

ORGANIZATION OF THE ISLAMIC COOPERATION (OIC) ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (CSE)

Board-Bazar, Gazipur-1704, Dhaka Bangladesh

THESIS

ON

E-COMMUNITY:

CASE STUDY OF CAMEROONIAN STUDENTS' COMMUNITY IN IUT (CSCIUT)

Written

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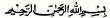
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18th September, 2012





ORGANIZATION OF THE ISLAMIC COOPERATION (OIC)

L'ORGANISATION DE LA COOPERATION ISLAMIQUE (OCI)



ISLAMIC UNVERSITY OF TECHNOLOGY (IUT)

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This Thesis is Submitted to the Department of Computer Science and Engineering (CSE), In Partial Fulfillment of the Requirements for the Award of HIGHER DIPLOMA in Computer Science and Engineering (HD-CSE).

18th September, 2012

Declaration

This thesis contains no material which has been accepted for the award to the candidate of any degree or diploma, except where due reference is made in the text of the thesis.

To the best of our knowledge the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

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Dedication

This work is dedicated to the following people:

To our respective mothers who gave us a love of life and to whom we shall remain indebted for setting the foundation on which this thesis is based.

To our respective fathers whose love, care and faith gave us the strength to face the world without fear and weakness.

We are equally very indebted to our respective grandparents whose ancestral inspiration remains an enormous source of wisdom and guidance in everything we do in our life.

To our respective brothers, sisters, cousins, uncles, aunts and all other members of our extended family; we shall forever remain grateful to them for their unfailing moral support, encouragement and generosity throughout our stay in Bangladesh.

Our very special thanks go to our Honorable Head of Department Prof. Dr. M. A. Mottalib and our respected supervisor Mr. Md. Mohiuddin Khan for their all-out help, support and encouragement.

Finally, our work is dedicated to all our friends, classmates and well-wishers with whom we really enjoyed a very friendly and cordial relationship since our arrival in Bangladesh. May Allah bless and protect them all.

Most Sincerely Yours,

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Abstract

Today we are in a new era of technology marked by an unprecedented revolution in social networking, with the Internet growing at a very rapid rate and becoming increasingly available to billions of people all over the world, almost everyone has access to the internet anywhere in the world and at any time, therefore they can browse and get connected to the Internet no matter where they are. The main objective or better still the aim of our website is to demonstrate how a group of people with a common background and a common interest can be brought together under the same umbrella to share their views on matters of common interest, exchange information, provide help and support to group members and above all regularly keep in touch with each other in today's very hectic world; all these thanks to the very powerful and innovative evolution of sophisticated Information Technologies as exemplified by the rapid and dynamic growth of the Internet. Our website provides all the common facilities that a typical online community forum does; namely: a full-fledged interactive Forum and an Alumni Portal in addition to the usual amenities that all websites provide such a home page, contact us module etc. Besides, another prominent feature of our website is an attractive gallery of photos implemented with J-Query and viewed in a virtual studio that looks aesthetically appealing to the user. Our website also has an up-to-date interactive forum panel for its users to keep in touch. Articles are posted exclusively by the Administrator of the website and users can only view and comment on them. Alumni members are approved by the Administrator after proper verification is done. The Administrator has the privilege to block forum members as well as registered Alumni. All in all, our project is a modern community website that incorporates most of the recent technologies in the field of web development and responds adequately to the needs of a student community that we are.

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Chapter 1: Introduction

1.1 Project Background

Recently, the world has started changing rapidly. People are living under the umbrella of globalization. People nowadays can communicate easily wherever they are and whenever they want, by using the facilities that have been provided by information technology notably the Internet ^[11]. The Internet has now become one of the most important technologies of communication for people all over the world. So far there are over two hundred Cameroonian students who have already passed out from IUT and are now pursuing their professional careers in diverse parts of the world. Many more will still join them in the years and years to come. There is thus a clear need to develop a community website that brings them all together under the umbrella of an online forum. This is exactly what our website is out to achieve.

1.2 Overview of the significance of Social Networking

The Internet is one of the recent developments in communication and information transfer. It is considered a technology asset because of its ability to disseminate larger volume of information quickly and effectively to all types of stakeholders, including current students, prospective applicants, alumni members and the wider public audience. Nowadays, many organizations and communities use the internet not only as a valuable tool of interaction in providing a low-cost medium for communication, but also a channel of further socialization to promote friendly ties among its members^[12]. This has resulted in the increased usage of the Internet all over the world and has become a very significant strategic tool in fostering and modernizing the phenomenon of social networking. This has seen the Internet growing from a research network to a world-wide network which is used daily by billions of people and the phenomenal growth and rising popularity of the Internet have attracted Groups and Communities to come together in a bid to foster their common good. The development of the Internet has proven to change and enhance many aspects of our daily life. Today it is no longer necessary to leave one's home to go to the post office to send photos and letters to friends or go to the radio and television houses to make public announcements to members. Communications

between friends and relatives living in different countries can occur in a matter of seconds thanks to the powerful network of networks commonly called the Internet.

Members who want to share information just have to sign up to the Forum portal of the CSCIUT website and do so in a matter of seconds.

1.3 Impact of ICT on Social Networking

Information Technology has generated fundamental changes in the nature of application of technology in the sphere social networking. Information and communication technologies (ICT) can provide powerful strategies and technical tools for communities, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness ^[12].

In recent years ICT developments have had enormous implications for the operation, structure and strategy of organizations as well as like-minded Groups and communities.

The degree of interaction between and among people future nowadays depend to great extent on their use of ICT. It contributes towards efficiency and improvements of both inter-community and intra-community communication.

ICT is changing the world dramatically. The World Wide Web has created a completely new order in the social networking sphere with e-communication that broadcasts events in a matter of seconds and make it available to all people from different corners of the world.

1.4 E-Community in Brief

An e-community is a social network of individuals who interact through specific online forums, potentially crossing geographical boundaries in order to pursue mutual interests or goals. One of the most pervasive types of e-community includes social networking services, which consist of various online communities ^[11].

These e-communities all promote interaction, sometimes focusing around a particular interest, or sometimes just to communicate. Some e-communities do both. They allow users to interact over a shared passion usually through social networking site or internet-based forums.

The traditional definition of a community is of geographically circumscribed entity (neighborhoods, villages, etc.). E-communities are usually dispersed geographically. Some online communities are linked geographically, and are known as community websites. Virtual communities resemble real life communities in the sense that they both provide support, information and friendship.

E-communities are used by a variety of social and professional groups. The explosive diffusion of the Internet since the mid-1990s has also fostered the proliferation of e-communities taking the form of social networking services and online communities.

1.4.1 Advantages of E-community

An E-community offers the advantage of instant information exchange that is not possible in a real-life community. This allows people to engage in many activities from their home, such as: admission announcements, counseling, job vacancies etc. and searching for specific information ^[11]. Users of online communities also have access to thousands of specific discussion groups where they can form specialized relationships and access information in such categories as: education, technical assistance, social activities, and recreational pleasures. Moreover, an E-community provides an ideal medium for these types of relationships because information can easily be posted and response times can be very fast. Another benefit is that these types of communities can give users a feeling of membership and belonging. Users can give and receive support, and it is simple and cheap to use.

1.4.2 Disadvantages of E-community

While instant communication means fast access, it also means that information is posted without being reviewed for correctness. It is difficult to choose reliable sources because there is no editor that reviews each post and makes sure it is up to a certain degree of quality ^[12]. Everything comes from the writer with no filter in between.

In theory, online identities can be kept anonymous which enables people to use the virtual community for fantasy and sometimes out of fancy. Some professionals urge caution with users who use online communities because predators also

frequent these communities looking for victims who are vulnerable to online identity theft or online predators.

1.5 Online Interaction

Online interaction means using the power of online social networks, computer communications and digital interactive media to reach our social communication needs. Online interaction will not replace traditional forms of communication anyway. Instead, it will both add to and subtract from today's socialization mix. It will add more friendly interactivity and subtract communication costs ^[8].

It adds more flexibility in the way people interact and socialize. It will add flavor and a touch of modernity in how people communicate with the fellows on the network. In addition, it takes away barriers often related to taking an initiative involving members or extending a forum meant for the international audience. And most importantly, it will turn upside down some old notions we have held of what friendly interaction is all about.

1.6 Project Goals/Objectives

- 1. The Cameroonian Students' Community in IUT (CSCIUT) website is a community website aimed primarily at bringing together former, present and future Cameroonian students of IUT.
- 2 Create a solid bond among its members with a view of fostering camaraderie and promote a sense professional belonging.
- 3 Ensure the constant flow of information among members and the dissemination of important scholarship opportunities and job vacancies from all over the world.
- 4 To let the public discover who we are and what our achievements are.
- Maximize the well-being of members wherever they are and promote and sustain their academic and professional excellence in every corner of the globe
- Increase awareness about our university (IUT), sell its image to the outside world by building a formidable reputation for our community.
- Provide complementary information to future students and prospective applicants on how to apply and get their way to Bangladesh.

- 8 Guide and support our juniors by means of regular posts on our online forums.
- 9 Sensitize the public of the intended projects of our Community such as the creation of a solidarity fund and community enterprise.
- Inform the public of the various activities we undertake while we are students in IUT.
- Provide detailed information about the status and structure of IUT, the organization and functioning of the university, the different departments and specializations available, the various degrees awarded, all the courses being thought, the rules and regulations governing the institution etc.
- 12 Check the authenticity of a student and approve his membership for the Alumni.
- 13 Provide flexible access modes to users internet, telephone, PDA, etc.
- 14 Encourage more Cameroon students to apply to IUT by vigorously advertising for available places in the university on our website. Lobby with the Government of Cameroon to send us more students in order to swell our ranks and boost our status and membership ranks.
- Build strong and redoubtable Alumni with a global reputation capable of defending the interests of its members, promoting its professional advancement and enhancing its international repute.

Chapter 2: Initial Study

2.1 Project Vision

This project is aimed at creating a virtual community forum that brings together all the former, present and future Cameroonian students of IUT in Dhaka Bangladesh with the purpose of enhancing brotherly togetherness and a sense of national belonging. It is the first initiative of its kind, and it will certainly go a long way in fulfilling the original goals it is meant for given its rich content and wide scope.

2.2 Project Scope

This website is confined exclusively to Cameroonian students who have passed out from IUT or are currently in IUT or intend to come and study in IUT irrespective of gender, age, academic qualification or level of education to be pursued. Membership is completely restricted and proper verifications are always done to ensure that members who sign up are genuine and authentic. The registrar's office will always be consulted for authentic identification of members, and also the IUT Alumni portal is regularly crosschecked to confirm the student's acceptance as a certificate holder from IUT.

2.3 Advantages of the New Website

- i. It is easy, flexible and very user-friendly
- ii. It is not labor intensive or physically demanding and therefore considerably reduces the time and cost to meet any member anywhere and at anytime.
- iii. It makes it easy for members to find their seniors, batch mates and juniors based on their current profession thanks to our rich and dynamic search engine.
- iv. Its many social and interactive features help users to always share their information and stay connected in an increasingly hectic professional world where people hardly get time for physical contacts or meetings.

- v. It facilitates the dissemination of important information to future applicants of IUT through the announcements of scholarship and admission offered by OIC in IUT to Cameroonian students.
- vi. It promotes social welfare and community development through a sustained solidarity fund among the members which will be pursued as part of the online gathering.

2.4 How the current System works

The existing means of online interaction between former and present Cameroonian students is both primitive and outmoded. The Cameroonian Students Community of IUT have until now used the Yahoo Group in a bid to stay together. New members had to send membership applications through e-mail to a centralized administrator based in faraway Europe and wait for his approval/rejection in days or even weeks later. This process is not only obsolete nowadays but also time-consuming and very limited both in content and scope. Members wanting to share information to their fellows do so via an e-mail that is broadcasted to everyone connected to the Group. Subsequent comments and reactions from participants are equally sent via e-mail to everyone. The administrator has the privilege to block any unauthenticated member or unidentified user. E-mails to be broadcasted can as well be filtered either by the sender who may choose to send his message to a particular individual in the Group or to a group of people within the Group.

This way of doing things is clearly out of fashion in light of what is happening in today's rapidly revolutionized social networking sphere.

2.5 Drawbacks of the Current System

There is no system free of faults so it is possible that each and every system has its own weakness and drawback and most probably, the weakness of a system is a point of consideration and where the need of new system starts, takes root and develops then.

The current system is not well organized, it is very ad hoc and nobody is assigned nor designated to properly manage the system.

The information about the CSCIUT is not effectively maintained and the quality of the work done in administering the Group is not up to required level of efficiency.

Besides, the existing system is so rudimentary and does not provide even the most basic of social amenities which most social networking sites provide nowadays. For example; no interactive and direct way of sharing photos as is the case with Facebook ^[8], MySpace ^[9], and Hi5 ^[10] etc.

Also the current system lacks ubiquity by virtue of its presence on an e-mail service provider (YAHOO), this implies that vital announcements and information destined for the public in general and prospective applicants to IUT in particular are not properly disseminated.

Chapter 3: Feasibility Study Overview

3.1 Feasibility Study in Brief

A feasibility study is defined as an evaluation of an existing system and a way of selecting the best system that meets performance requirements ^[5]. This entails identification, description, evaluation of candidate systems and selection of the best system for the job. The feasibility study is conducted once the problem is clearly understood. It is a high level capsule version of the entire system analysis and design process. The core objective of feasibility study is to determine whether the proposed system is feasible or not and it helps to minimize the expense of how to solve the problem and to determine, if the problem is worth solving.

The feasibility of the proposed system can be determined if the following are accomplished in different phases.

- i. To maintain real time social networking so that current information concerning the community is readily available at all time and everywhere.
- ii. To create an efficient and effective backup system so that important information is never lost.
- iii. To maintain a computerized database for computer peripherals.

In practical terms, while doing feasibility study, there are a number of tests that are to be performed as part of caution, better determination of favorable features and assurance of accuracy of the proposed system.

The following is a summary of the different feasibilities carried out in developing the website:

- i. Technical feasibility
- ii. Economic feasibility
- iii. Operational feasibility

3.2 Technical Feasibility

In the technical feasibility study, we had to test whether the proposed system can be developed using existing technologies or not. It is planned to implement the proposed system JSP.

The project entitled E-community: The case study of the Cameroonian students' community in IUT is technically feasible because of the following reasons:

- i. All the necessary enabling technologies exist to develop the system.
- ii. Existing system is so flexible that it can be easily developed and modified.
- iii. System requirements, both hardware and software is readily available and affordable by the members of the community.

3.3 Economic Feasibility

Launching a website for a community involves a great deal of financial issues which needs to be considered and given proper considerations. Many systems fail to reach their destination due to lack of proper budgeting and utilization of resources ^[5]. A community should only adopt a new system if the cost benefit analysis gives out a positive response even though the initial expenditure might look greater.

In short, the project is economically feasible only if tangible and intangible benefits overweigh the cost and we can say the proposed system is feasible based on the following conclusions:

- i. The cost of developing the full system is reasonable and within the reach of all the members put together.
- ii. The cost of hardware and software for the application is very minimal.
- iii. System requirements, both hardware and software are easily available and economically sustainable in the short, medium and long term as well.

3.4 Operational Feasibility

In our CSCIUT website, we used MySQL database ^[3]. Much of the dynamic content in the website comes in real-time using the data fetched from a database. The specific information presented to a member at the member's panel or interface is created dynamically after the user has made a request. To accomplish this operational exigency, the following steps were taken:

- i. A large database rich in content is queried
- ii. Relevant data are extracted from the database
- iii. The extracted data are organized as a content object
- iv. The content objects are transmitted to the client environment for display

As a result we have designed the database to keep the efficiency and performance of the whole application at optimal levels.

Chapter 4: System Analysis

4.1 Information Gathering

Strategies we have followed to gather information include: ^[5].

4.1.1 Observation

We have visited a lot of social networking websites such as Facebook, MySpace, and Hi5 etc. to identify how they provide forum and community services to their users and also to identify the style of their implementation and how they display information. As better means of data collection and fact finding, we also visited the current system being used, i.e. the YAHOO GROUP named "CAMER-IUT".

4.1.2 Questionnaire

We have developed a set of questionnaire for the current system and prospective users of our developed system in order to get a clear idea about the user requirements and expectations and also to identify the problematic areas that are to be solved and the needs of the users that must be attended to.

Users and potential administrators of the website are asked to complete the formulated questionnaire about the current system when and where there is a need to effect a change to the existing or new system. The main strength of questionnaire is that it enabled us to collect a large amount of data from many users quickly without incurring travel expenses as everything was done through electronic feedback. The respondents to the questionnaire did not remain anonymous, and questionnaires are relatively inexpensive as a data collection technique and it also saved us a lot of time.

Some of the questions we asked members of CSCIUT include among others:

- i. What are some of the facilities you would like to find on our website?
- ii. How do you want your profile information to be displayed? Partially or fully?
- iii. What are some of the events and information you would like to be published on our website?

- iv. In what way would you like to interact with other members of the Alumni and the users of the Forum Portal?
- v. What are some of the difficulties you are facing when using the current system (Yahoo Group)?

4.1.3 Prospectus and Manuals.

We have collected the prospectus and manuals of the web portal from several online sources in general and social networking sites in particular. Our Alumni Portal for example is developed based on the model of the current IUT Alumni portal as available on its website.

Document review helped us to understand how the current system is supposed to work. System documentation is sometimes out of date. Forms can change or be discontinued, and documented procedures often are modified or eliminated. Usually document samples can be obtained during interviews with the people who perform that procedure.

4.2 Investigation of the Current System

System analysis is a detailed study of the various operations performed by a system and their relationships both within and outside of the system ^[5]. Here, analysis is done to understand the existing system, both in detail (such as what is done?) and in principle (such as why it is done?).

At this stage, investigation on the current system is done to record the information in a way that can be understood. During the required analysis, focus was on determining the user needs and requirements, studying the application area in depth, assessing the strengths and weaknesses of the present working method, and reporting results to management or administrators.

> Current System

This document outlines the current system in details and presents a graphical format beginning from the very top right to the bottom.

> Data flow diagram of current system

This document as the name implies has a detailed diagram of the flow of processes in the current system.

> Fact Finding

Fact finding refers to the survey of the existing system and analyzing the needs and discussions with the management on how to improve it.

> Final Proposal

This document contains the whole implementation procedure, description of the current system, basic problems and limitations, proposal of the new system, initial new system requirements, hardware and software requirements and the cost and benefit analysis.

Problems and Limitations

Problems and limitations outline the current system disadvantages, advantages and bottlenecks so that the issues can be addressed in the future systems.

> Requirement Specifications

Requirement specification specifies the requirements, which will be followed in the new system or upgraded from the existing system for the system to run properly and efficiently.

4.3 Input/output Process of the current System

The input/output process of the current system contains the following modules: [20].

- i. Member-search
- ii. Admin Sign-in
- iii. Member Sign-in
- iv. Forum Portal
- v. Alumni Portal

4.4 Data flow diagram of the current System

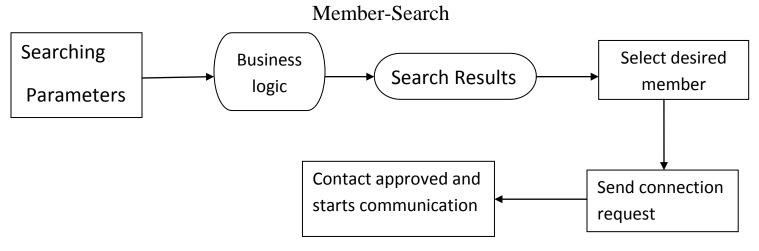
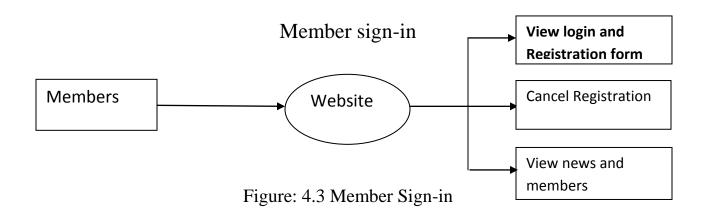


Figure: 4.1 Member-Searches

Admin Sign-in



Figure: 4.2 Admin Sign-in



Searching members and Information Forum Website

Figure: 4.4 Schedules

4.5 Requirement Analysis

Questionnaires provide a foundation to have live interaction with the users and develop a logical overview of the system. Questionnaires consist of questions with all the possible answers given as the possible options so that the users can response in the desired way the analyst wants the users to.

The main objective is to depict the performance of the system and sort out the information about the system components. In this project the following fields were identified in the questionnaire prepared for the users:

- Design of the system
- Operational method of the system
- Working dimension of the system
- Working capabilities
- Basic structure etc.
- Proposed System Analysis

Since the present existing system is very tedious and takes a lot time. This system is proposed for the work to be done in sophisticated manner instead of investing their strain and their valuable work time. Avoiding dependency is also one of the important issues in proposing this system.

- i. It provides facilities for easy searching of information about former students and gives full access to Alumni members and their full profile information
- ii. reduces some privileges to non-members of the community

iii. provides special privileges to the administrator of the database

4.6 Features of the new System

- **Centralization**: There should be a designated person who will manage the system and who will have the responsibility of keeping it updated and running smoothly. He should be given necessary authority, power, equipment and personnel to keep the system running. The management of the website should be handed over to this person or anyone he delegates it to, so that the website can be kept up to date on the latest information about the community.
- **Timely updates**: Members can inform their fellows about any changes in their contact details and other profile information and at the same time the executive management of the community will inform members of any new development or event or announcement concerning its members and this can be done via individual e-mail, mobile phone or through the community website itself.
- Accessibility of Information: Information about CSCIUT and its various activities as well as the position of all its members around the globe can be kept on the website where everyone can have access to it. Search functions are implemented so that the users can find the information they need quickly, thus the information about it can be easily updated and it is hoped that the public will get accurate information about the activities of our community.

Chapter 5: System Design and Implementation

5.1 Tools and Technologies Used

The tools and technologies used during the development and implementation of our website include: [2].

a) Programming Languages used:

- HTML [15]
- JavaScript [18]
- J-Query [19]
- PHP ^[14]
- CSS [17]
- PL/SQL [16]

b) Software tools Used:

- Adobe Dreamweaver CS5 [7]
- Windows 7 Internet Information Services (IIS) Server [4]
- PHP Processor [2]
- MySQL Database [1]
- Mozilla Firefox 14
- Photoshop

c) Platform Used:

• Windows 7

d) Other tools used:

- Graphic Interchange Format (GIF) [12]
- Virtual Studio [12]
- Photo animation gallery [12]

5.2 Home Page of CSCIUT Website



Figure 5.2.1: Main Home Page with all the modules implemented



Figure 5.2.2: Home Page with Submenu of a module

5.3 Website Gallery: [21]

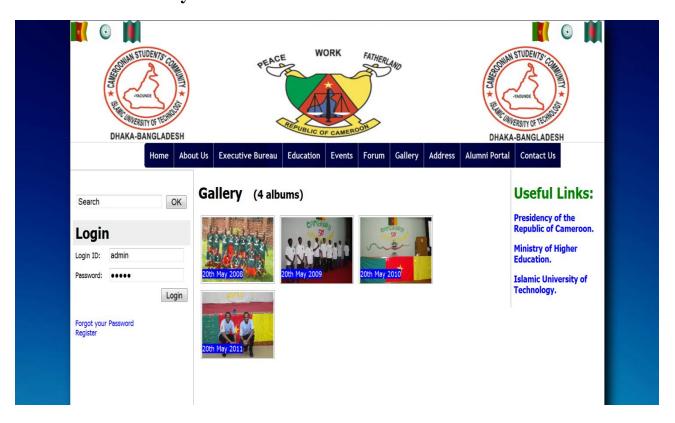


Figure 5.3.1: All albums in the Gallery

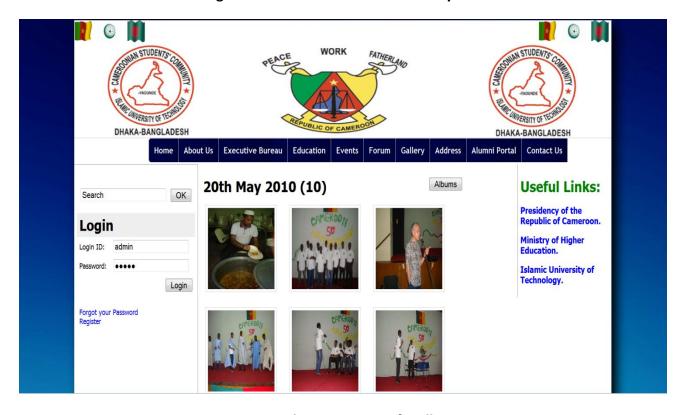
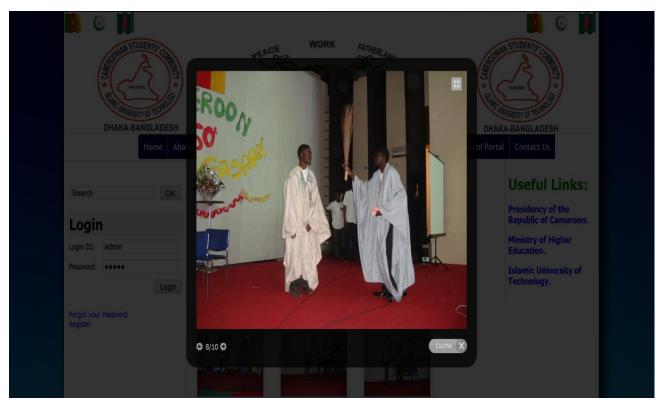


Figure 5.3.2: Photos in a Specific Album

5.4 Photo View [21]



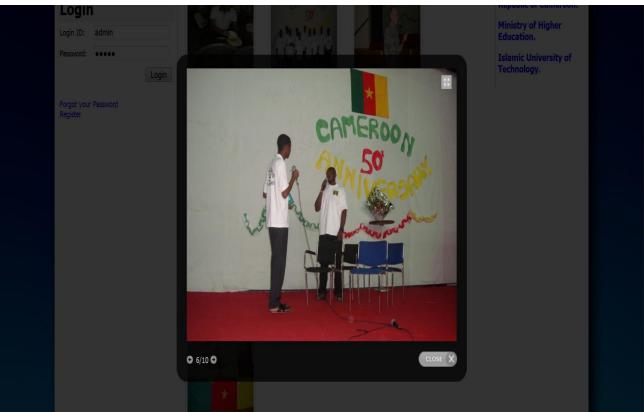


Figure 5.4: Photo Displayed in the Gallery

5.5 Alumni Home Page: [13]

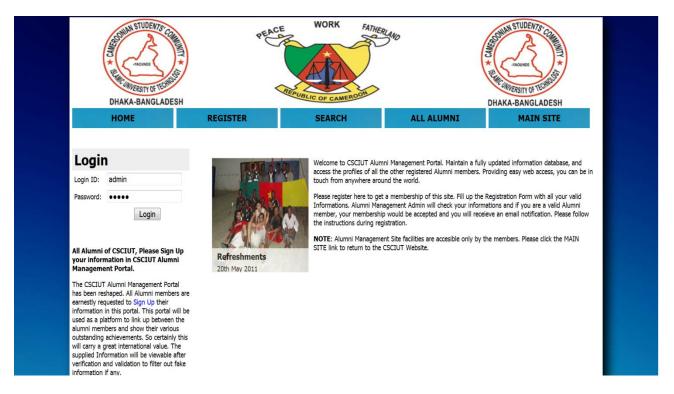


Figure 5.5: Alumni Home Page with all the modules implemented

5.6 Alumni Registration Form [9]



Figure 5.6: Mandatory fields of the alumni Registration Form

5.7 Alumni Registration Process Details [8]

	Residence Ad	ldress			Business Addr	ress	
	Address * :				Address :		
	City *:				City:		
	Country *:	Select a count	ry •		Country:	Select a country	
	Mobile Phone *:				Mobile Phone :		
	Land Phone:				Land Phone :		
	Email * :				Email :		
	IUT Informat	ion					
	Student ID *						
	Passing Year		Year	·			
	Departement		Depart	•			
	Program * :		Program	·			
l							
	Current Statu	S					
	Present Occu	pation * :	Student	Employee			
	Program :						
	Department :						
	University :						
	Country:*	Sel	ect a country	•			
	Website :	http:					
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Пир					
	Previous Expe		ition				
	Job experience 1			1	Education 1		
	Designation :				Program :		
	Organization :				University :		
		I currently work he	ere .				
				to	Year of Completion		
		Day Month Day Month	Year Year				

Figure 5.7.1: All the fields to be filled during Alumni Registration Process

Current Status		
Present Occupation ★: Student ● Employe	yee	
Designation :		
Organization :		
Organization Type :		
Salary Level : Below Average		
City:		
Country: * Select a country		
Website : http://		
Previous Experience/Education		
Job experience 1	1 Education 1	
Designation :	Program :	
Organization:	University :	
Length of time : I currently work here	Vac of Completion	
	Year of Completion :	
Previous Experience/Education		
Job experience 1	1 Education 1	
Designation :	Program :	
	110glaiii.	
Organization :	University:	
Length of time : $\ensuremath{\overline{\vee}}$ I currently work here	Year of Completion :	
Day Month Year to		
present.		
	2	
Job experience 2	Education 2	
Designation :	Program :	
Organization :	University:	
Length of time : I currently work here	Year of Completion :	
Day Month Year to		
Close this	is	
Submit	Reset	

Figure 5.7.2: Optional fields to be filled during the Alumni Registration Process

5.8 Alumni Search

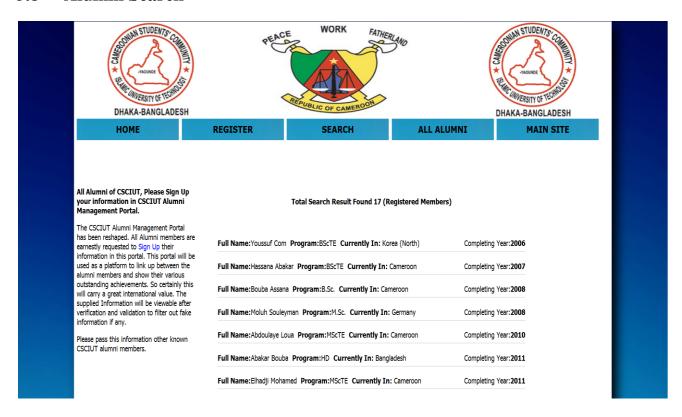


Figure 5.8.1: Display of all Alumni Search Result

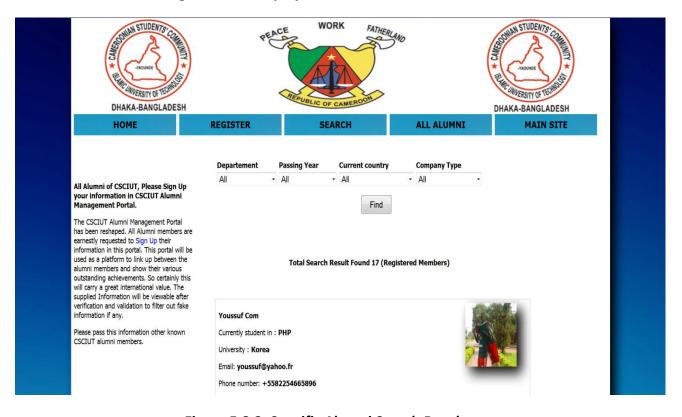


Figure 5.8.2: Specific Alumni Search Result

5.9 Alumni Detail Information

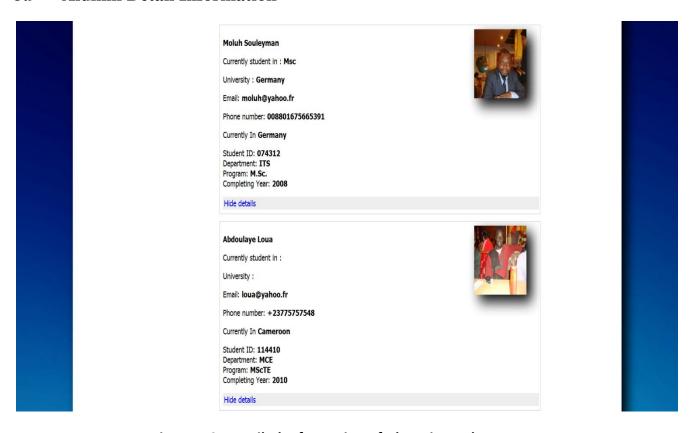


Figure 5.9: Detailed Information of Alumni members

5.10 Contact us Form

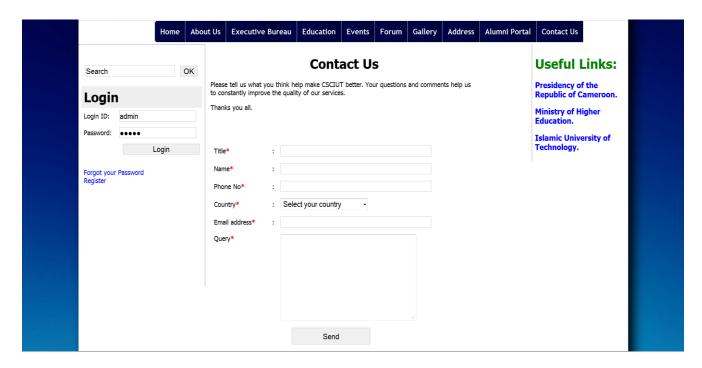


Figure 5.10: Mandatory fields to be filled when contacting us via the Admin of the Website

5.11 2011-2012 Executive Bureau

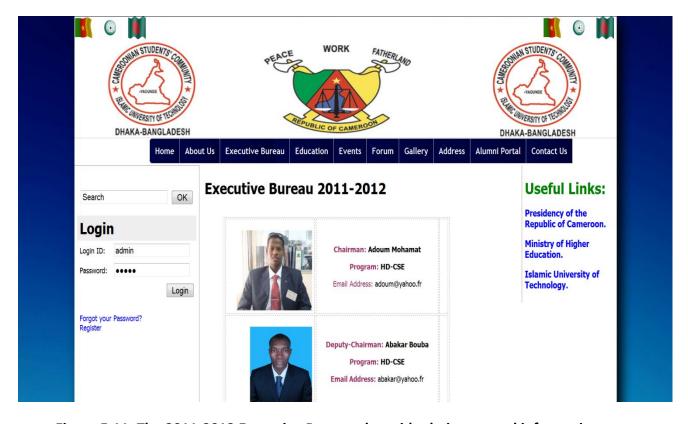


Figure 5.11: The 2011-2012 Executive Bureau alongside their personal information

5.12 Frequently Asked Questions



Figure 5.12: When any of the Questions is clicked, the answer is displayed just below it

5.13 Forum Registration Form [10]

				9 0 1	
THE DHAKA-BANGLADESH	PEA	REPUBLIC OF CAMEROON		THE CHARGE OF THE STATE OF THE	
Home About Us	Executive Bureau	Education Events Forum	Gallery Addre	ess Alumni Portal Contact Us	
10000000		Personal information			
Search	Full Name:		*		
Login	Sex:	Sex *			
Login ID: admin	Date of Birth :	Day - Month - Year -			
Password: Login	Citizen of :	Select your country *			
Forgot your Password Register	Marital Status :	Marital •			
Search OK		Personal information			
	Full Name:		*		
Login	Sex:	Sex ▼ *			
Login ID: admin Password: •••••	Date of Birth :	Day - Month - Year -			
Login	Citizen of :	Select your country • *			
Forgot your Password	Marital Status :	Marital •			
Register		Contact Details			
	Address:				
			± *		
	Country:	Select your country *			
	City: Phone No:		*		
	Phone No: Cell No:				
	Email :		*		
		Submit			

Figure 5.13: Mandatory fields to be filled when registering for the Forum Portal

5.14 Forum Home Page

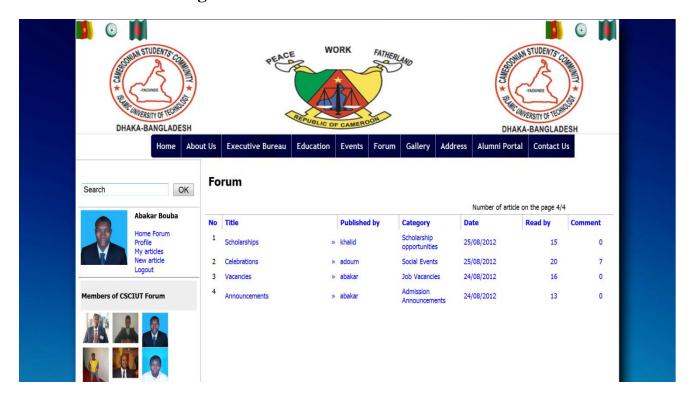


Figure 5.14.1: A member signed in to the Forum Portal. All available articles are displayed. A user can view and edit his profile information.

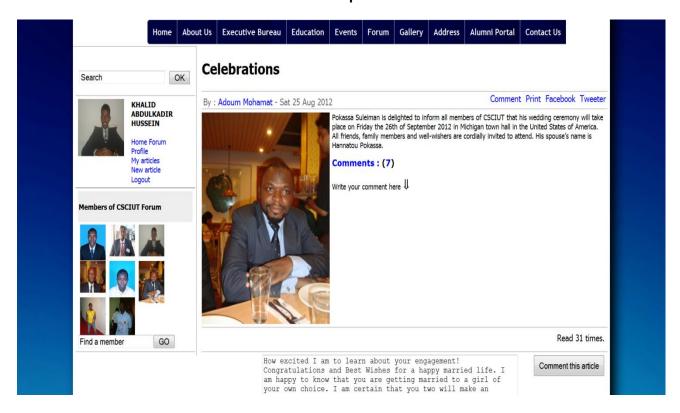


Figure 5.14.2: A member can view and comment on articles posted by the Admin in the Forum



Figure 5.14.3: All the comments posted on a particular article are available to all users to read and comment further.

5.15 Main Website Search Engine

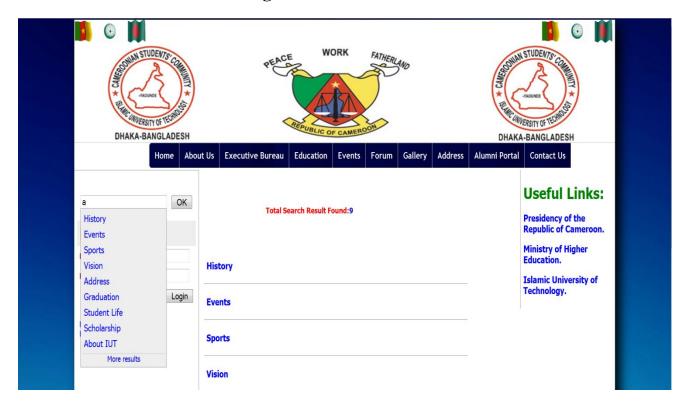


Figure 5.15: Search contents are displayed automatically whenever a user starts typing the desired keyword.

5.16 Administrator's Home Page

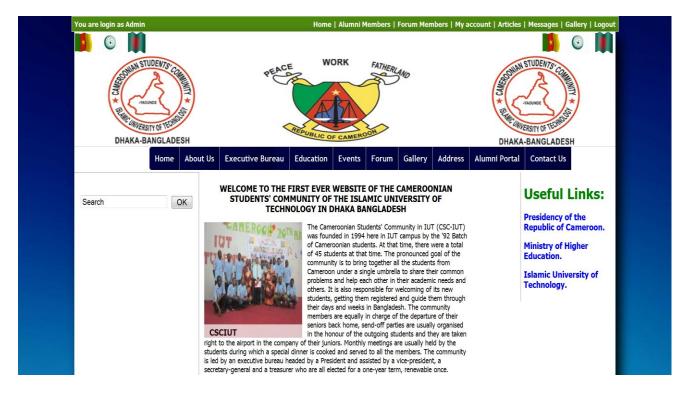


Figure 5.16: Admin Home Page with all the privileges he has over the implemented modules

5.17 Administrator's Alumni Privileges

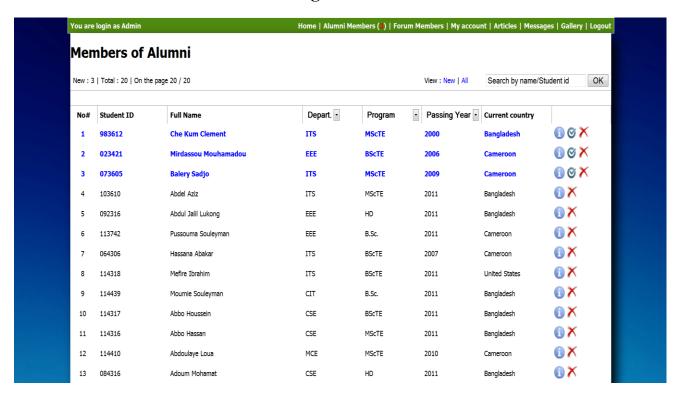


Figure 5.17.1: Records in Blue indicate new members who are not yet approved by the Admin.

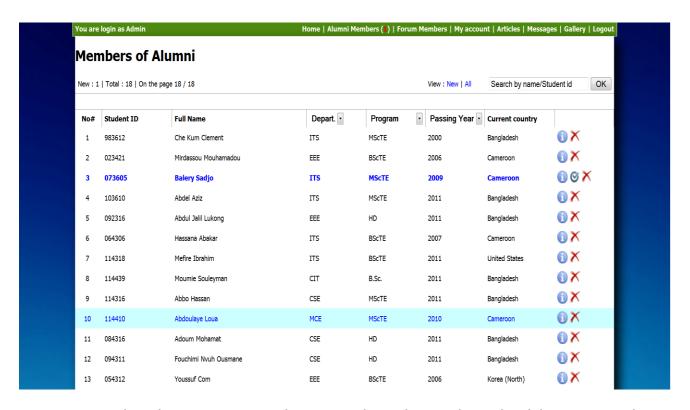


Figure 5.17.2: The Admin approves newly registered members and can also delete registered members

5.18 Administrator's Gallery Privileges

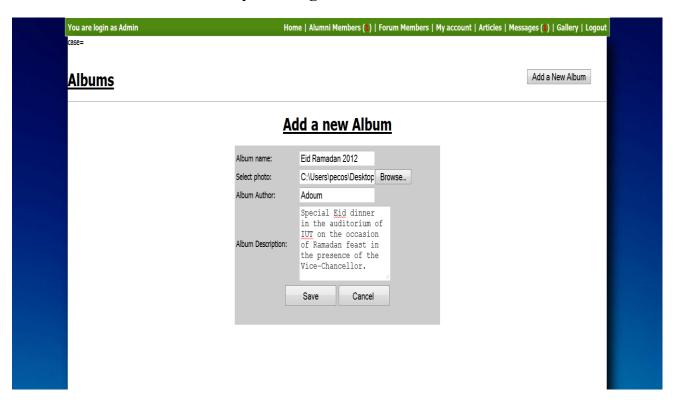


Figure 5.18.1: Administrator can add new Album into the Gallery

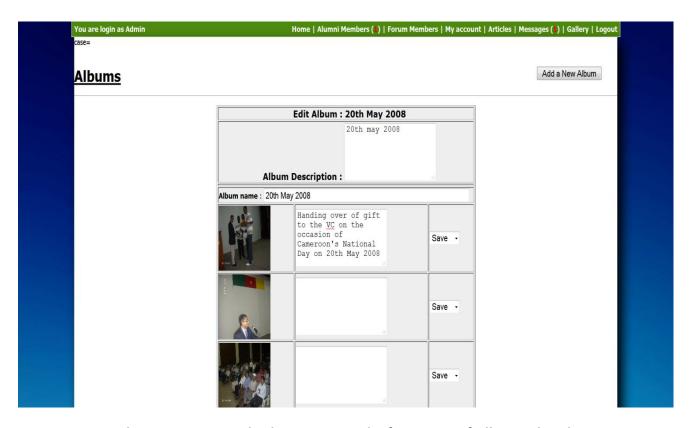


Figure 5.18.2: Administrator can edit the content and information of Albums already existing.

5.19 Administrator's Message Privileges

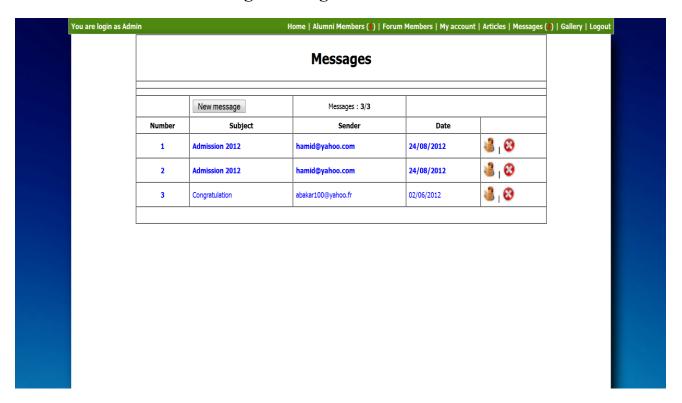


Figure 5.19.1: Admin can view, read or delete messages sent by users and members



Figure 5.19.2: Admin can reply to messages sent by members and users via the contact us form

5.20 Administrator's Article Privileges



Figure 5.20.1: Admin can post new articles for members to read and comment

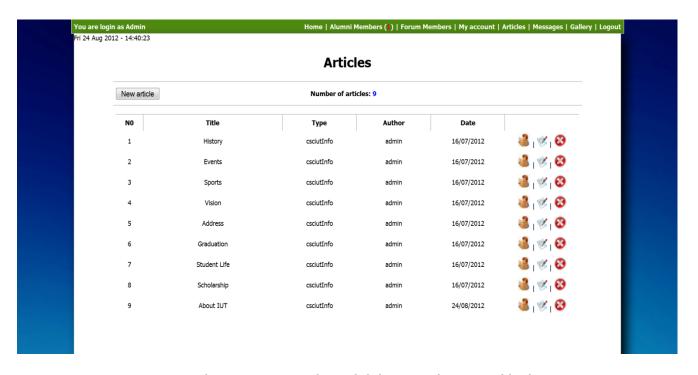


Figure 5.20.2: Admin can view, edit and delete articles posted by him.

5.21 Administrator's Forum Privileges

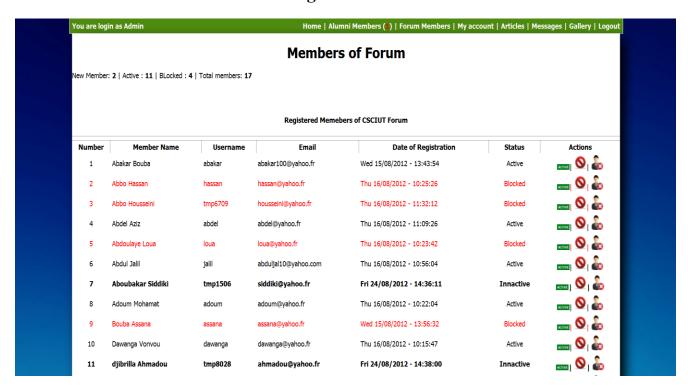


Figure 5.21.1: Admin can activate, block and delete members from the Forum portal. Records in Red indicate members who are blocked, records in Black indicate members who are already active (already activated by the Admin) while those in Bold indicate newly registered members who are not yet activated by the Admin.



Figure 5.21.2: Administrator adding a new article in the Forum Portal. He has the exclusive privilege

5.22 General View of the Database

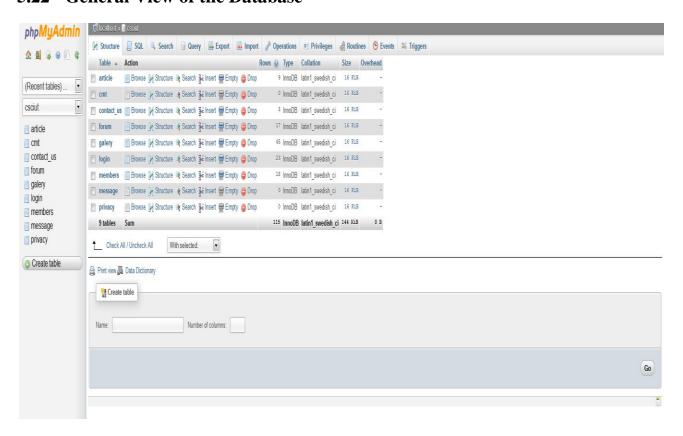


Figure 5.22: Database showing all the tables created.

5.23 Tables Created in the Database [3]

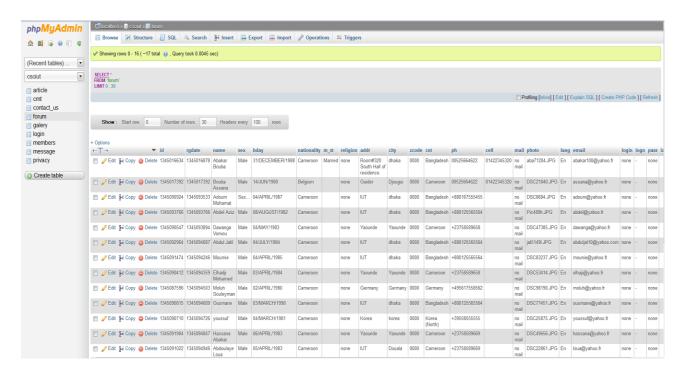


Figure 5.23.1: Forum_Member table showing all the fields created

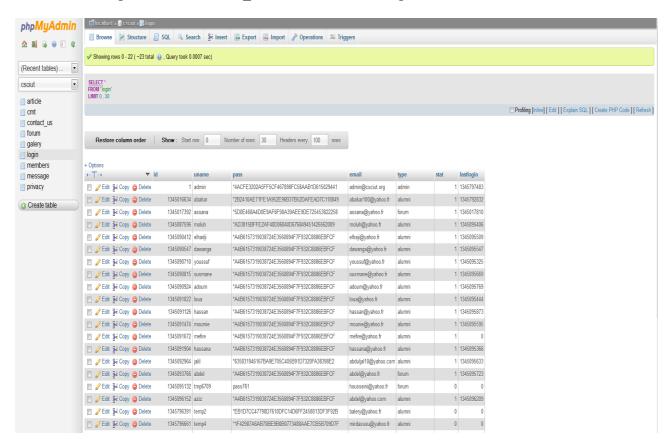


Figure 5.23.2: Login table showing all the fields created

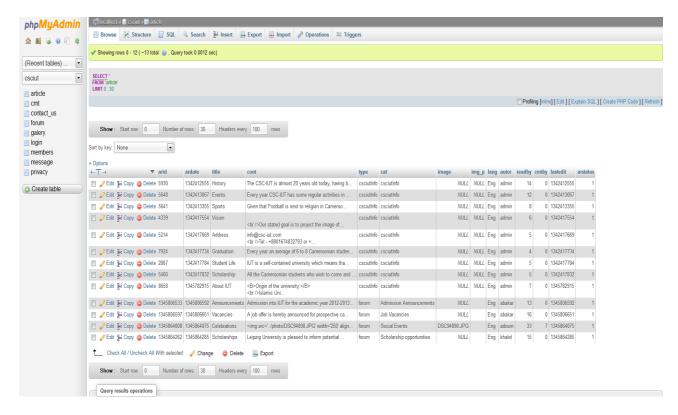


Figure 5.23.3: Article table showing all the fields created

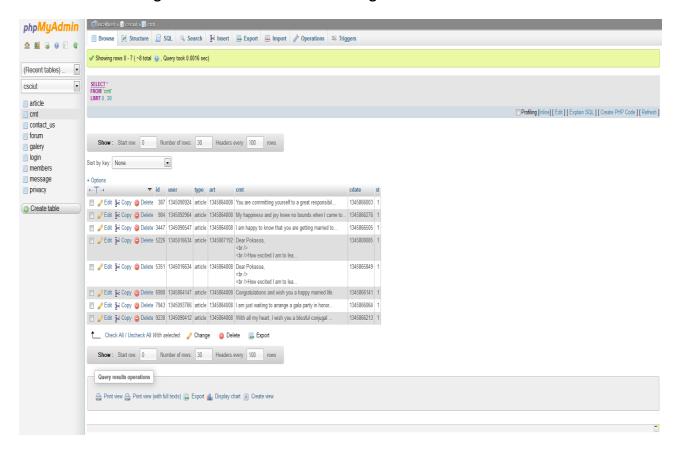


Figure 5.23.4: Comment table showing all the fields created

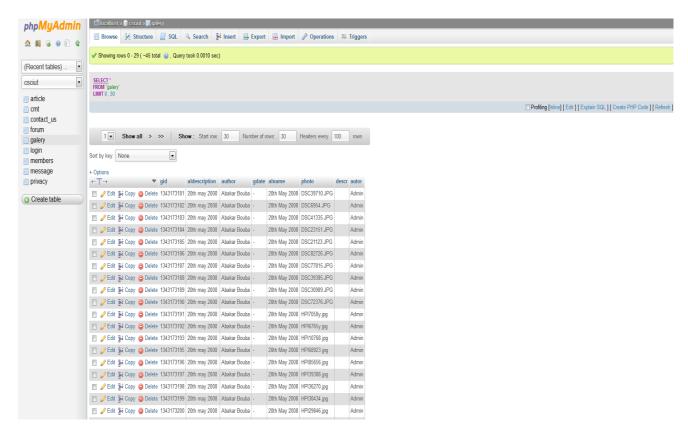


Figure 5.23.5: Gallery table showing all the fields created

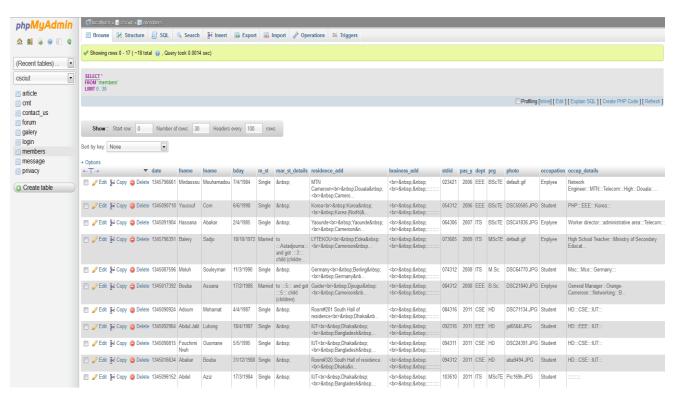


Figure 5.23.6: Alumni_Member table showing all the fields created

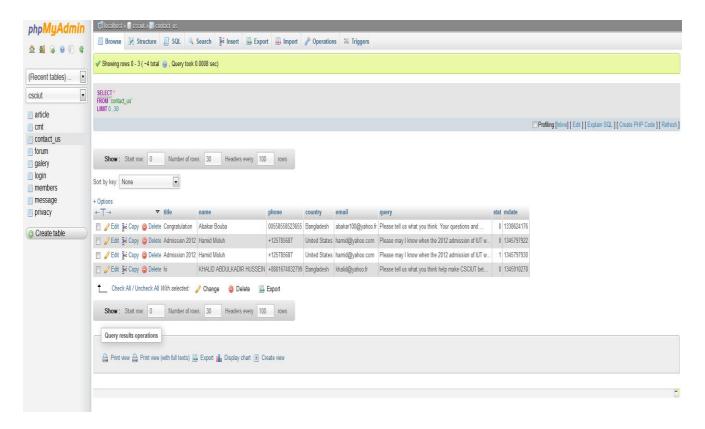


Figure 5.23.7: Contact_Us table showing all the fields created

5.24 Problems Faced During System Implementation

The problems we faced while implementing the project started right from the design of the architecture of the website itself. These include among others:

- Issues related to the choice of our logo, its design and creation, the background color and the frame to use were among some of the most difficult problems we faced.
- Then came the problem of coding where we faced numerous syntax errors related to the various programming languages we used.
- Integrating the different modules of the website also turned out to be a very challenging task during our work.
- We also faced some compatibility problems when we tried to implement the J-Query with some photos having the GIF format.
- Moreover, we had some difficulties configuring the Internet Information Service (IIS) Server on Windows 7 Platform as it was our first time to use it.
- Complexities and difficulties related to prototyping, gathering of user requirements and adjusting the website according to their changing needs.

Chapter 6: System Testing

6.1 System Strategy and Plan

Testing is the debugging of the program codes of a candidate system, it is one of the most critical aspects of computer programming, without a program that works and runs properly and efficiently, the system would never produce an output for which it is designed and implemented.

Testing is best performed when users are asked to assist in identifying all errors and bugs. The sample data are used for testing. It is not the quantity but quality of the data used that matters most in testing. Testing of our website was aimed at ensuring that it was accurately and efficiently functioning before the beginning of live operation commands.

6.2 Code Testing

This examines the logic of the program and its code implementation. It also tests the efficiency of the different algorithms implemented in the project ^[6]. Execution time and space required were the two main factors being tested here. For example, the logic for updating various sample data and with the sample files and directories were tested and verified accordingly.

Also we tested the Database connection code written in PHP for compatibility with the IIS Server on Windows 7 Platform and we found it to be operational and functionally compatible.

6.3 Specification Testing

Carrying out the specification testing means specifying what the program should do and how it should perform under various conditions and then verifies all these specifications as per the algorithms implemented in the programs ^[6]. Accordingly, test cases for various scenarios and combination of conditions in all the modules are tested and found to be satisfactorily functioning at optimum levels.

For example, the code segment used in implementing the uploading of photos and articles has been optimized so that it performs within a minimum amount of time.

6.4 Unit Testing

In unit testing we test each module individually and integrate it with the overall system ^[6]. Unit testing focuses on verification efforts of the smallest unit of the software design in the module. The module of the system is tested separately. This testing is carried out during the programming stage itself. In the testing step each module is found to work properly and at optimum level vis-à-vis the expected output from the module. There are some validation checks for fields also which have tested and verified.

For example the validation check is done for varying user input given by the user in order to verify the validity of the data entered and no validation errors were found in the system.

6.5 System Testing

Once the individual module testing was completed, all the different modules were assembled and integrated to perform as a system. We used the top-down testing approach for our website, where we began from the upper level module right to the lower level module. This approach was carried out to check whether the entire system is performing satisfactorily and was it was found to be so.

For instance, we have integrated the Admin module with all the other modules namely; Alumni, Forum, Gallery and the Main Home Page to test and verify whether the Admin effectively has exclusive privileges over them, and it was found exactly the same as implemented.

6.6 Correction Evidence

Data can be lost across an interface, one module can have an adverse effect on the other sub-functions or modules when combined and may not produce the desired or expected output. Correction action is the systematic testing for constructing the undiscovered errors within the system's interface. This testing technique was done with sufficient sample data. The developed system has run successfully with the sample data. The need for such an integrated test is to evaluate the overall system performance and prove the consistency and integrity of the website's functionality.

6.7 Output Testing

After performance of the validation testing, the next step is output testing. The output displayed or generated by the system under consideration is tested by asking the user about the format required by the system. The output format on the screen is found to be correct as format was designed in the system phase according to the user needs. Hence output testing does not result in any correction or modification of the system.

For example, users have uploaded their profile information and edited them as per their individual identities. They have all agreed with the format presented to them and are all satisfied with the overall view, layout, format and presentation of the website. Articles and photos have been viewed successfully as they have been posted by the Admin. This means that the system is maintaining an acceptable level of consistency and integrity.

Chapter 7: Evaluation and Conclusion

7.1 An Evaluation of the Project Objectives

Our community website is the first of its kind; it is a new system which has to be run to see whether it works efficiently and perfectly. After running if for a few days we are now sure that the new system's purpose is maintained. Software evaluation and selection can become an innovative issue by some measures and considerations. We are therefore satisfied with the way our new website is working and addressing our Group's needs in many ways. We are satisfied with the following objectives that have been achieved:

- The system contains various types of user-defined checking methods like data duplicity, integrity, and inconsistency.
- The system checks each and every inputted data by performing the above mentioned methods.
- The system is capable to show alert, confirmation, information messages to the user as per requirements.
- The system has an attractive, flexible and efficient interface.
- Now for the primary version we have designed the website efficiently, aesthetically appealing and given it all the flexibility it requires. We have emphasized on functions rather than just designing attractive interfaces.
- There are some messages sent to newly registered members in their respective e-mail accounts in the form of links to enable them confirm their membership status and register their details.
- As all the information is stored in the database, previous information can be generated by searching for key words in our website's search engine.
- Generating errors —the minimum error generated by a system is clearly defined by the system and our system also fulfils this criterion.
- Stimulation the experience of working in a team made us to perform better and have more enthusiasm to work even harder.
- Learning we all acquired new knowledge and insights from each other and this has helped us enormously in realizing our work on time and with no major hitches.

7.2 Evaluation by Real End Users

During the last decade, the use of an assortment of usability inspection methods has become prevalent as project schedule become shorter and budgets become tighter. In general, the expense and effort involved in testing the real end users has been viewed by the development community as impedance to software development.

To find out how well the new system works a questionnaire was created by us during the running and testing phases of the website development. The questionnaire has been designed in an easy way so that the participating users can answer them only by writing the points into the answer sheet. From the answers we would be able to judge if the proposed system has been up to the desired standard or there are still any functional lapses and lacunae in it.

Some of the questions we asked the real end users include among others:

- i. How do you assess the amenities provided by the website?
- ii. Do you find the modalities of accessing the website user-friendly enough?
- iii. Does the website satisfy all the needs and requirements you have initially specified?
- iv. What else do you think should be added to the website that has been previously omitted?
- v. Are the difficulties you faced when using the previous system (Yahoo Group) solved now?

So far, the evaluation by the real end users has attained a very satisfactory level after so many rounds of adjustments, modifications and improvements in the initial user requirements and interface design. The website has been rendered more user-friendly and dynamic in all its functional aspects.

7.3 Future Work

Future work is what we intend to do in future to improve on our website, make it more modern and integrate some of the most recent technologies that would have evolved by then. These future plans among others include:

- Use of Advanced security system: Security is a big issue in all online projects especially in social networking sites where privacy of individuals need to be kept confidential. We intend to use higher levels of security in future to keep private message secret and to protect the profile information of our members from theft.
- Greater user friendliness: As our forum is open to everyone especially prospective Cameroonian IUT applicants and also given that the website itself is expected to be used by a great number of people around the globe, it must be easily accessible, more flexible and very easy to use even by noncomputer literates.
- More powerful database system like Oracle will be used in future.

7.4 Conclusion

A website for the Cameroonian Students' Community in IUT has for the first time been developed fully, with all the requirements and functions that we intended to implement during this one semester work period.

Overall the project has been a great success, and has been able to achieve all its design and development goals.

We agree that more functionality can be added and the whole project can be improved further.

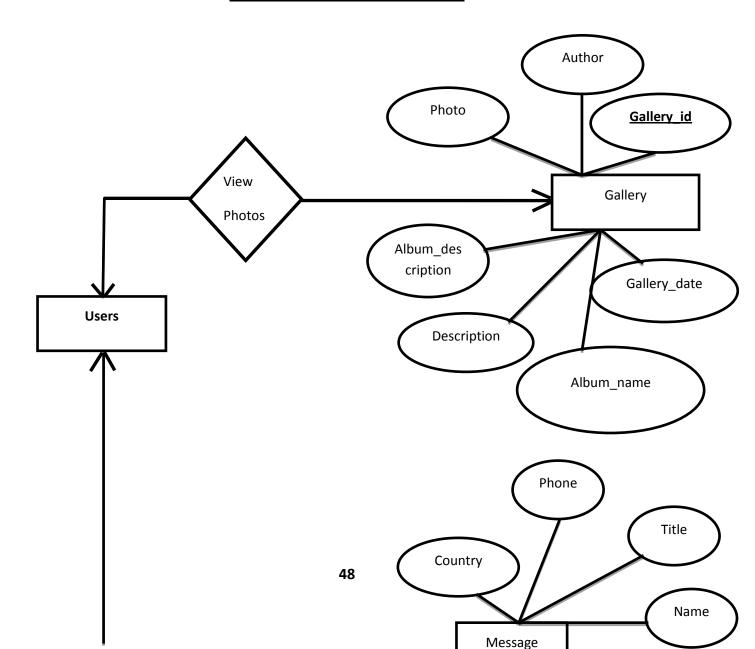
References:

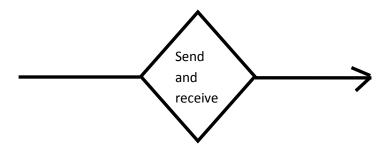
- [1] ΜψΣΘΛ Βιβλε βψ Τιμ Χονπερσε θοψχε ωιτη Χλαρκ Μοργαν. Πγ. 45 το 60.
- [2] Βεγιννινή ΠΗΠ5, Απαχηε, ΜψΣΘΛ Ωεβ Δεσελοπμεντ βψ: Μιχηαελ Γλασσ, Ψανν Λε Σχουαρνεχ, Ελιζαβετη Ναραμορε, Γαρψ Μαιλερ, θερεμψ Στολζ, θασον Γερνερ.
- [3] $M\psi\Sigma\Theta\Lambda$ Ω eb Development by Ω rof Π 2 Π , Π 7. 9, 25, 36, 49.
- [4] Ωινδοωσ Ηελπ ανδ Συππορτ: Ιντερνετ Ινφορματιον Σερσιχεσ (ΙΙΣ) 7.5; ΦΑΘ σ.
- [5] Σψστεμ Αναλψσισ ανδ Δεσιγν βψ Ελιασ Μ. Αωαδ, Πγ. 8 το 66.
- [6] Σοφτωαρε Ενγινεερινγ: Α Πραχτιτιονερσ Αππροαχη, $6^{\tau\eta}$ Εδιτιον βψ Πρεσσμαν, Πγ. 55 το 79.
- [7] Δρεαμωεαπερ Τυτοριαλό φρομ <u>ηττπ://ωωω.εντηεοσωεβ.χομ/δρεαμωεαπερ/,</u> Απριλ 2012.
- [8] Φαχεβοοκ Ωεβσιτε φρομ ηττπ://ωωω.φαχεβοοκ.χομ/προφιλε/εδιτ/, θυνε 201 2.
- [9] ΜψΣπαχε Ωεβσιτε φρομ ηττπ://ωωω.μψσπαχε.χομ/ηομε/, θυνε 2012.
- [10] Hi5 Website from $\frac{\eta \tau \tau \pi: //\omega \omega \omega. \eta \iota 5. \chi \omega \mu / \mu \alpha \iota \nu}{2012}$, June 2012.
- [11] Ωικιπεδια Ωεβσιτε φρομ ηττπ://εν.ωικιπεδια.οργ/ωικι/Ε-χομμυνιτψ, Αυγυστ 2012.
- [12] Γοογλε ρεσουρχεσ ον Γοογλε σεαρχη ενγινε ατ ηττπσ://ωωω.γοογλε.χομ/, Α υγυστ 2012.
- [13] Ισλαμιχ Υνισερσιτψ Οφ Τεχηνολογψ ωεβσιτε (IYT) Αλυμνι Πορταλ ον ηττ π://ωωω.ιυτοιχ-δηακα.εδυ/Αλυμνι/, θυλψ 2012.
- [14] ΠΗΠ (Ηψπερτεξτ Προχεσσορ) Τυτοριαλσ ον ηττπ://ωωω.ω3σχηοολσ.χομ/π ηπ/ , Απριλ–Μαψ 2012.
- [16] Structured Query Language (SQL) http://www.w3schools.com/sql/ , Jun e-July 2012.
- [17] $X\alpha\sigma\chi\alpha\delta$ ing Style Sheets ($X\Sigma\Sigma$) Tutorial on $\underline{\eta\tau\tau\pi://\omega\omega\omega.\omega3\sigma\chi\etaools.\chio\mu/\chi}$ $\underline{\sigma\sigma/}$, April-9une 2012.

- [18] θα ω α Σχριπτ Τυτοριαλσ ον <u>ηττπ://ωωω.ω3σχηοολσ.χομ/φσ/</u>, Απριλ-θυλψ 2012.
- [19] θ-Θυερψ Τυτοριαλσ ον <u>ηττπ://ωωω.ω3σχηοολσ.χομ/φθυερψ/</u> , θυνε-Αυγυσ τ 2012.
- [20] Ασσοχιατιον φορ τηε Δεσελοπμεντ οφΝορτηερν Χαμεροον (ΑΔΧΣ) Ωεβσιτε ηττπ://αδχσγερμανψ.οργ/φορυμ/?ωελχομε&ρ8=3#ηομε, Απριλ-θυλψ 2012.
- [21] Ασσοχιατιον φορ τηε Δεπελοπμεντ οφΝορτηερν Χαμεροον (ΑΔΧΣ) Ωεβσιτε ηττπ://αδχσγερμανψ.οργ/?ρεφ=γαλερψ&ρ8=4#ηομε, Απριλ-θυλψ 2012.

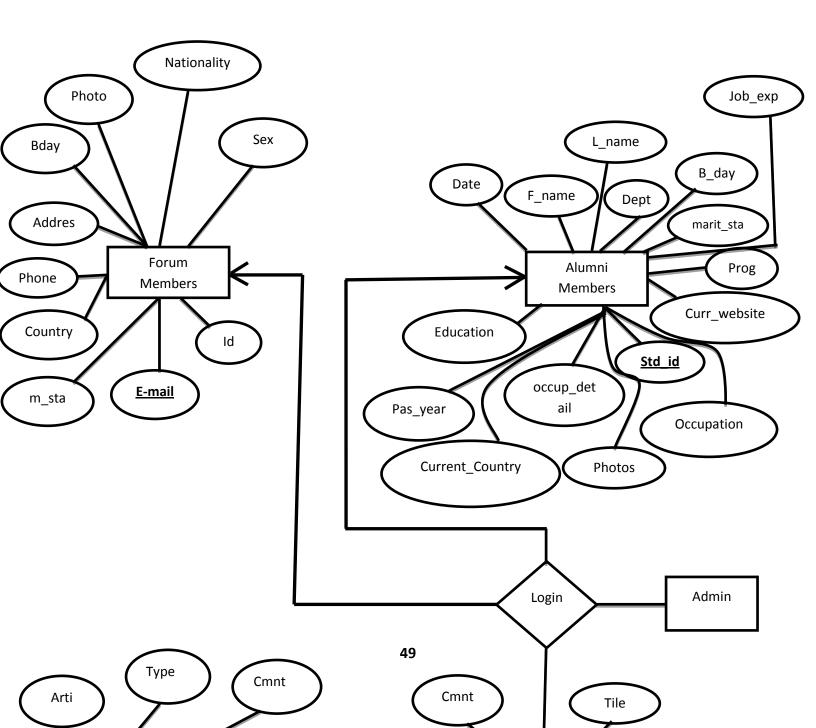
Appendix A: Entity-Relationship Diagrams

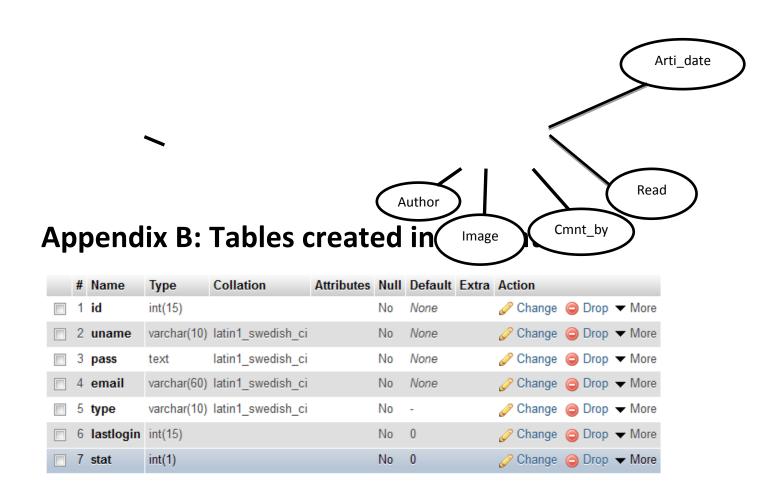
Entity-Relationship (E-R) Diagram Depicting the Relationship Existing Between USERS, GALLERY and MESSAGE





E-R Diagram showing the relationship between the Admin and the various modules





Login Table

#	Name	Туре	Collation	Attributes	Null	Default	Extra	Action		
1	gid	int(5)			No	None		Change	Drop	▼ More
2	aldescription	varchar(100)	latin1_swedish_ci		No	-		Change	Drop	▼ More
3	author	varchar(25)	latin1_swedish_ci		No	-		Change	Drop	▼ More
4	gdate	varchar(15)	latin1_swedish_ci		No	-		Change	Drop	▼ More
5	alname	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
6	photo	varchar(15)	latin1_swedish_ci		No	None		Change	Drop	▼ More
7	descr	varchar(120)	latin1_swedish_ci		No	-		Change	Drop	▼ More
8	autor	varchar(20)	latin1_swedish_ci		No	None		Change	Drop	▼ More

Gallery Table

#	Name	Туре	Collation	Attributes	Null	Default	Extra	Action		
1	title	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
2	name	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
3	phone	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
4	country	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
5	email	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
6	query	varchar(1000)	latin1_swedish_ci		No	None		Change	Drop	▼ More
7	stat	int(11)			No	1		Change	Drop	▼ More
8	<u>mdate</u>	int(15)			No	None		Change	Drop	▼ More

Contact_Us Table

#	Name	Туре	Collation	Attributes	Null	Default	Extra	Action		
1	<u>id</u>	int(5)			No	None		Change	Drop	▼ More
2	user	int(5)			No	None		Change	Drop	▼ More
3	type	varchar(10)	latin1_swedish_ci		No	None		Change	Drop	▼ More
4	art	varchar(15)	latin1_swedish_ci		No	None		Change	Drop	▼ More
5	cmt	text	latin1_swedish_ci		No	None		Change	Drop	▼ More
6	cdate	varchar(15)	latin1_swedish_ci		No	None		Change	Drop	▼ More
7	st	int(1)			No	1		Change	Drop	▼ More

Comment Table

#	Name	Туре	Collation	Attributes	Null	Default	Extra	Action		
1	arid	varchar(15)	latin1_swedish_ci		No	None		Change	Drop	▼ More
2	<u>ardate</u>	int(15)			No	None		Change	Drop	▼ More
3	title	varchar(140)	latin1_swedish_ci		No	None		Change	Drop	▼ More
4	cont	text	latin1_swedish_ci		No	None		Change	Drop	▼ More
5	type	varchar(10)	latin1_swedish_ci		No	None		Change	Drop	▼ More
6	cat	varchar(100)	latin1_swedish_ci		No	csciutInfo		Change	Drop	▼ More
7	image	varchar(15)	latin1_swedish_ci		Yes	NULL		Change	Drop	▼ More
8	img_p	varchar(10)	latin1_swedish_ci		Yes	NULL		Change	Drop	▼ More
9	lang	varchar(3)	latin1_swedish_ci		No	Eng		Change	Drop	▼ More
10	autor	varchar(25)	latin1_swedish_ci		No	None		Change	Drop	▼ More
11	readby	int(3)			No	0		Change	Drop	▼ More
12	cmtby	int(5)			No	0		Change	Drop	▼ More
13	lastedit	int(15)			No	0		Change	Drop	▼ More
14	arstatus	int(1)			No	0		Change	Drop	▼ More

Article Table

#	Name	Туре	Collation	Attributes	Null	Default E	xtra	Action		
1	date	int(15)			No	None		Change	Drop	▼ More
2	fname	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
3	Iname	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
4	bday	varchar(60)	latin1_swedish_ci		No	None		Change	Drop	▼ More
5	m_st	varchar(10)	latin1_swedish_ci		No	None		Change	Drop	▼ More
6	mar_st_details	varchar(150)	latin1_swedish_ci		No			Change	Drop	▼ More
7	residence_add	text	latin1_swedish_ci		No	None		Change	Drop	▼ More
8	business_add	text	latin1_swedish_ci		No	None		Change	Drop	▼ More
9	<u>stdid</u>	varchar(6)	latin1_swedish_ci		No	None		Change	Drop	▼ More
10	pas_y	int(4)			No	None		Change	Drop	▼ More
11	dept	varchar(10)	latin1_swedish_ci		No	None		Change	Drop	▼ More
12	prg	varchar(10)	latin1_swedish_ci		No	None		Change	Drop	▼ More
13	photo	varchar(15)	latin1_swedish_ci		No	default.gif		Change	Drop	▼ More
14	occupation	varchar(10)	latin1_swedish_ci		No	None		Change	Drop	▼ More
15	occup_details	text	latin1_swedish_ci		No	None		Change	Drop	▼ More
16	c_country	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
17	c_website	varchar(100)	latin1_swedish_ci		No	None		Change	Drop	▼ More
18	job_ex	text	latin1_swedish_ci		No	None		Change	Drop	▼ More
19	education	text	latin1_swedish_ci		No	None		Change	Drop	▼ More
20	st	int(1)			No	0		Change	Drop	▼ More

Alumni Table

#	Name	Туре	Collation	Attributes	Null	Default	Extra	Action		
1	id	int(15)			No	None		Change	Drop	▼ More
2	rgdate	int(15)			No	None		Change	Drop	▼ More
3	name	varchar(80)	latin1_swedish_ci		No	None		Change	Drop	▼ More
4	sex	varchar(15)	latin1_swedish_ci		No	None		Change	Drop	→ More
5	bday	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	→ More
6	nationality	varchar(40)	latin1_swedish_ci		No	None		Change	Drop	▼ More
7	m_st	varchar(15)	latin1_swedish_ci		No	None		Change	Drop	→ More
8	religion	varchar(15)	latin1_swedish_ci		No	none		Change	Drop	▼ More
9	addr	varchar(100)	latin1_swedish_ci		No	None		Change	Drop	▼ More
10	city	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
11	zcode	varchar(10)	latin1_swedish_ci		No	0000		Change	Drop	▼ More
12	cnt	varchar(40)	latin1_swedish_ci		No	None		Change	Drop	▼ More
13	ph	varchar(20)	latin1_swedish_ci		No	None		Change	Drop	▼ More
14	cell	varchar(20)	latin1_swedish_ci		No	None		Change	Drop	▼ More
15	mail	varchar(50)	latin1_swedish_ci		No	no mail		Change	Drop	▼ More
16	photo	varchar(20)	latin1_swedish_ci		No	default.gif		Change	Drop	▼ More
17	lang	varchar(2)	latin1_swedish_ci		No	En		Change	Drop	▼ More
18	email	varchar(50)	latin1_swedish_ci		No	None		Change	Drop	▼ More
19	login	varchar(15)	latin1_swedish_ci		No	none		Change	Drop	▼ More
20	logn	varchar(25)	latin1_swedish_ci		No	-		Change	Drop	▼ More
21	pass	varchar(15)	latin1_swedish_ci		No	none		Change	Drop	▼ More
22	lastlogin	int(15)			No	0		Change	Drop	▼ More
23	st	int(1)			No	0		Change	Drop	▼ More

Forum Table

Appendix C: Definition of the Terms Used

- ➤ <u>Admin:</u> The only authorized person who takes care of the overall management of the website, approves members, blocks users, upload photos and articles as per the request of approved members.
- ➤ <u>Member:</u> Any person duly approved as belonging to the Cameroonian Students' Community of IUT after proper verification. A member can view photos and articles as well as comment on them.
- ➤ <u>User:</u> Any ordinary member of the public who uses the Internet. He/she has limited access to the website. They can only read about our community, read announcements and articles posted by the Admin. They can also write to the Admin for further queries of their interest.
- **Approving:** Confirming the authenticity of a member as a genuine Alumni of CSC-IUT through proper and appropriate verification.
- ➤ **Blocking:** Preventing or restricting an unauthenticated member or a malicious user from gaining access to some of the website's facilities by the administrator.
- Registration: The process of filling up a prescribed form providing all the required personal and profile information to be saved in the database and used by the Admin for verification, authentication and subsequent approval of members.
- Forum: It is a portal that provides an interaction platform for all approved members. The Forum Portal is animated by articles uploaded by the Admin and the comments written by the participating members.
- ➤ <u>Article:</u> It refers to a piece of information carrying an announcement, event or news which may be personal, or of general public interest or concerning only the community members. To prevent any abuse of the website, an

article is exclusively published by the Admin and registered members can only comment on them.

- ➤ <u>IIS Server:</u> The Internet Information Services (IIS) 7.5 is the web server software included with Windows 7. IIS is not installed by default when you install Windows 7, it is rather configured according to the manual provided in the Windows 7 help and support section.
- ➤ Entity-Relationship Diagram: It is a diagrammatic representation of the relationship that exists between entities in a given database. The E-R diagram is a concept used when designing database management systems. Its objective is to give us a pictorial view of the entire database scenario specifying the entities used and their respective attributes as well as the type of relationship that exists between the various entities.