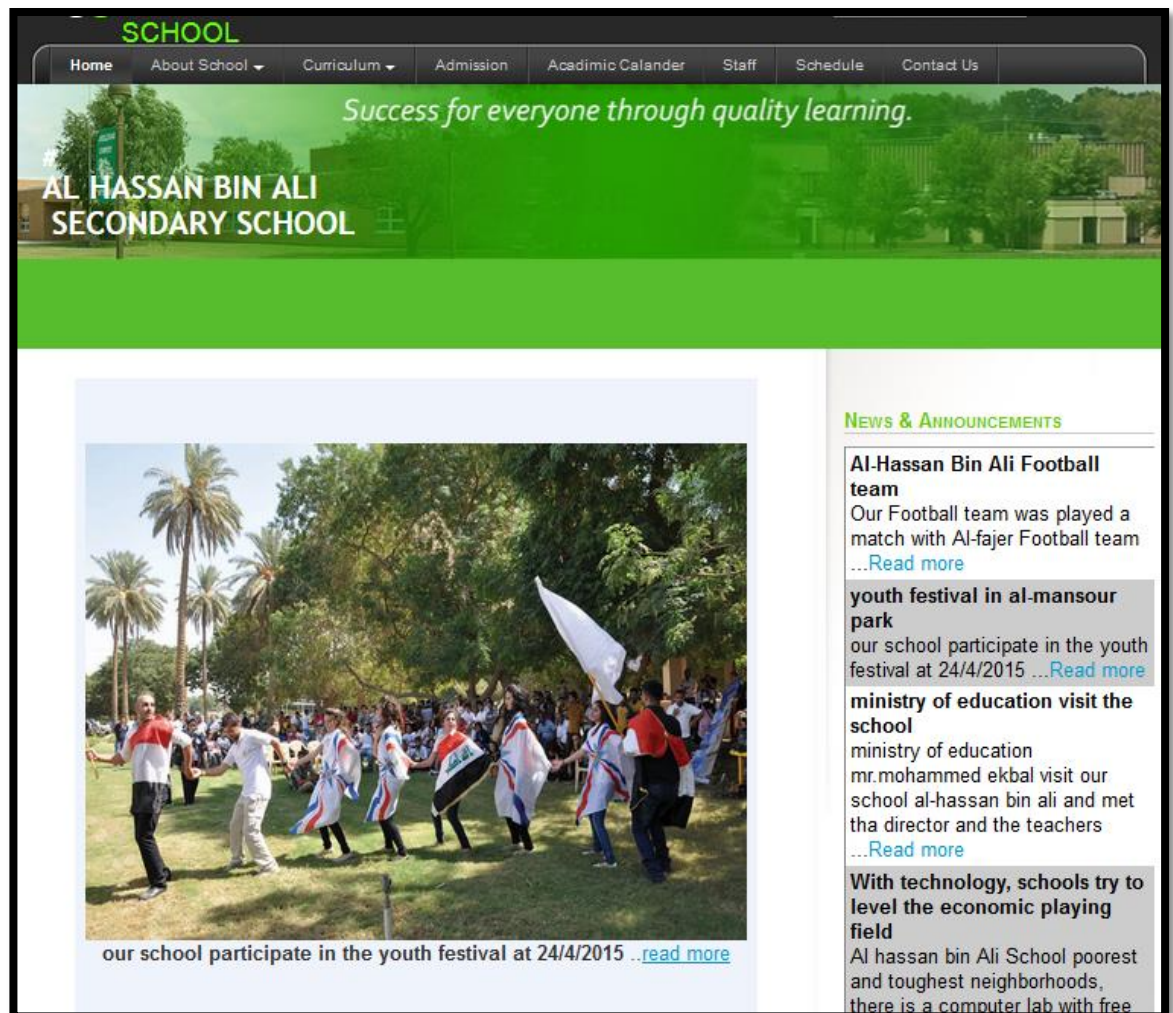


Figure 2 Body of Website

3.6.3 Footer:

The footer is the lower area of the web site which always consists of any housekeeping and legal matters, such as copyright statements, links to social media sites, email, as shown in Figure 3.



Figure 3 Footer of Website

3.7 Logical Structure Design of Web Interface

In this study, we will designing the web interface and building pages using *ASP.Net*, which is part of the *Microsoft Visual Studio 2010* environment, by segmenting the main page into three regions: *Header*, *Body* and *Footer*, each of which contain a set of codes behind the page design according to the type of content existing in the main interface. When designing a web site, the following elements should be emphasized:

- Colors, which should be coordinated, especially on the home page;
- Size and type of font;
- Navigation pages of the web;
- Accessibility;
- Coordination between content of the web; and
- Dimensions of site interface and pages.

3.8 Web Site Programming

The operation of designing and building any web site requires a high level programming language such as *ASP.Net* or *Visual Basic.NET*, the content of which contains basic tools that enable users to create static and dynamic pages with flexible control in page properties. After designing the main page and building it, databases should be provided for most pages by using *Microsoft SQL Server*.

3.8.1 What is ASP.Net?

ASP.Net is a web application framework developed by Microsoft to build dynamic data-driven web applications and services. *ASP.Net* is considered to be the most popular and most powerful way to develop interactive Web Applications and is also the most flexible tool for building interactive web sites. Programmatic logics and algorithms are used with the .css file extension. In this layer, *Visual Basic.NET* programming language codes are used [20].

Why ASP.Net?

- It allows users to design and manage web sites by providing all necessary tools.
- It enables users to control and manage web content easily.
- It is a powerful and flexible tool for building interactive web sites.
- It enables users to change the contents of sites easily and rapidly.
- It enables users to build web applications or windows applications.

3.8.2 Cascading Style Sheets

Cascading Style Sheets CSS is a style sheet language used to describe the look and format of a document written in a markup language. While most often used to change the style of web pages, the user interfaces are written in HTML and XHTML [21]. This is a very powerful, flexible and easy language to use. However, CSS is designed primarily to enable the separation of document contents from document presentation, and includes such elements as layout, colors and fonts. This separation can improve content accessibility and provide more flexibility.

3.8.3 SQL Server

SQL Server is a database management system from Microsoft that combines the relational *Microsoft Jet Database Engine* with a graphical user interface and software-development tools. *SQL Server* is perfectly suitable for work requirements [22].

SQL Server enables users to design and manage databases easily and more flexibly in addition to editing, adding, deleting and reporting on all contents of a database.

3.9 Database of Web site

When designing the main page of a web site, a database should be built which includes information needed by users. *ASP.Net* has many tools which enable designers and administrators to design web pages and build databases for each page according to page requirements as well as using *SQL Server* to building some pages of website.

3.10 Description and Structure Design of Database

In this study, we will use *SQL server* to create some tables relating to students, teachers, parents, courses and absent. In the following tables show the logical construction of the data in the main tables, The teacher information table is describe in Table 1, the schedule information table is describe in Table 2, The student information table is describe in Table 3, The absent information table is describe in table 4, the homework information table is describe in Table 5, as shown in the following tables.

	name	email	field	phone_number	pic
►		habeeb@schoo...	chemistry	7714258964	~/teacher/tech...
	jamal abdullah ...	jamal@school....	history	7714258964	~/teacher/tech...
	kemal hayider ...	kemal@school....	computer	7700448769	~/teacher/tech...
	mohammed hu...	mohammed@s...	physics	7714258964	~/teacher/tech...
	sabah ayub ...	sabah@school....	chemistry	77125732211	~/teacher/tech...
	t1	t1@school.com...	math	456854	...

Table 1 Teacher Information

	time	class	sunday	monday	tuesday	wednesday	thursday
►	08:00-08:45	first	arabic	english	arabic	math	history
	08:50-09:35	first	english	math	history	physics	art
	09:40-10:25	first	islamic	chemistry	math	english	biology
	10:30-11:15	first	chemistry	history	sport	art	geographic
	11:20-12:05	first	math	geographic	arabic	english	computer
	15:10-12:55	first	computer	biology	art	biology	sport

Table 2 Schedule Information

	id	name	bod	gender	class	email	phone	country	province	city	pic
	STD-150801435...	ahmed ali	... 2/4/2002	male	second	ahmed1@schoo...	7700124578	iraq	diyala	baquba	...
	STD-150801460...	ali hassan	... 7/5/2004	male	first	ali1@school.com	7700124879	iraq	diyala	baquba	...
	STD-150802525...	ayham moayad	... 1/1/2012	male	first	ayham11@scho...	7901458792	iraq	diyala	diyal	...
	STD-150802571...	taha yassein	... 1/1/2000	male	first	s1@school.com	7814558869	iraq	diyala	5454	...
	STD-150802574...	mohammed hassa...	1/1/2000	male	first	s15555@school....	7722332244	iraq	diyala	5454	...
0	NULL	NULL	NULL	NULL	NULL	NULL		NULL	NULL	NULL	NULL

Table 3 Student Information

	id	year	class	course	absent_date
►	STD-1507194629	2015-2016	first	arabic	1/1/2015
	STD-1507194629	2015-2016	first	arabic	2/1/2015
	STD-1507194629	2015-2016	first	arabic	2/1/2015
	STD-1507194629	2015-2016	first	arabic	2/1/2015
	STD-1507194629	2015-2016	first	arabic	2/1/2015
	STD-1507190013	2015-2016	first	arabic	3/1/2015
	STD-1507194629	2015-2016	first	arabic	1/1/2015
	STD-1507194629	2015-2016	first	arabic	2/1/2015
	STD-1507190013	2015-2016	first	arabic	1/1/2015
	STD-1507183231	2015-2016	first	arabic	2/1/2015
	STD-1507183231	2015-2016	first	arabic	1/1/2012
	STD-1507301106	2015-2016	first	arabic	1/1/2015
*	NULL	NULL	NULL	NULL	NULL

Table 4 Absent Information

	lecid	stdname	adddate	path
▶	L1507302821	s1@school.co...	7/30/2015	~/hw/h1507303...
	L1507302821	s1@school.co...	7/30/2015	~/hw/h1507303...
✱	NULL	NULL	NULL	NULL

Table 5 Homework Information

3.11 Designing the Interface of Website

Prior to beginning the design of a web site, we should take advantage of previous studies relating to the design and management of web sites, such as the study [18] which focused on the basic elements in web site design, including web site languages, navigation and email services.

- The first step is to open *Microsoft Visual Studio 2010, ASP.Net* and to select “New Project” as shown in Figure 4.

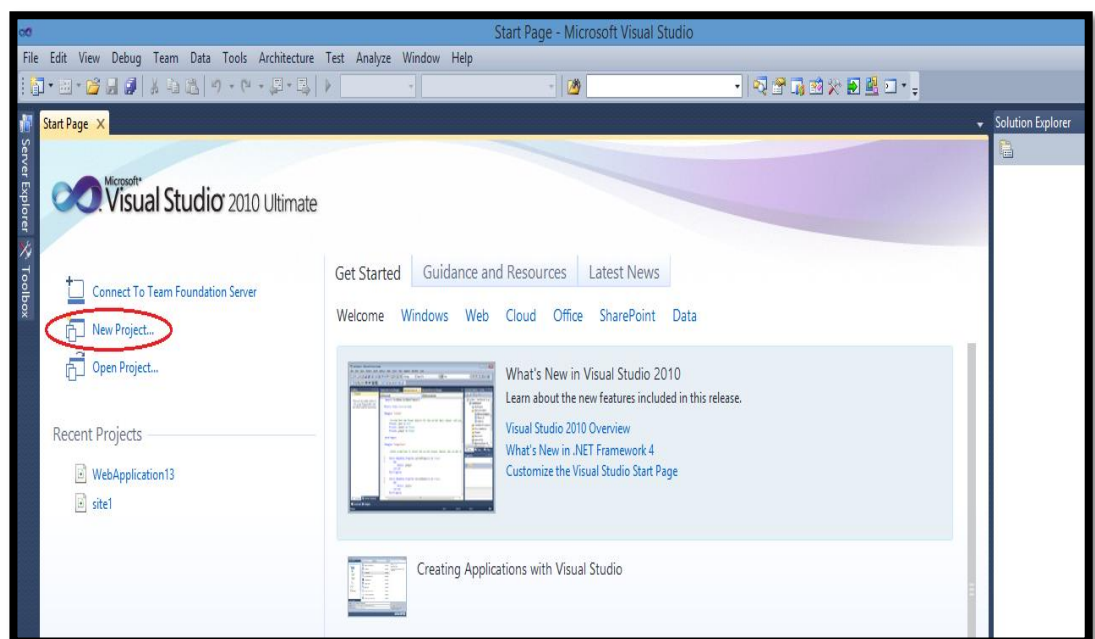


Figure 4 Opining Microsoft Visual Studio

- From the installed templates, select “Visual Basic” and select web. In the middle list, select “Net Framework4” and select *ASP.Net Web Application*. Finally, we write the name of the web in the name field to create a new web site. Pressing “OK” completes the process. Figure 5.

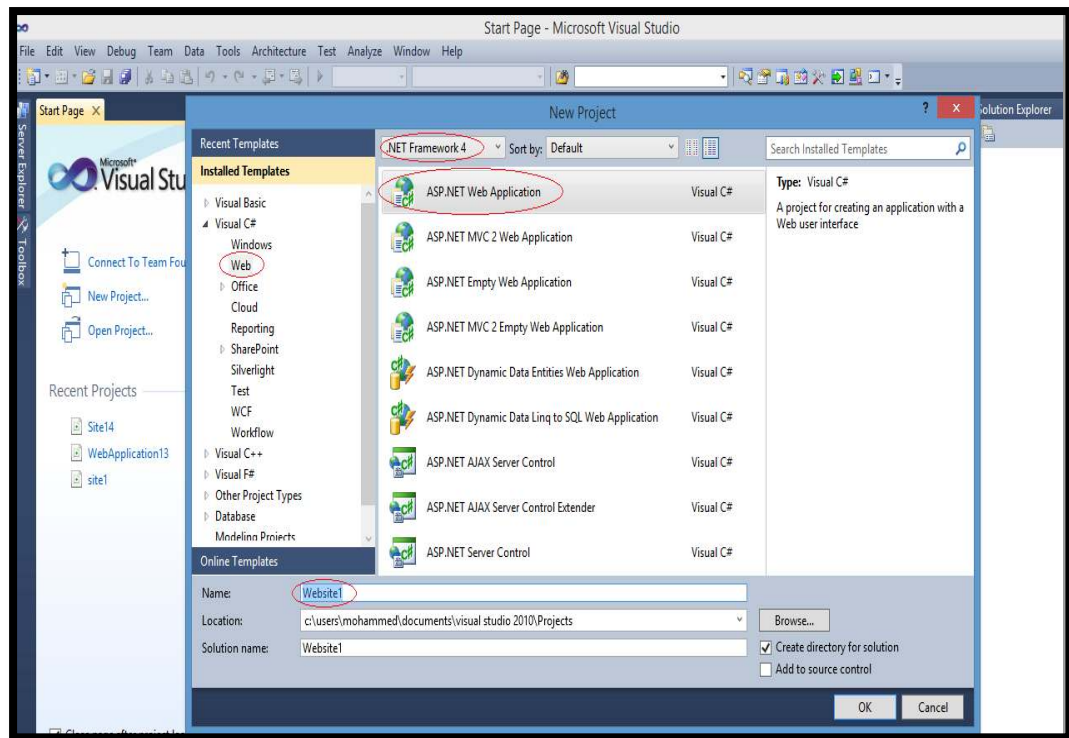


Figure 5 Create New Website

- After selecting the program language and name of the web site, it will open the main page of *ASP.Net*, which contains three basic elements: *Tools*, *Properties* and *Solution Explorer*; which help the user to design and build static and dynamic pages, as shown in Figure 6.

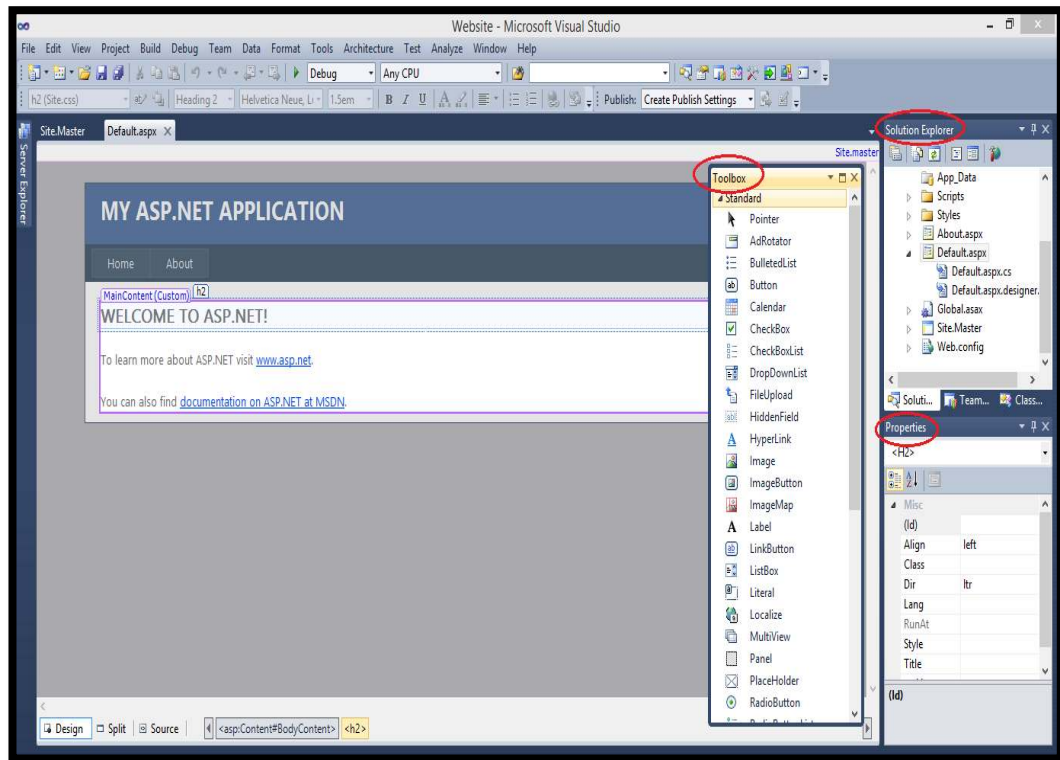


Figure 6 Opening the Main Page of ASP.Net

- Create webmail page

After opening the main page of *Visual Studio* and selecting *ASP.Net*, a web application will begin to build the first page by going to “File” and selecting “New” then selecting “Web Site...”, as shown in Figure 7.

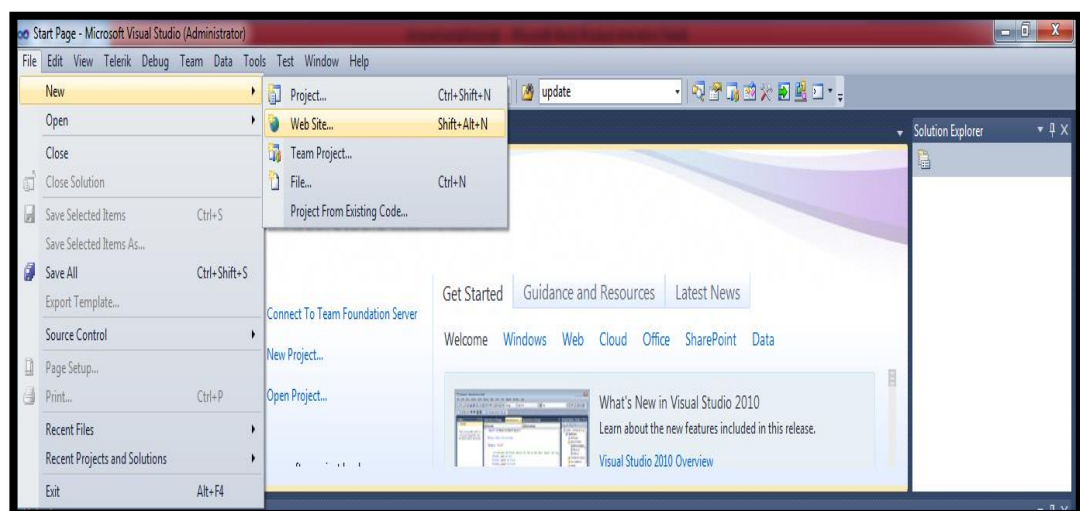


Figure 7 Create Webmail Page

- After selecting “New” then “New Web Site” will appear. From the “Installed Templates” list select “Visual Basic” then select “ASP.Net”, and press “OK.” This will open the webmail page. Here, we select the login page, then right click selecting “Add New Item” as shown in Figures 8 and 9.

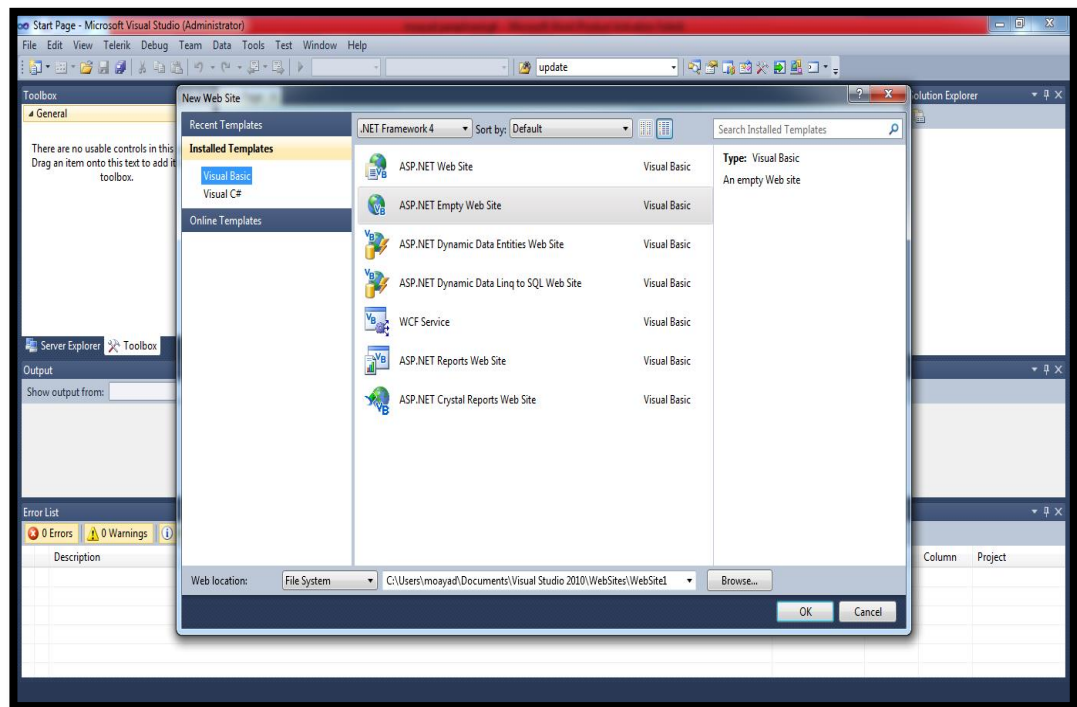


Figure 8 Opining Page of Webmail

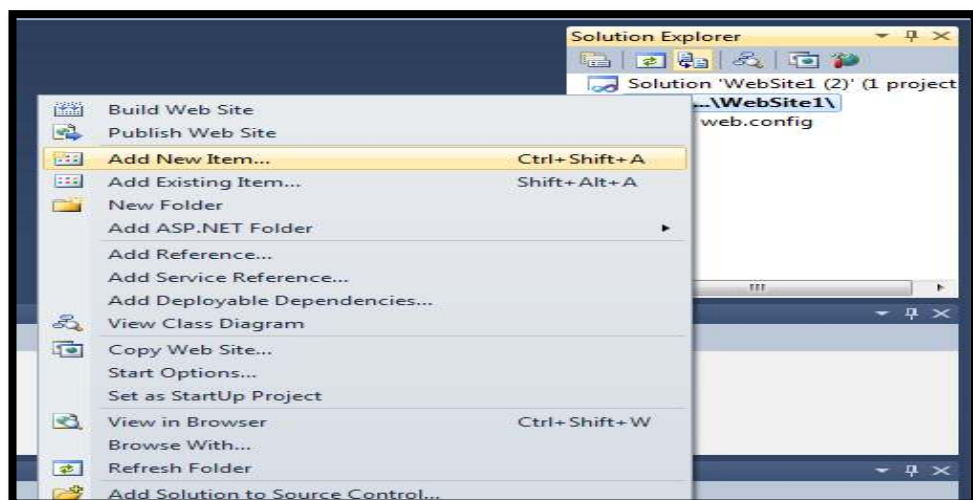


Figure 9 Add New Item

- After selecting “Add New Item,” a list will appear. We select “Visual Basic” then web form and determine the name of the page. Then we press “Add,” after which we create a table that includes seven rows and three columns as shown in Figure 10.

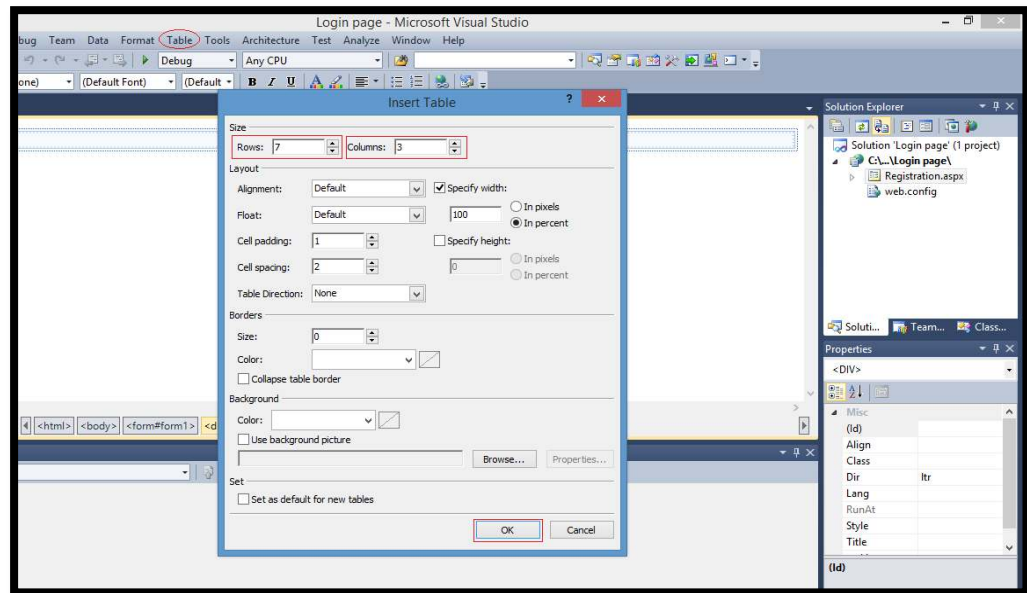


Figure 10 Create Table

- The table contains a set of fields: *User Name*, *E-mail*, *Password*, *Confirm password*, *Department*, *Gender*, *Address*, *Photo*, *Login*. This table determines the properties of each field, as shown in Figures 11 and 12.

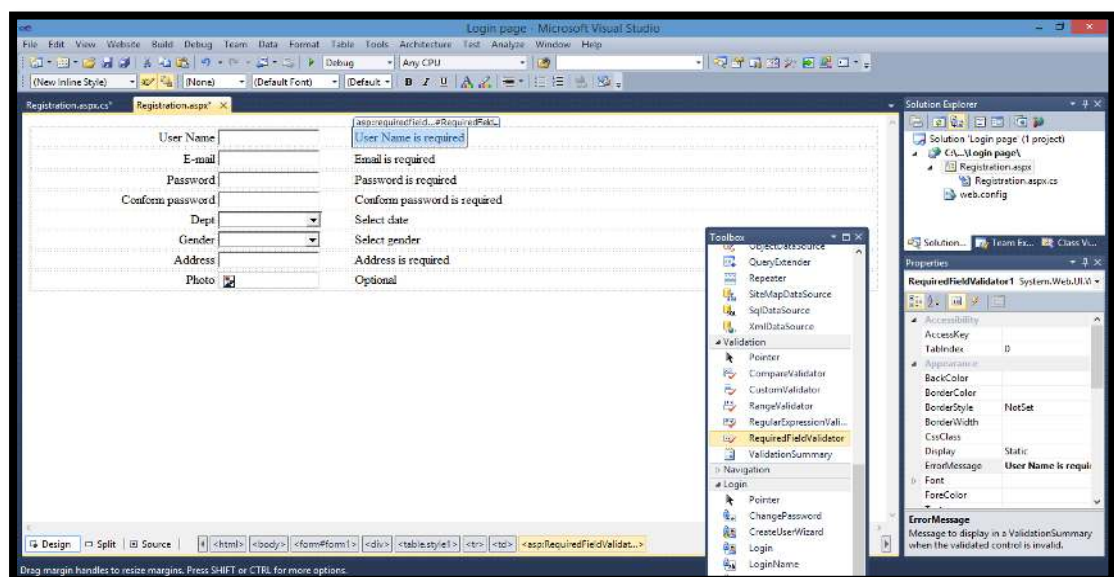


Figure 11 Selecting Names of Fields

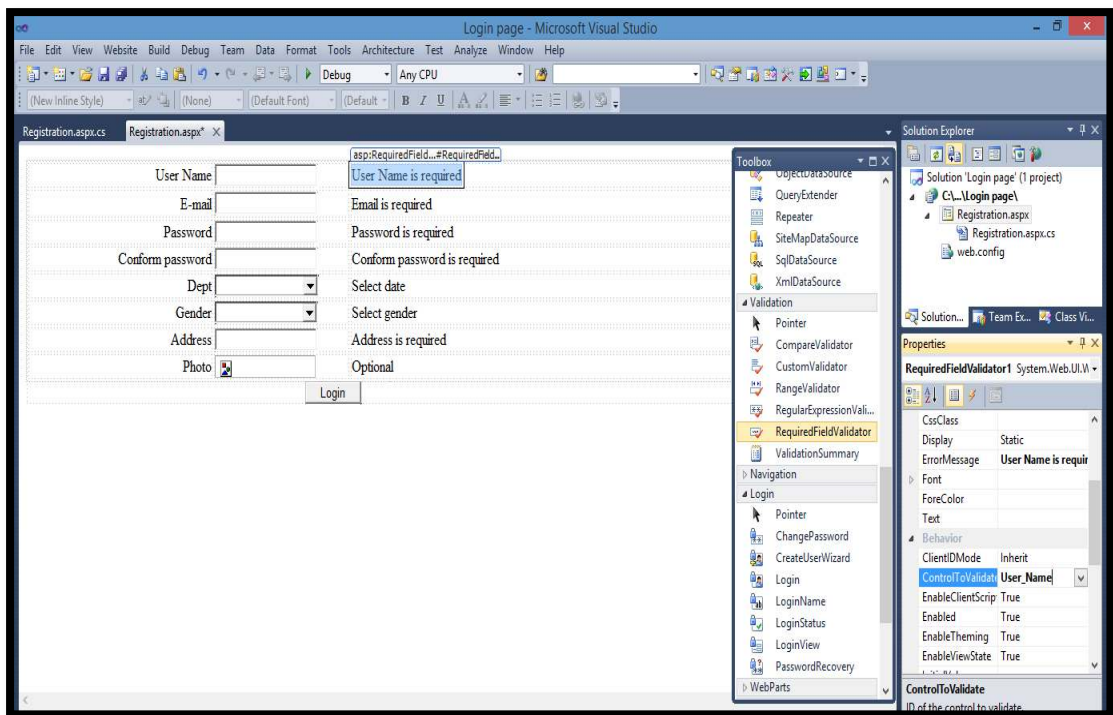


Figure 12 Selecting Properties of Each Field

3.12 Connecting the Interfaces of Web site with Database

Most pages of the web site containing the database include information according to the type of page due to the fact that the database was designed using *Microsoft SQL Server*. When linking a specific page with the database, we should follow the following steps: After opening Microsoft visual studio and open a particular page, followed by clicking “Tools” on the menu bar. From here, we select “Connect to Database,” After that, from “Data sources” we select the *Microsoft SQL Server* database file and press “Continue,” which will open a new form with several fields, the first of which is “Data source.” The second field is “Database file name.” This field can determine the type of file that is contained in the database and then links with page. Finally we press “Ok.” as shown in Figures 13 and 14

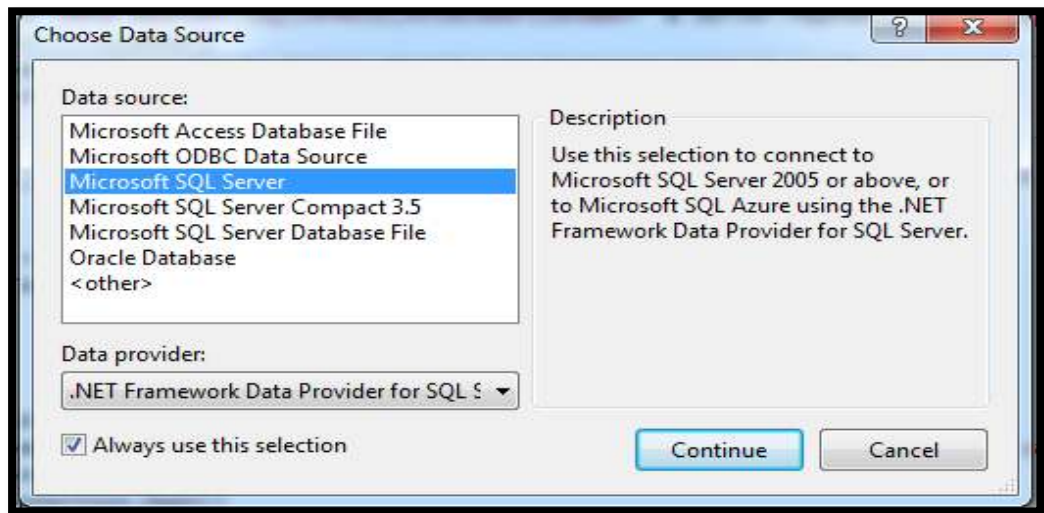


Figure 13 Database Connection

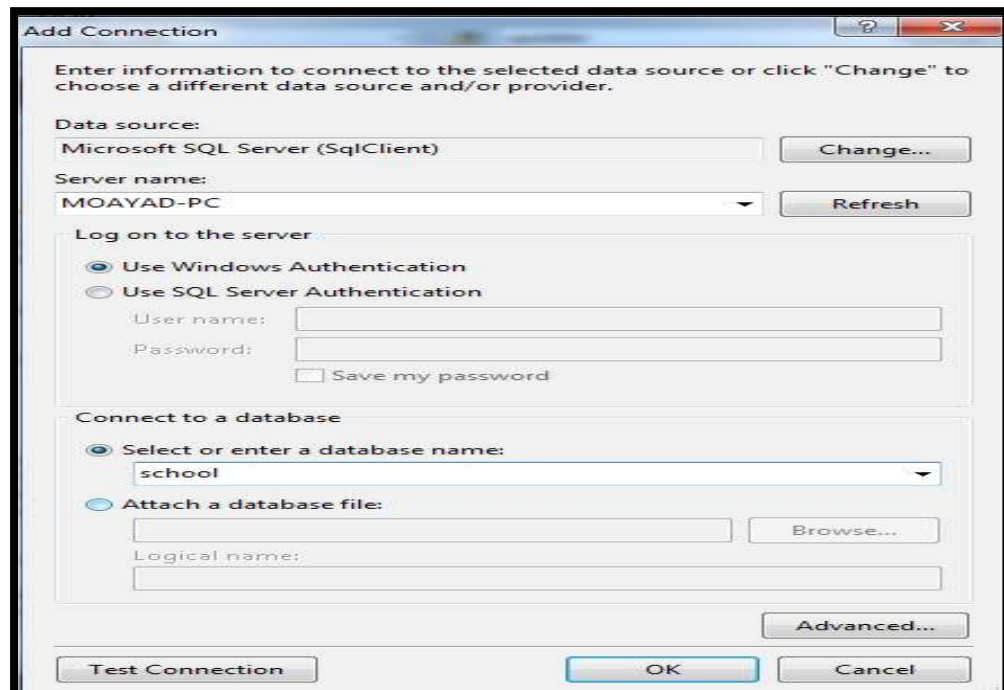


Figure 14 Linking Database

3.13 Website Protection

Web site security is a very important issue due to the Web being widely used in public life. Moreover, it suffers from attacks due in no small part to its interconnection, openness and other features [23]. A user with entry permission and who manages site contents is called “Admin.” The admin page should include a username and password in order to prevent unauthorized access to the control panel and database of the web site.

3.14 Results of the System Designed

After analyzing the previous studies and looking at the experiences and details of the techniques used in designing and managing web sites, the author has compiled the information to design and build a web site Al-Hassan Bin Ali secondary school – General Directorate for Education in Diyala. This web site facilitates access to the school in addition to facilitating the dissemination of information through publishing activities and issues concerning the School or The Directorate. Furthermore, it achieves communication between students and teachers by delivering homework and exam grades via the school webmail as well as the parents will be able to monitor their sons through a portal specified for them. A page is created for the school in order to publish activities, such as schedules, advertisements and exam results. Finally, according to the techniques and information previously discussed about building these web site pages, the following results were reached.

3.14.1 Webmail Service

This page is the most important on the web site and represents the connection point between the school and other institutions as well as among teachers and students. This service is designed exclusively for school members, students and parents. The registration operation and creation of new accounts for teachers or students or parents is generate automatically for each of them when register to the school web site. This page enables users to send and receive information, documents and other files, as shown in Figures 16 and 17.

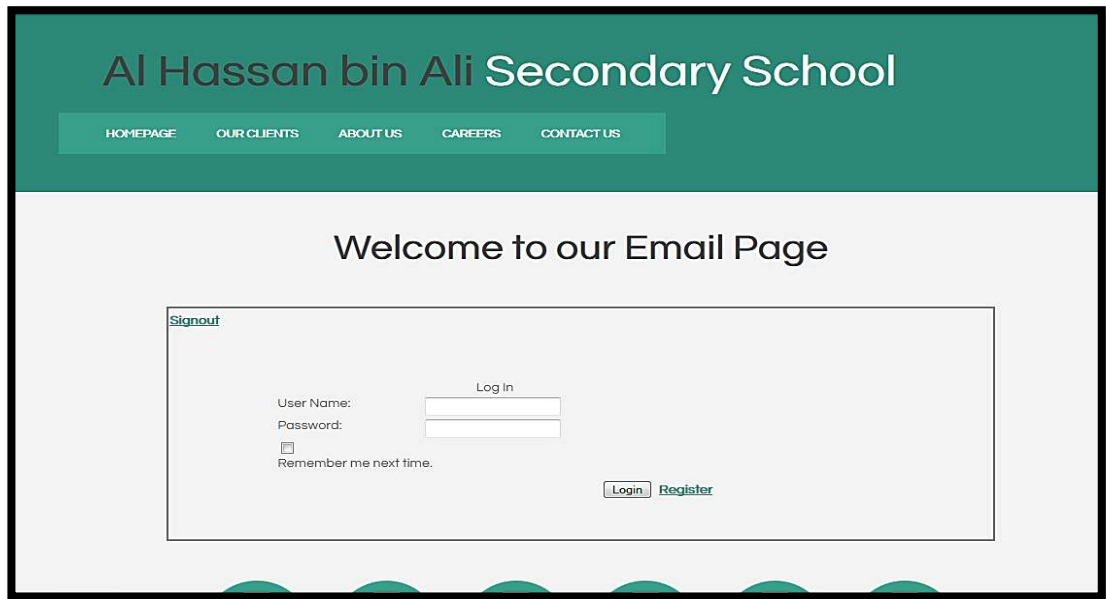


Figure 16 Webmail Service

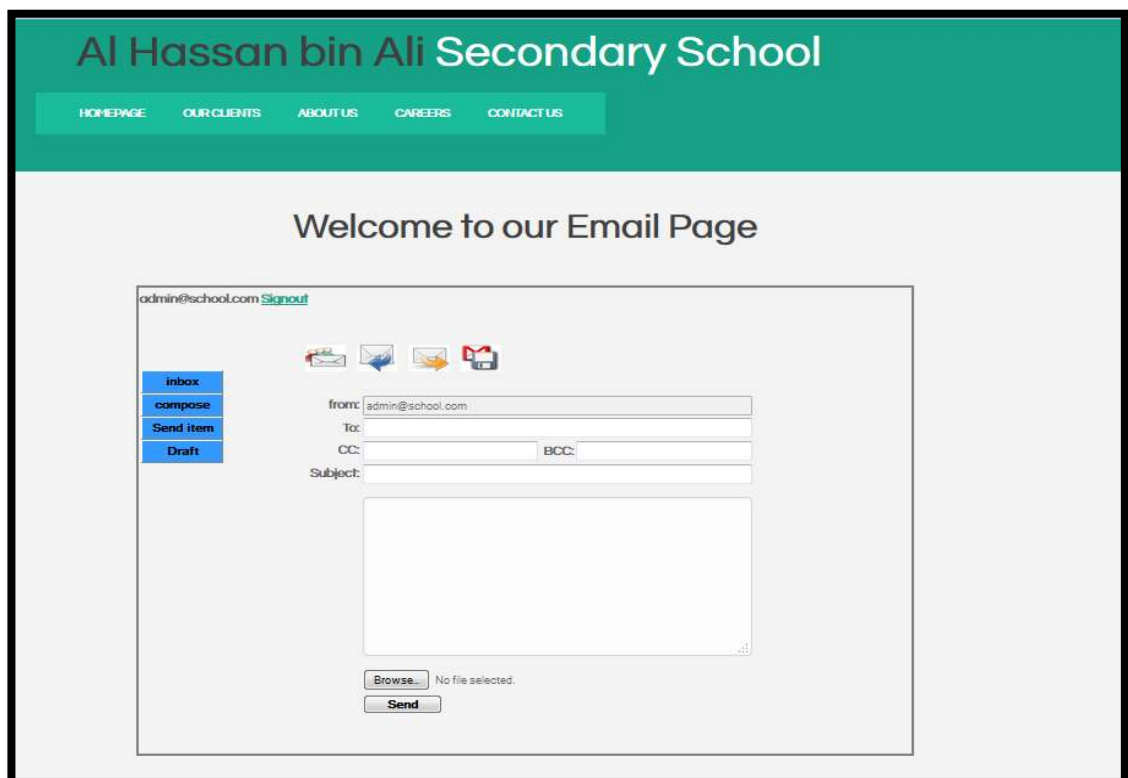


Figure 17 Email Page

3.14.2 Admin Page

The admin page is the point of entry to the administrator control panel of the web site by authorized persons with a user name and password which enables him to enter and control the site contents, as show in Figure 17.

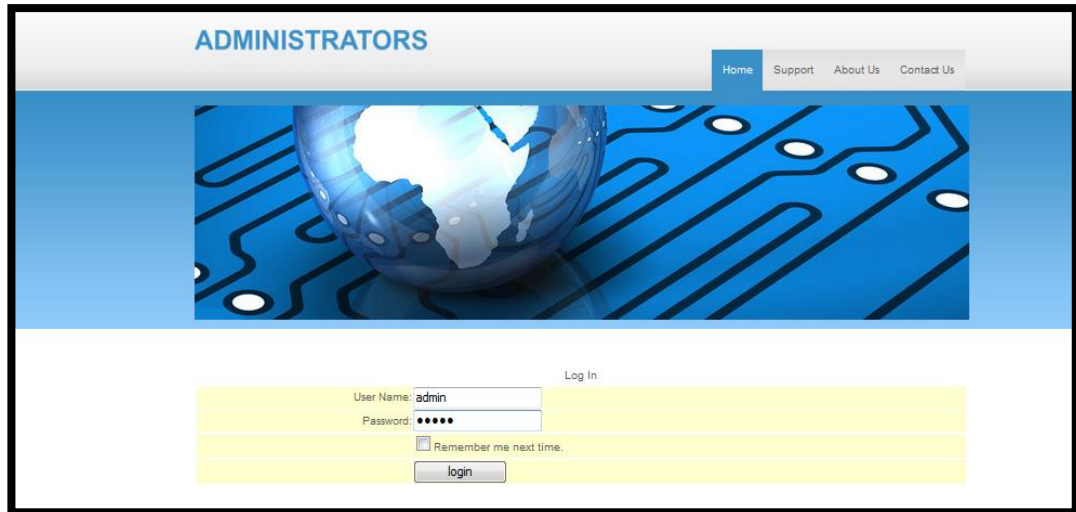


Figure 17 Admin Page

3.14.3 Page of Administrator

This page contains a menu bar each command is responsible for managing specific pages, such as publishing news, advertising and all activities of the school as well as the possibility of editing, adding and removing site contents. It can be summarized thus: See Figure 20

- Add news
- Add parameters
- Final degree
- Schedule
- Courses
- All users
- Student info
- Teacher info
- Mail

The screenshot displays the 'ADMINISTRATORS' page. At the top, there is a navigation bar with links: Home, Support, About Us, and Contact Us. Below this is a large banner image featuring a globe and a circuit board pattern. Under the banner is a horizontal menu with links: Add news, Add parameters, final degrees, Schedule, courses, All users, Student info, Teachers info, and Mail. The main content area contains a form with the following fields and controls:

- title:** A single-line text input field.
- sub:** A single-line text input field.
- details:** A multi-line text area.
- image:** A 'Browse...' button followed by the text 'No file selected.'
- type:** A dropdown menu currently showing 'news'.
- At the bottom of the form are three buttons: 'upload', 'Delete', and 'Update'.

Figure 18 Page of Administrator

3.14.4 Teacher Registration Page

This page functions as the teacher registration portal and includes information about teacher such as name, photo, field, password; confirm password, phone no. and e-mail. The email extension should consist of the extension of the school, as seen in Figure21.

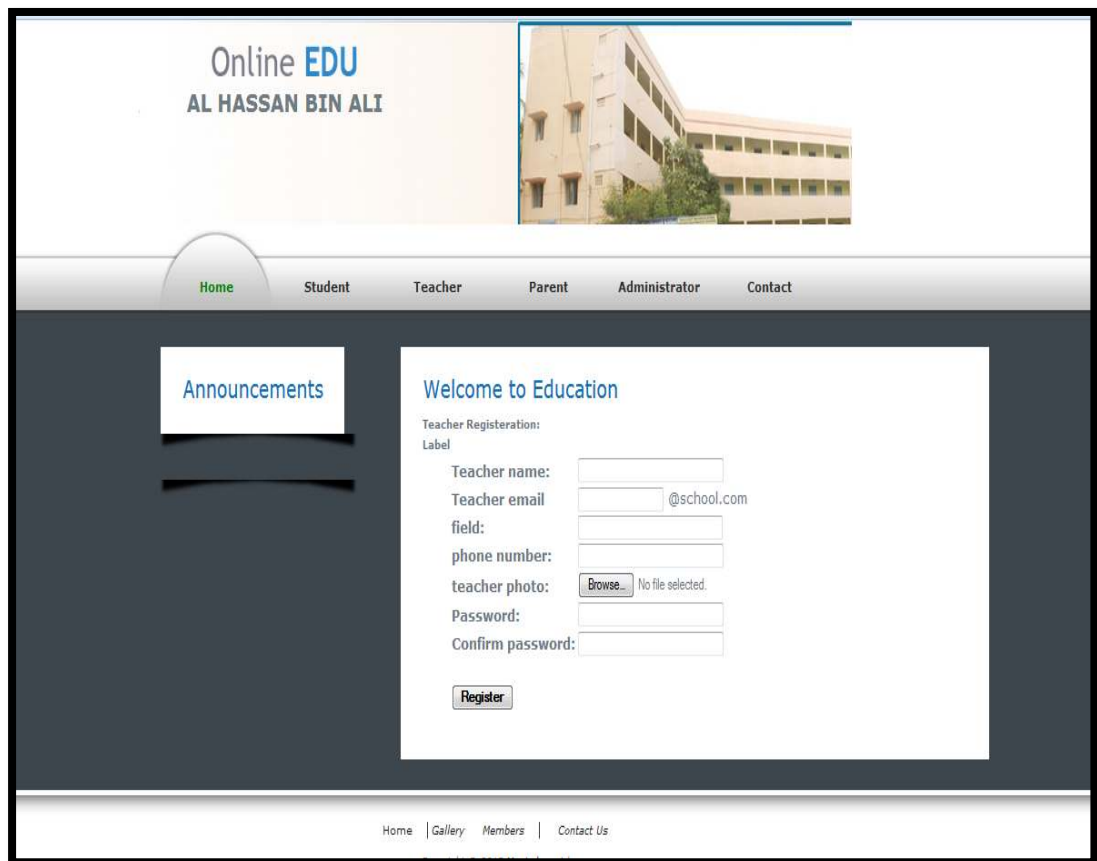


Figure 19 Teacher Registration Page

3.14.5 Student Registration Page

This page functions as the student registration portal of the school and includes student information such as name, password, class, student ID, gender, birth date, e-mail, province and city. Here, each student has his own page, which enables the student to connect with teachers or the school, as shown in Figure 20.

Online **EDU**
AL HASSAN BIN ALI

Home Student Teacher Parent Administrator Contact

Announcements

Welcome to Education

Register new student:

Student information

Student Id: STD-1508018344

Name:

birthdate:

gender:

class:

Email:

address:

phone numbers:

student photo: No file selected.

id's information

idno.: date: office:

national certificate no.: date:

office:

student account paaword

password:

confirm password:

Home | Gallery | Members | Contact Us

Figure 20 Student Registration Page

3.14.6 Parent Registration Page

This Page functions as a Parent registration to the web site. Parent could register at the same time when he filled his son registration page or he can register directly from parent registration page, but he have to know his son's Student ID number, as shown in figure 21.

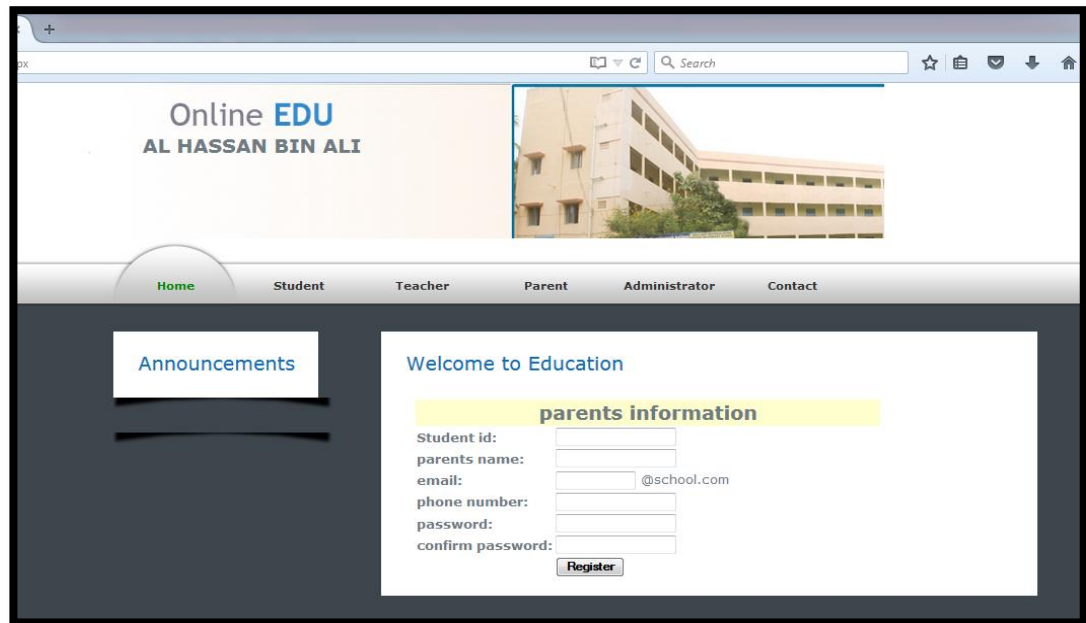


Figure 21 Parent Registration Page

3.14.7 Student Portal

After he finished his registration operation, the student now can use his page and get advantage of this site. This portal or page contains some important functions to the student such as *Profile*, *Degrees*, *lectures*, *absent* and *Mail*. Moreover, in the *Lecture* interface the student can download homework or lectures that uploaded by the teacher as shown in Figure 22.

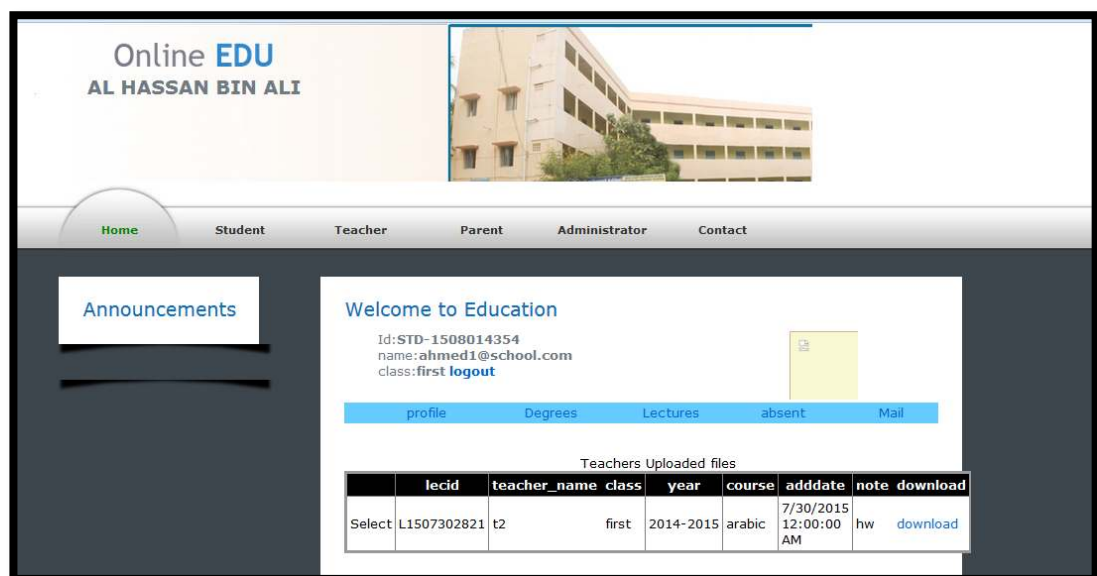


Figure 22 Student Portal

3.14.8 Teacher Portal

This page specified to the teachers who were already registered in the teacher registration page. This portal enables the teacher to upload lectures and homework which will be seen by all the students who enrolled in the same class. In addition, he can add degrees and absent to each student in the class as shown in Figure 23.

id	year	class	course	absent_date
STD-1507190013	2015-2016	first	arabic	3/1/2015 12:00:00 AM
STD-1507194629	2015-2016	first	arabic	2/1/2015 12:00:00 AM
STD-1507194629	2015-2016	first	arabic	2/1/2015 12:00:00 AM

Figure 23 Teacher Portal

3.14.9 Parent Portal

This portal enables Parents to monitoring them sons' through knowing them exams degrees and absent days as well as they can send an e-mail to the teachers or principle, as shown in Figure 24.

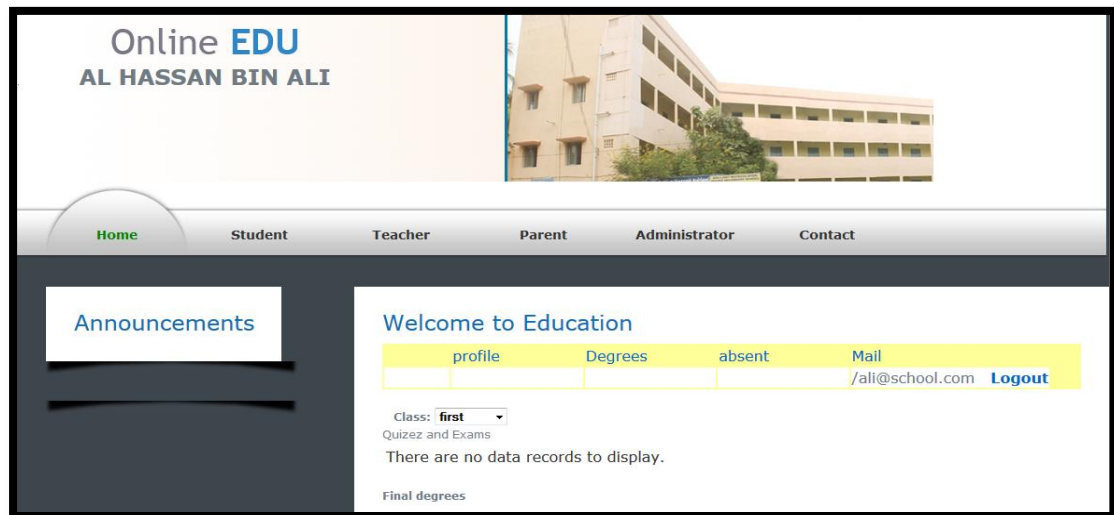


Figure 24 Parent Portal

3.15 Menu Bar

The Menu bar contains much useful commands which help users to easily find what they needs. Moreover, this menu bar will make the web site navigation more flexible.

3.15.1 About School Page

This page contain more than one property, we can find *Principle message*, *mission and vision*, *Organizational structure* and *location*, as shown in Figure 25.

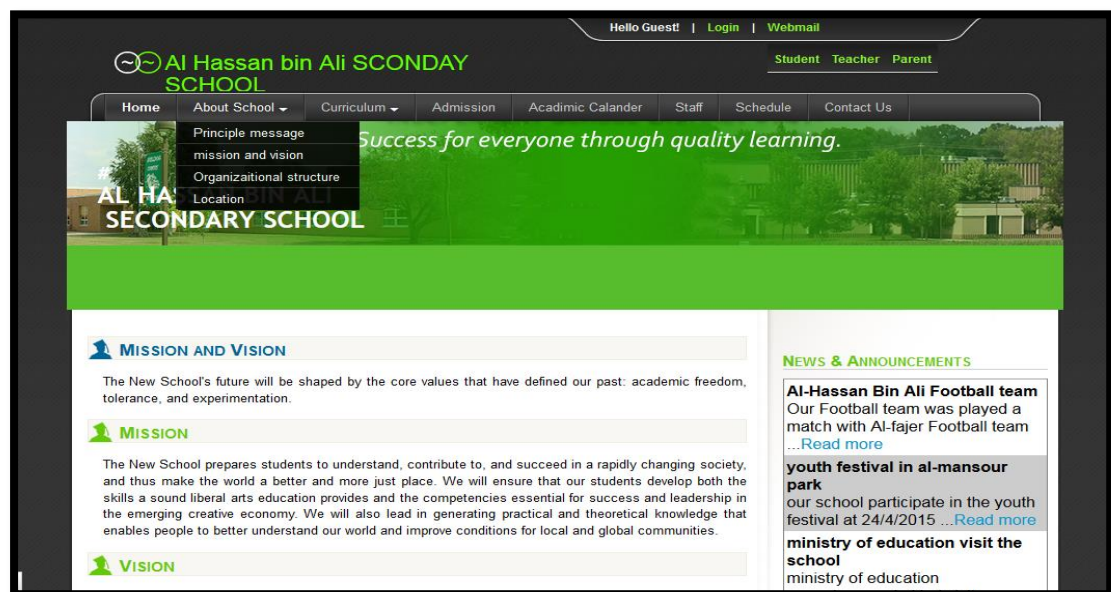


Figure 25 Mission and Vision Page

3.15.2 Organizational Structure

This page contains the organizational structure of Al-hassan Bin Ali secondary school and explains the relationship between the principle and teachers, as well as students and parents, as shown in Figure 26.

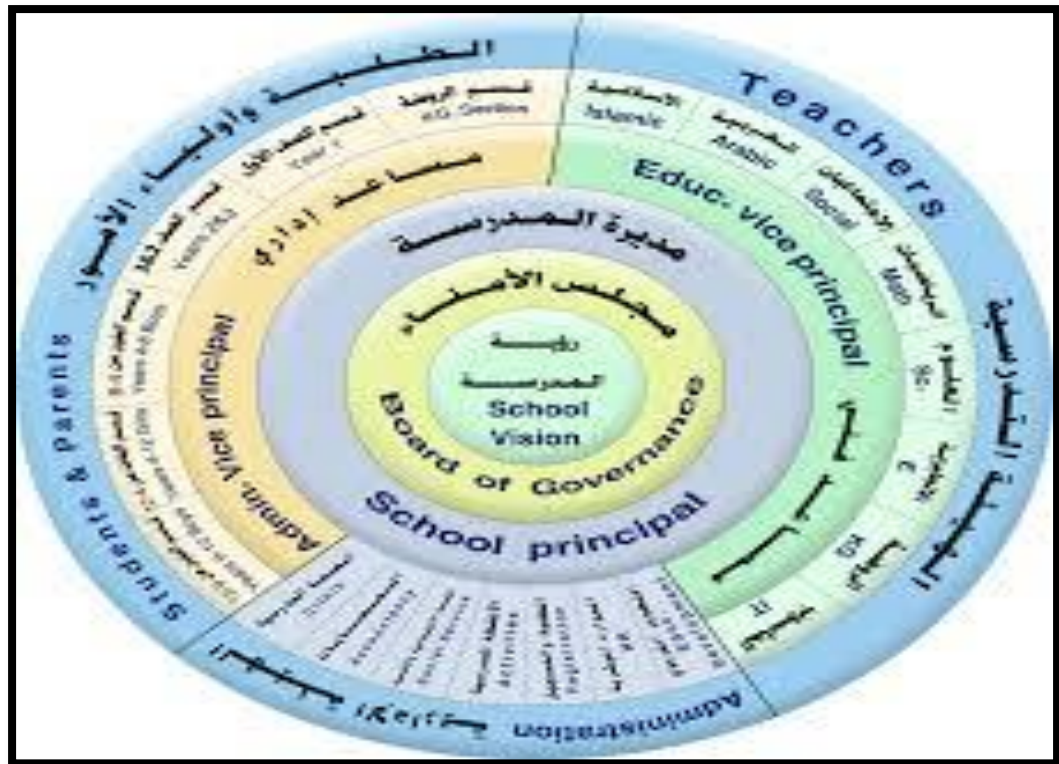


Figure 26 Organizational Structure

3.15.3 School Location

This page includes the geographical location of the school on a map. Al-hassan Bin Ali secondary school located in Diyala Province about 65 kilometers northeast of Baghdad, as shown in Figure 27.

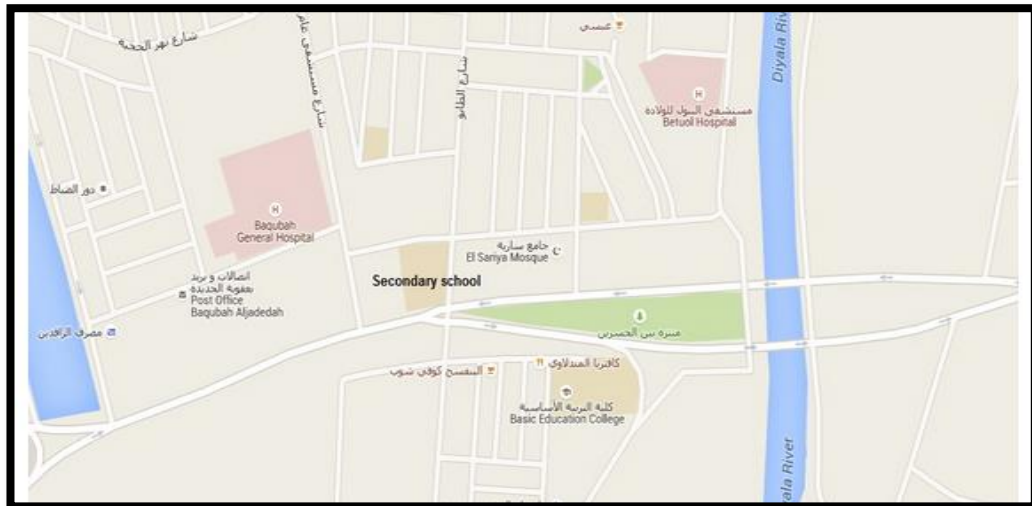


Figure 27 School Location

3.15.4 Curriculum Page

In the curriculum page the students will find all the e-books for their different stages uploaded in PDF format and with direct download link, as shown in Figure 28.

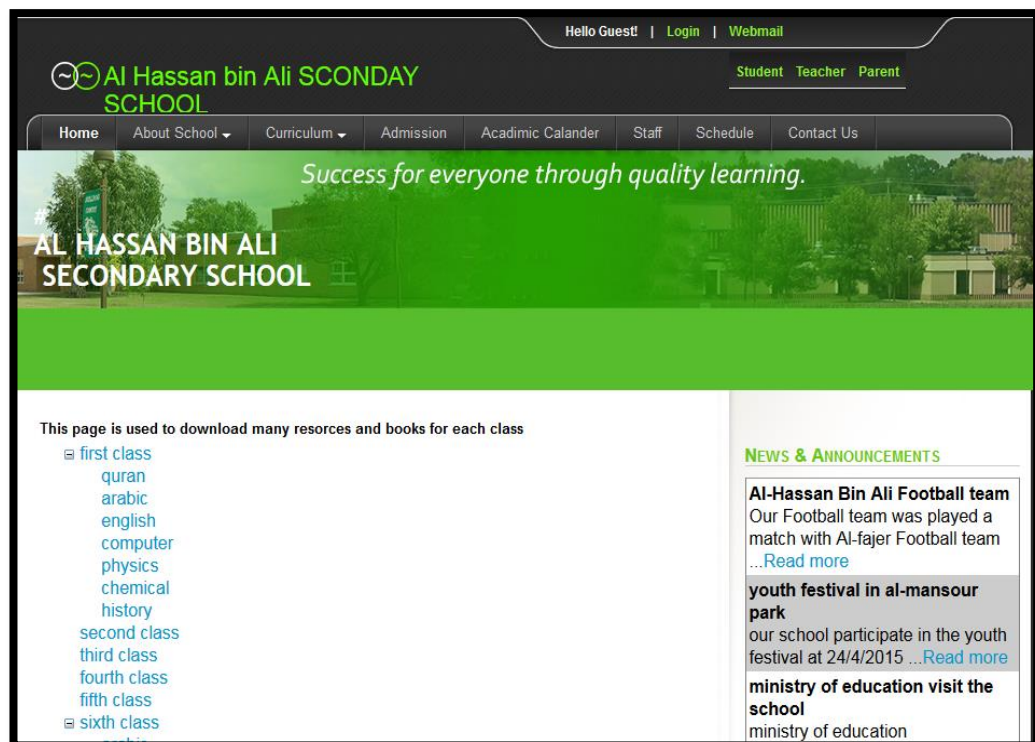


Figure 28 Curriculum Page

3.15.5 Admission Page

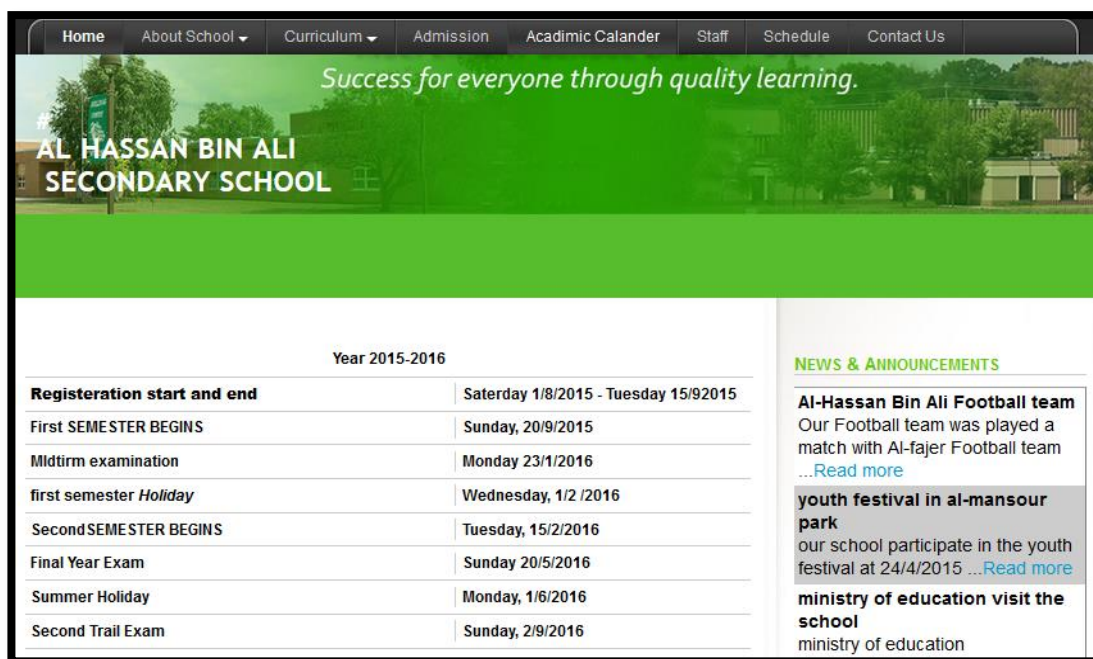
This page improves the transaction of administrative process to electronic process by enabling the parents and students to directly filing an admission form and resends it by e-mail. After that, if the student achieved all the requirements, the school will accept him. Forum is shown in Figure 29.

STUDENT ENROLMENT INFORMATION – 20__		Computer Generated Student ID: _____	
STUDENT DETAILS.			
PERSONAL DETAILS OF STUDENT			
Surname: _____		Title: (Miss Ms Mr) _____	
First Given Name: _____			
Second Given Name: _____			
Preferred Name (If applicable): _____			
☒ Sex (tick): ☐ Male ☐ Female		Birth Date: (dd-mm-yyyy) _____ / _____ / _____	
Student Mobile Number: _____			
PRIMARY FAMILY HOME ADDRESS:			
No. & Street: or PO Box details _____			
Suburb: _____			
State: _____		Postcode: _____	
Telephone Number _____		Silent Number: (tick) ☐ Yes ☐ No	
Mobile Number: _____		Fax Number: _____	
OFFICE USE ONLY			
Child's Name and Birth Date proof sighted (tick)		☐ Yes ☐ No	
Enrolment Date: _____			
Year Level _____	Home Group _____	Timetabling Group _____	House _____
Student Email Address: _____			
Immunisation Certificate received?: (tick)		☐ Complete ☐ Not sighted	
Is there a Medical Alert for the student? (tick)		☐ Yes ☐ No	
Does the student have a Disability ID Number? (tick)		☐ No ☐ Yes	
Disability ID No.: _____			
Has a Transition Statement been provided (either by the Early Childhood Educator or parents)? (tick)		☐ Yes ☐ No	
For prep students only		☐ Pending	
FAMILY DETAILS			
List any other family members attending this school: _____			

Figure 29 Admission Forum

3.15.6 Academic Calendar

This page contains an important dates such as start and end of registration and midterm exams dates or final exam dates...etc. In addition, these dates' helps parents to engorge them sons to but a schedule till the exam date, as shown in Figure 30.



The screenshot shows the website of Al Hassan Bin Ali Secondary School. The header includes a navigation menu with links: Home, About School, Curriculum, Admission, Academic Calander, Staff, Schedule, and Contact Us. Below the navigation menu is a banner with the school's name and the tagline "Success for everyone through quality learning." The main content area displays the "Year 2015-2016" Academic Calendar as a table. To the right of the calendar is a "NEWS & ANNOUNCEMENTS" section with three items: "Al-Hassan Bin Ali Football team", "youth festival in al-mansour park", and "ministry of education visit the school".

Year 2015-2016	
Registration start and end	Saturday 1/8/2015 - Tuesday 15/9/2015
First SEMESTER BEGINS	Sunday, 20/9/2015
Midterm examination	Monday 23/1/2016
first semester Holiday	Wednesday, 1/2 /2016
Second SEMESTER BEGINS	Tuesday, 15/2/2016
Final Year Exam	Sunday 20/5/2016
Summer Holiday	Monday, 1/6/2016
Second Trail Exam	Sunday, 2/9/2016

NEWS & ANNOUNCEMENTS

Al-Hassan Bin Ali Football team
Our Football team was played a match with Al-fajer Football team ...[Read more](#)

youth festival in al-mansour park
our school participate in the youth festival at 24/4/2015 ...[Read more](#)

ministry of education visit the school
ministry of education

Figure 30 Academic Calendar

3.15.7 Staff Page

This page function is to show information about teachers and other employee in the school. Thus, each teacher information such as *name*, *e-mail* and *field*. In addition, there is a dropdown menu to select which class you want to show his teacher, as shown in Figure 31.

Home About School Curriculum Admission Academic Calander Staff Schedule Contact Us

Success for everyone through quality learning.

AL HASSAN BIN ALI SECONDARY SCHOOL

sixth Class Staff

email	course	year	class
habeeb@school.com name: habeeb salman field: chemistry phone_number: 7714258964	arabic	2015-2016	sixth
jamal@school.com name: jamal abdullah field: history phone_number: 7714258964	english	2015-2016	sixth

NEWS & ANNOUNCEMENTS

Al-Hassan Bin Ali Football team
Our Football team was played a match with Al-fajer Football team ...[Read more](#)

youth festival in al-mansour park
our school participate in the youth festival at 24/4/2015 ...[Read more](#)

ministry of education visit the school
ministry of education mr.mohammed ekbal visit our school al-hassan bin ali and met tha director and the teachers ...[Read more](#)

With technology, schools try to level the economic playing

Figure 31 Staff Page

3.15.8 Schedule Page

In this page the student can see their weekly schedule depending on their class. They can select the class by click on the name of the class from a dropdown menu in the interface, as shown in Figure 32.

Hello Guest! | Login | Webmail

Al Hassan bin Ali SECONDARY SCHOOL

Student Teacher Parent

Home About School Curriculum Admission Academic Calander Staff Schedule Contact Us

Success for everyone through quality learning.

AL HASSAN BIN ALI SECONDARY SCHOOL

class: first
weekly Schedule

time	sunday	monday	wednesday	thursday
08:00-08:45	arabic	english	math	history
08:50-09:35	english	math	physics	art
09:40-10:25	islamic	chemistry	english	biology
10:30-11:15	chemistry	history	art	geographic
11:20-12:05	math	geographic	english	computer
15:10-12:55	computer	biology	biology	sport

NEWS & ANNOUNCEMENTS

Al-Hassan Bin Ali Football team
Our Football team was played a match with Al-fajer Football team ...[Read more](#)

youth festival in al-mansour park
our school participate in the youth festival at 24/4/2015 ...[Read more](#)

ministry of education visit the school
ministry of education

Figure 32 Schedule Page

3.15.9 Contact Us

This page includes a set of addresses which enable users to contact the school by email or phone number, as shown in Figure 33.

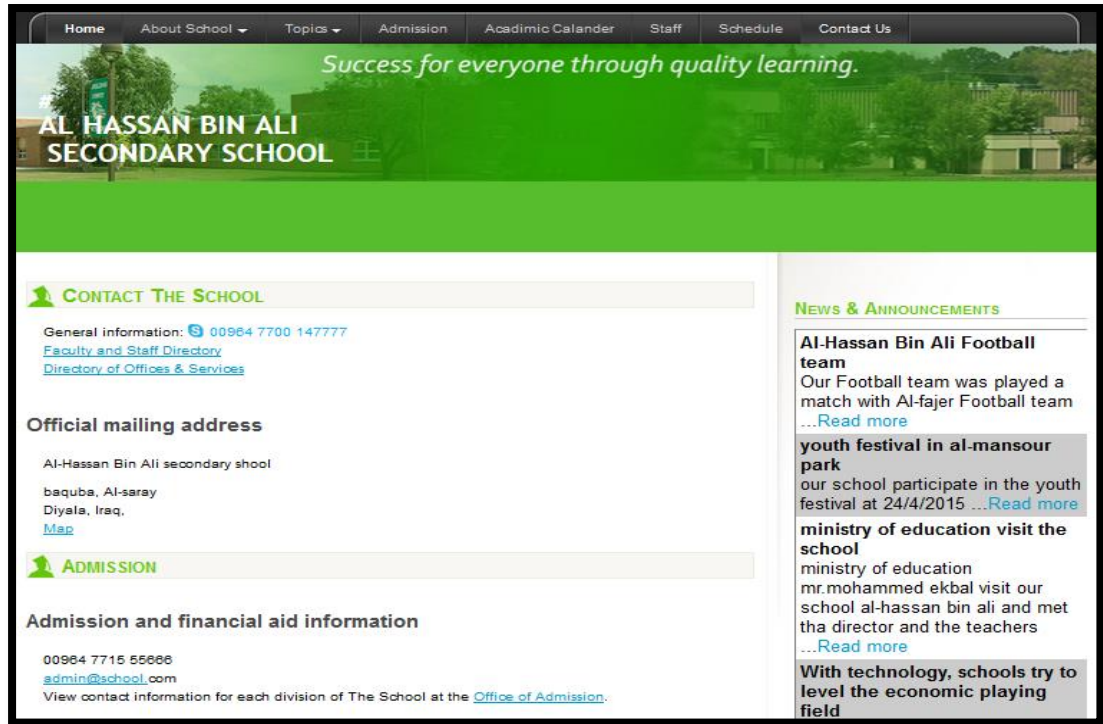


Figure 33 Contact Us

3.15.10 The Middle Template

This area is allocated for publishing news. The latest activates in the school or General directorate, with photographs. Moreover, it is contains welcoming message to the website visitors, shown in Figure 34.

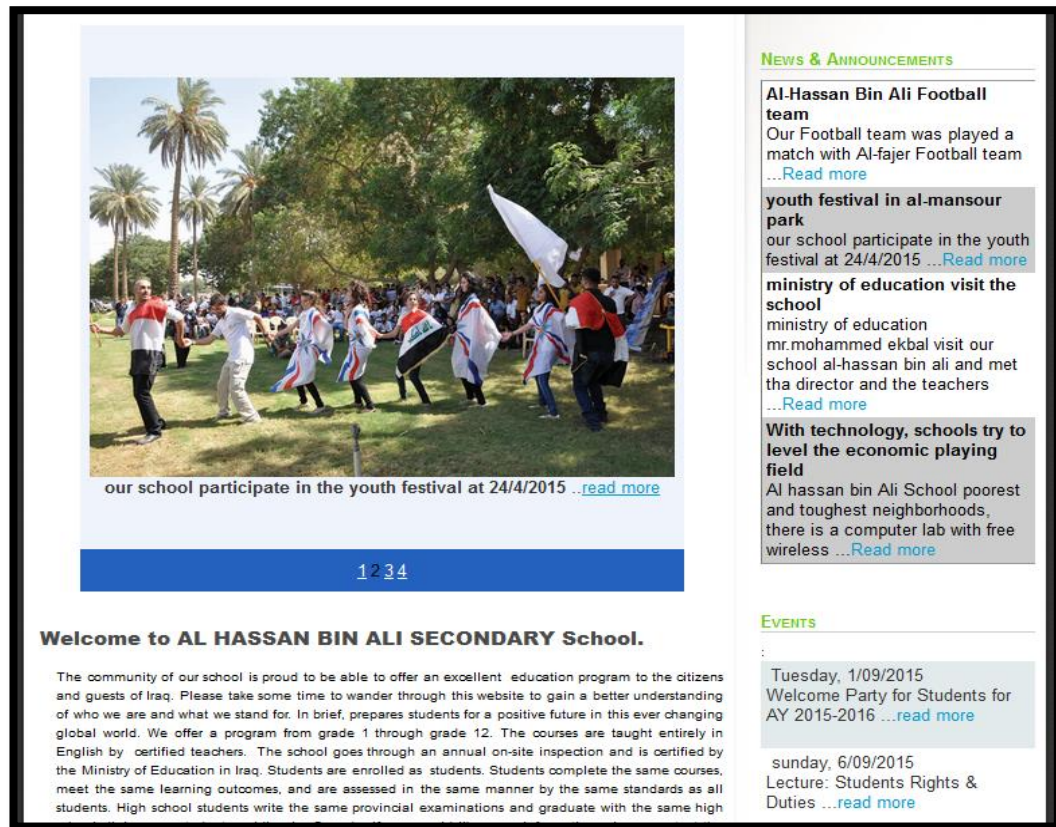


Figure 34 The Middle Template

3.15.11 Follow us

Nowadays, social media sites have become one of the important facilities in the electronic media. Therefore, it is made available to each user around the world. Examples include Facebook, Twitter, and YouTube, which enable people to exchange ideas and information in addition to pictures and videos in virtual communities and networks, as shown Figure 35.



Figure 35 Follow Us

CHAPTER 4

CONCLUSION

4.1 Finding

Findings achieved from this study can be summarized by the following:

- Create new web site for Al-Hassan Bin Ali secondary school – General Directorate for Education in Diyala by using Microsoft visual studio 2010 , ASP.Net which have many tools that support the designers to create and control web content smoothly and more flexibly and to change the old administrative processes and converting to an e-management process.
- Helps parents to follow up their sons and know their grades and absences through special gate with username and password for each parent.
- Enhance the communication between students and teachers by creating a personal page for every student and teachers in order to deliver information, such as homework, dates of exams and exam results, to students.
- Ease of admission process through one click on ADMISSION button in the web interface and filling the admission form easily, after reading the requirements of acceptance.
- The usability of websites and ease of navigation between pages are most important rules for any powerful web site which could achieved by simple user interfaces in addition to the possibility of easy access to any page .
- Improve the role of media in the school through coverage of activities and events which occur at the school.

4.2 Limitations

The work presented in this thesis has the following limitations:

- The web site does not contain the student management system.
- The page of the library needs a database system, including the publication of books in addition to linking with international libraries where students and staff can access and take advantage of this library.
- The teachers and the principle have poor knowledge and experience in using of computer and internet web site.
- The web site needs to be hosted on the server.

4.3 Future Studies

To enhance the performance of the proposed web site, some future studies are recommended:

- Design and create a mobile application for the school web site, which helps students, teachers and parent to access from their smartphone or tablet at any time and from anywhere.
- Designing a database management system for the administrative unit and student management system by using Microsoft SQL Server in the building Database Management System DBMS and linking it with the school site.
- Create a sub site for the school library and constructs a database system, including curriculum books in addition to lectures for each teacher and linking it with the site of the school.
- Make up a special committee for the management and development of the web site, including computer teachers, management and staff who will work as one team to manage and develop the school site.
- The General Directorate for Education in Diyala should allocate a budget to the school and pays the cost of web site hosting.

4.4 Conclusion

In this study, we have introduced the web site for Al-Hassan Bin Ali secondary school – General Directorate for Education in Diyala. The main objective was to reduce or eliminate the paper work and converts to electronic work in both of administrative and educational operations in the school through design and manages school web sites by using *Microsoft Visual Studio 2010 Ultimate* and *ASP.Net*, which has many tools that helps the designer to build and manage web content easily and more flexibly. Moreover, improve relationship between students and teachers by delivering homework, exam dates and exam results. The functions for which they were designed have been achieved. In this study, two programming languages were used to design and manage the web site including *ASP.Net*, which includes the *Visual Basic.NET* language. The second language used is HTML and *Java script* with *SQL server* being used to build databases for some pages of the web site. This website enables the parents to follow up their sons and knowing them degrees and those absences via special portal in the site without need to coming to the school. In addition, each user is able to access and browse the web site easily and take advantage of the contents of the web site. Moreover, this web site can improve the management of the school to carry out its tasks efficiently through the exchange of formal papers between school and the General directorate through the email service of the web site. The web site enables the media unit in the school to publish all news, activities and conferences which occur at the school or at the directorate. The proposed web site has achieved the purpose of this study, which includes the possibility of automate the administrative and educational operations in the school by designing and managing the web site for Al-Hassan Bin Ali secondary school – General Directorate for Education in Diyala. The characteristics of this web site are the answer to most of the questions raised from the purpose of this study. The scale of efficiency of the web site is dependent on its ability to satisfy the user's requirements for the quality of information. Currently most schools use web sites to provide students, teachers and parents with interactive systems which accelerate communication and increase knowledge in every field of study.

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APPENDICES A

CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: AL-samurai, Moayad Awny

Date and Place of Birth: 16 January 1978, Diyala

Marital Status: Married

Phone: +9647700147777

Email: moayad1978@yahoo.com



EDUCATION

Degree	Institution	Year of Graduation
M.Sc.	Çankaya University, Mathematics and Computer Science, Information Technology Program	2015
B.Sc.	Baghdad University, College of Science ,Computer Science Dept.	2002
High School	Al-Sharef Al-Radee School	1995

WORK EXPERIENCE

Year	Place	Enrollment
2005- Present	General Directorate of Education- Diyala, Al-Hassan Bin Ali Secondary School	Teacher

FOREIGN LANGUAGES

English

HOBBIES

Volleyball, Chess, Traveling, Reading.