الجامعـــة الإسلاميـــة للتكنولوجيا
UNIVERSITE ISLAMIQUE DE TECHNOLOGIE
ISLAMIC UNIVERSITY OF TECHNOLOGY
DHAKA, BANGLADESH
ORGANISATION OF ISLAMIC COOPERATION

PROJECT NAME: E-ADMINISTRATION OF TECHNICAL HIGH SCHOOL IN AFRICA

Written

By

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By

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September, 2013.

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This Report is Submitted to the Department of Computer Science and Engineering (CSE).In Partial Fulfillment of the Requirements for the Award of Bachelor of Science in Technical Education with Specialization in Computer Science and Engineering.

September, 2013.

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 the 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 lives.

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 the Honorable Head of Department Prof. Dr. M. A. Mottalib and our respected supervisor Mr. Faisal Ahmed 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,

Abakar Bouba (Student ID: 123404)

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Acknowledgement

First and foremost, we are very much indebted to Almighty Allah, the most Merciful without whose patronage and blessing this project report would not have been successfully completed.

We would like to express our sincere gratitude to our supervisor, Mr. Faisal Ahmed, Lecturer, Department of Computer Science and Engineering (CSE) whose kind understanding, expertise, guidance, and patience, have considerably improved our graduate experience and know-how in our field of specialization. He provided us with immense guidance, technical support and constructive suggestions and in the course of time became more of a mentor than just a supervisor.

We are also grateful to him for the enormous time he has spent going through the various phases of our project work. His impressive commentaries, criticisms and observations throughout the several stages of our work have played a major role in enhancing both the quality and content of our humble work. It is thanks to his persistence, indulgence, understanding and kindness that we completed our project on time and at a very comfortable pace. We doubt that we will ever be able to convey him our appreciation fully, but we owe him our eternal gratitude.

Our special thanks goes to Prof. Dr. M. A. Mottalib, Head of CSE Department without whose motivation and encouragement we would not have considered a graduate career in our field.

Prof. Dr. M. A. Mottalib is the one professor who truly made a difference in our life; he was kind and helpful to us.

Last but not the least; we would like to thank our parents who have given us tremendous inspiration and support. Without their constant moral and financial support we would not have been able to complete our project work.

Abstract

In the early days the management of such systems was not easy and dynamic due to the lack of today's technology; therefore the implementation of this website has come with some enhancement to improve the earlier disadvantages.

The main objective or better still the aim of this website is to make it easier for the users (Students and Staffs) to access useful resources such as digital library, alumni, admission form, admission requirements, and view admission results. 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 Administration does; namely: a full-fledged interactive 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 users (Students and Staffs). Articles of the school are exclusively uploaded by the Administrator of the website and users can only view. Alumni members are approved by the Administrator after proper verification is done. The Administrator has the privilege to block Alumni members. All in all, our project is a modern online Administration website that incorporates most of the recent technologies in the field of web development.

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Chapter 1: Introduction

1.1 Project Background

Designing an E-Administration of technical high school in Africa is the electronic administration of high school through a dedicated website that provides all the necessary administrative modules required for such tasks.

1.2 Main features of the project

- User friendly
- Facilitate access to various school resources by the concerned users.
- Modernization and enhancement of the administration of technical high schools in Africa
- A database design with no data redundancy
- A fully developed web portal for the school
- Enable users (both students & staff) to access useful resources such as digital library, alumni, admission form, view admission result etc.

1.3 Project Goals/Objectives

- Develop a fully comprehensive website to enable the online administration of a technical high school.
- To ameliorate the efficiency of the principals and teachers in the process of administering their schools.
- To vulgarize the concerned schools providing greater opportunities to potential candidates.
- Create a solid bond among its members with a view of fostering camaraderie and promote a sense professional belonging.
- Ensure the constant flow of information among alumni members and the dissemination of important scholarship opportunities and job vacancies from all over the world.
- To let the public discover what the Technical High School is all about.
- Maximize the well-being of members wherever they are and promote and sustain their academic and professional excellence in every corner of the globe
- Provide complementary information to future students and prospective applicants on how to apply in Technical High School.

- Inform the public of the various activities we undertake while we are students in Technical High School.
- Provide detailed information about the status and structure of Technical High School, the organization and functioning of the School, the different departments and specializations available, the various degrees awarded, all the courses being taught, the rules and regulations governing the institution etc.
- Check the authenticity of a student and approve his Alumni membership
- Provide flexible access modes to users such as navigating through the website on a mobile device, PDA, etc.
- Encourage more African students to apply to Technical High School by vigorously advertising for available places in the School on the Technical High School website.
- 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 reputation.

Chapter 2: Initial Study

2.1 Project Vision

This project is to enable users (both students and staffs) to access useful resources such as digital library, alumni, admission form, view admission result, and Gallery, etc.

2.2 Project Scope

This website is confined exclusively to students who have passed out from Technical High School 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 vice-principal's office will always be consulted for authentic identification of members, and also the TECHNICAL HIGH SCHOOL. Alumni portal is regularly crosschecked to confirm the student's acceptance as a certificate holder from the TECHNICAL HIGH SCHOOL.

2.3 Advantages of the Technical High School

An E-Technical High School offers the advantage of instant information exchange that is not possible in a real-life Technical High School. This allows people to engage in many activities from their home, such as: admission announcements, counseling and searching for specific information [I].

- It is easy, flexible and very user-friendly
- It makes it easy for Alumni members to find their seniors, batch mates and juniors based on their current profession thanks to our rich and dynamic search engine.
- It facilitates the dissemination of important information to future applicants through the announcements admission offered by TECHNICAL HIGH SCHOOL

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 [14]. 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 create an efficient and effective backup system so that important information is never lost.

ii. To maintain a computerized database for the website

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 using PHP, JavaScript, CSS and HTML.

The project entitled E-Administration of TECHNICAL HIGH SCHOOL in Africa. 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 School.

3.3 Economic Feasibility

Launching a website for a Technical High School 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 [14]. A Technical High School 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 outweigh 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 users 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 TECHNICAL HIGH SCHOOL website, we used MySQL database [1]. 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's 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 and resources gathering

Strategies we have followed to gather information include: [14].

4.1.1 Principal's requirement

The school principal is the highest-ranking administrator in a Technical high school. Principals are responsible for the overall operation of their schools. Some of their duties and responsibilities are delineated in state statutes. Regions and school districts have also set expectations for principals through their principal evaluation criteria and procedures.

With schools facing increased pressure to improve teaching and learning, the duties and responsibilities of principals expanded further to include the responsibility for leading school reform that would raise student achievement. Success in leading reforms to increase student achievement often hinged upon a principal's ability to create a shared vision within the school community and success in implementing new organizational structures that engage teachers in shared decision-making. Principals have discovered that engaging the entire school staff in making decisions results in more commitment to school reform initiatives.

Responsible for involvement in the academic process, including supervision and instruction.

1. Responsible for contributing to the optimum attendance of all students through close communication with parents, teachers, students and counselors.

2. Responsible for developing a sound discipline process on student behavior.

3. Responsible for effective supervision of staff and students.

4. Responsible for effective public relations through continual positive promotion of the school and its students at all opportunities.

5. Responsible for effective usage of school supplies and for timely distribution, monitoring, and acquisition of proper and pertinent textbooks through close communication with department heads and teachers.

6. Responsible for assisting the building principal for promoting a school climate that fosters high student expectations and employs appropriate strategies that address multiple learning styles.

7. Responsible for effective coordination of day-to-day functions and activities

through close communication with all departments and administrators.

8. Responsible for close supervision of the educational process and effective communication with academic and counseling staff in all issues regarding students.

9. Responsible for contributing to the treatment and mainstreaming of students with special needs through close communication with the Special Education Department, its teachers and central office staff.

10. Responsible for working with building principal in developing master schedule for assigning staff and students. Must be familiar with alternative scheduling methods.

11. Responsible for effective utilization of teachers and staff through ongoing studies of requirements.

12. Responsible for supervising the daily use of school facilities in the area of both academic and non-academic activities, including usage of school facilities by community groups.

13. Responsible for providing equal educational and employment opportunity to all individuals regardless of race, color, gender, age, marital status, religion, national origin, sexual orientation, homelessness, or disability.

14. Ability to speak English and French.

15. Performance of all other job-related duties as assigned.

The creation and implementation of a shared school vision

16. The nurturing and sustaining of a culture and instructional program conducive to learning and staff development

17. The ensuring of the management of school operations to produce a safe and effective learning environment

18. The collaboration with families and the diverse communities schools serve

19. The promotion of integrity, fairness, and ethical behavior

20. The interaction with larger political, social, legal, and cultural contexts of schooling

4.1.2 Admission requirement

Students who wish to apply for admission to a technical high school must submit an application to the Office of Admissions.

The completed application must include: [4]

- Demand of admission to the Principal's with A parent/guardian signature
- Application form
- A copy of class 4 transcript
- A copy of O-level or BEPC
- A copy of the most recent birth certificate.

4.1.3 Teachers' requirement

High school teachers put together informative and engaging lesson plans for their subjects. Teachers use a variety of visual aids, textbooks and creative projects to gain student involvement. As technology becomes an increasingly large part of education, high school teachers may be required to have and teach computer skills. Other duties may include:

- Making administrative and budget decisions
- Chaperoning classes and trips
- Prioritizing teaching methods
- Completing parent and student counseling
- Enforcing rules and disciplinary action
- Lecturing and discussing concepts
- Preparing material for presentations
- Grading tests and conducting progress reports
- Recordkeeping student activities in accordance with laws and school policies

4.1.4 Vice –principal requirement

A high school assistant principal works directly under the principal and helps coordinate, direct and plan the academic or auxiliary activities of the school. The assistant principal manages the teachers, counselors, staff and students on a daily basis. Along with the principal, they review and approve or recommend modifications to new or existing programs and then submit their proposals to the school board. They prepare or oversee the maintenance of attendance records, personnel reports, planning and other activities. The assistant principal coordinates or directs the use of the high school facilities.

An assistant principal meets with staff and parents to discuss policies, educational activities and a students learning or behavioral problems. He or she provides counsel and guidance to students regarding academic, personal, behavioral or vocational issues, along with enforcing attendance and discipline rules. The assistant principal organizes and directs committees of volunteers, specialists and staff to provide either advisory or technical assistance for programs and develops partnerships with communities or organizations to help meet educational needs providing school-to-work programs.

Common work activities include:

- Working closely with the principal on a daily basis to ensure the smooth overall operation of the school.
- Supporting committees of staff and parent that function to improve the learning and social environment of the school for the students.
- Teaching classes, developing rapport with the students, handling discipline issues and filling in for the principal when required.
- Resolving conflicts between students, teachers, parents or combinations of conflicts between various individuals.
- Assisting in yearly teacher evaluations, assisting in providing guidance to staff and students, and encouraging a positive climate in the school.
- Directing assemblies and other special gatherings of students for events throughout the year.
- Developing emergency response plans for schools as required by state and federal education agencies. Filing reports and updating as required.
- Record keeping as required through the use of various logs, tracking records, computer programs, inter or intranet software or other programs.

4.1.5 Discipline Master Requirement

The discipline master is the leader of the school discipline team. She/he

is in charge of the planning, organization, development and monitoring of matters relating to student discipline at school. Administratively, he/she is responsible for recommending to the school head the deployment of school staff to the discipline team and allocation of duties and resources for student discipline to ensure collaboration among members of the discipline team and other functional teams as well as with the school social worker. To draw on their expertise and resources to provide an integrated support service in developing proactive and/or preventive programmes in managing students' behavior problems at school. A detailed description of the duties and responsibilities of a discipline master is listed below.

4.1.5.1. Administrative duties

a) To assist the school head in making decision on the staffing of the school discipline team;

b) To assist the school head in developing a school discipline policy;

c) To handle administrative matters relating to student discipline work;

d) To form and lead a school discipline team to plan and develop student discipline work with specific objectives for the school year;

e) To coordinate all functions organized by the school discipline team;

f) To participate in other functional team meetings to ensure that the concerns of school discipline will not be contravened by any other school matters;

g) To liaise with outside organizations and agencies concerned and coordinate their services to strengthen school discipline work; and

h) To monitor the use of resources allocated to school discipline work.

4.1.5.2. Operational duties

a) To implement and enforce the school discipline policy and school rules;

b) To work in collaboration with other functional teams and/or subject committees in running preventive and developmental programmes pertaining to student discipline upon arriving at a consensus on discipline work;

c) To assist other teachers in managing students with serious behavior problems;

d) To collaborate with parents of students with behavior problems in helping the students overcome their difficulties;

e) To attend to individual cases and conduct case conferences with relevant functional teams and teachers;

f) To refer students wherever necessary, to the guidance team, the school social worker or outside bodies for follow-up work;

g) To take the lead in conducting investigation of complaints from students, parents, teachers and the public; and

h) To review the school discipline policy, school rules and the work of the discipline team and make changes according to the needs of the students, the school and the community.

4.1.5.3. Supportive duties

a) To develop resource materials and programmes relating to student discipline for teachers' reference and use;

b) To assist in running staff development programmes to strengthen teachers' skills in managing students' misbehavior;

c) To advise on programmes regarding parent education;

d) To act as an advisor on student discipline matters; and

e) To attend professional meetings and seminars to keep abreast of the recent development in the subject.

As can be seen, the duties of the discipline master/mistress could be very diverse but the work focus reflects the orientation and the needs of the school at a particular point of time. Therefore, when deciding whether to pay special emphasis on a certain work area, the discipline master/mistress should not just consider the need of the students but also the ability of the discipline teachers. If the discipline teachers are not able to manage the new tasks or expanded work areas, the discipline master/mistress should consider the following actions:

- clarifying the missions of the discipline team;
- empowering the team members to innovate; and
- reviewing and improving the team members' attitude and strategies of student management according to the needs of the students, the school and the community.

4.1.6 Librarian requirement

Elementary schools, junior and senior high schools, and colleges and universities all employ librarians, who select and order books, audiovisual materials, computer equipment, and other materials that support their schools' educational programs. They not only maintain their collections so students can access them easily and quickly; they also teach students how to do so.

Actual duties vary with the size of the library and the needs of the students. High school libraries are generally larger than those in elementary schools because older students need more extensive resources for research. Elementary and secondary school librarians may work alone, while librarians in colleges and universities may be members of sizable staffs that include technical assistants and clerks. In large libraries, assistants catalog new books, return

books to the shelves, and repair damaged books. In small libraries these tasks are done by the librarians themselves.

Elementary school librarians teach basic library skills, often in regularly scheduled classes in the library. They may teach students how to distinguish among various kinds of books, such as fiction, nonfiction, poetry, and biography, and how to use the classification systems for finding books and other materials. They encourage use of the library for information and recreation, while making it an interesting and important part of the school day. To interest students in reading, librarians may conduct story hours for the younger students and arrange special programs for those in the higher grades.

The library of LYTEGA is the collection of the knowledge and built up a balanced and rich collection in civil, Electrical, Electronic, Mechanic, Computability, Computer, Carpentry, Garments, Biomedical. It is an open library system to students of LYTEGA, which provides rich collection of books including journals, newsletter, audio-visual materials and CDs. The total collection of the library is about 10,000 including printed and non-printed resources. The library can accommodate more than 200 students at a time. Students ID cards stand as library card. The library is operating on an extensive schedule from 8.00 am to 5.00 pm from Monday to Friday.

4.1.7 Computer center requirement

A Computer Center assistant is responsible for consulting with others who are in the Computer Center and have questions. This could include working with students, or staff of a School. In the situations when the Computer Center assistant cannot answer a question, he should report to his supervisor for helps.

The lab assistant is responsible for making sure that those who are using the computers in the lab treat the equipment properly so accidents do not occur. This involves seeing that lab users do not have food or drinks at the computers. It also involves making sure users are not downloading questionable files or programs on the computers that could include spyware or other malwares

If a computer in the lab does not function properly, it is the lab assistant's responsibility to diagnose the problem to the best of his abilities. He must provide a written or verbal report to a superior explaining what problem is occurring and the potential causes of it and suggest actions that could help fix the problem.

When a user of the Computer Center is having troubles with a certain software or operating system, the Computer Center assistant can provide the user with reference materials that can help her learn more. This is particularly true when the Computer Center is located in a library. A lab assistant can recommend books and periodicals that can help lab users learn more about what they are trying to do.

The Computer Center assistant is responsible for the maintenance of all equipment in the computer lab. In addition to caring for and maintaining the computers, lab assistants also are required to do things like change the toner and add paper to printers. He also is In addition to caring for and maintaining the computers, lab assistants also are required to do things like change the toner and add paper to printers. Responsible for making sure that instructor or others who might be using a projector understand how to operate it. Depending on the time of day a Computer Center assistant works, he will be responsible for setting up or shutting down the lab. This could include doing things like turning on or off the lights, computers, printers and copy machines.

4.2 Input/output Process of the System

The input/output process of the current system contains the following modules: [14].

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

Alumni and Admin User verification

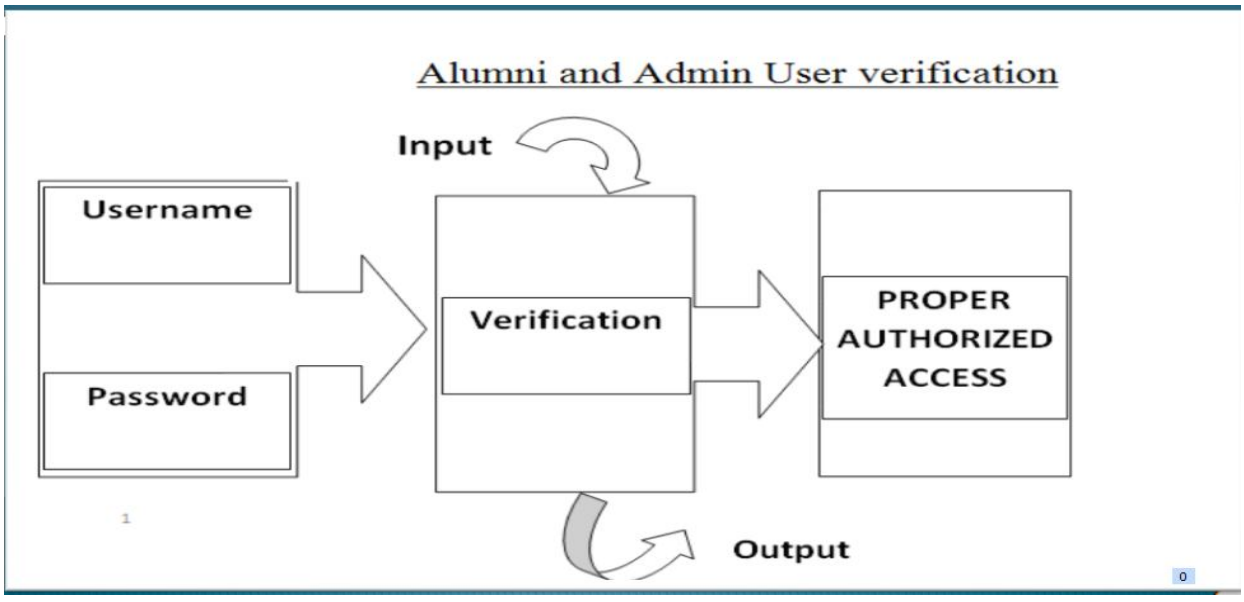


Figure: 4.2 Alumni and Admin User verification

Admin Sign-in

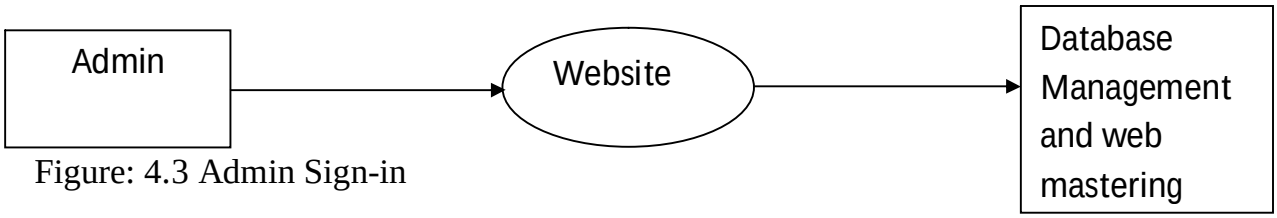


Figure: 4.3 Admin Sign-in

Alumni Member sign-in

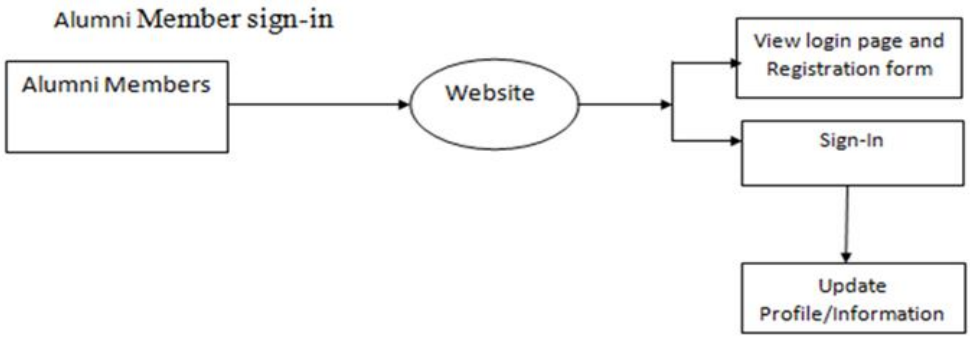


Figure: 4.4 Alumni Member Sign-in

Digital Library Sign-in[3]

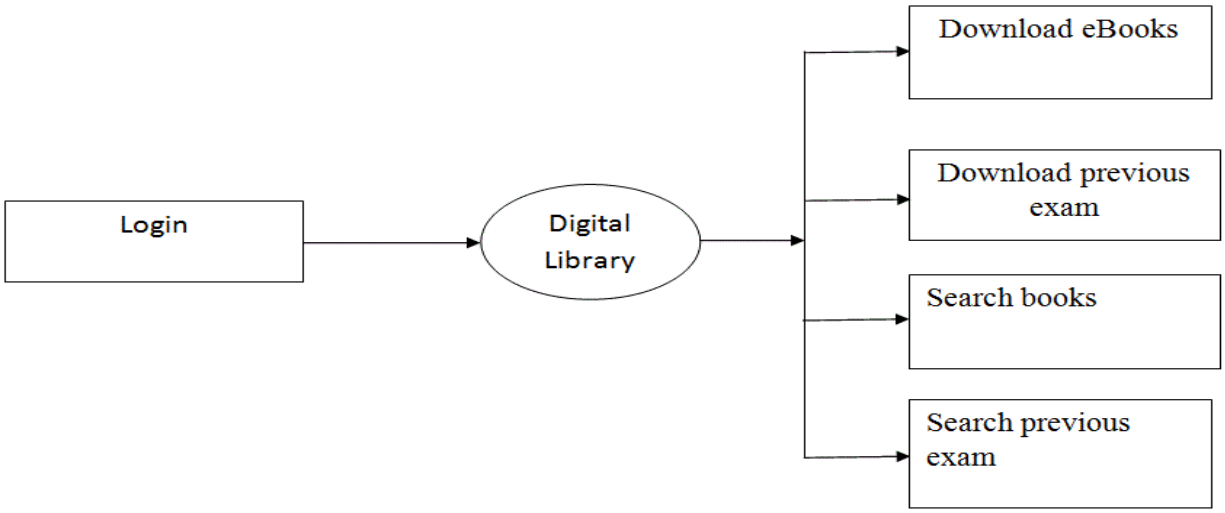


Figure: 4.5 Digital Library Sign-in

4.4 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 manual system is very tedious and takes a lot of time, this automated system is proposed for the work to be done in sophisticated manner instead of investing their brain 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 Alumni

iii. provides special privileges to the administrator of the database

4.5 Features of the 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 Technical High School.

- **Timely updates**: Alumni 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 High School 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 Technical High School website itself.

- **Accessibility of Information**: Information about Technical High School 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 the Technical High School.

Chapter 6: System Design and Implementation

6.1 Tools and Technologies Used

The tools and technologies used during the development and implementation of our website include: [7].

a) Programming Languages used:

- HTML [8]
- JavaScript [13]
- J-Query [18]
- PHP [9]
- CSS [12]
- SQL [10]

b) Software tools Used:

- Adobe Dreamweaver CS5 [16]
- Windows 7 Internet Information Services (IIS) Server [17]
- PHP Processor [20]
- MySQL Database [19]
- Mozilla Firefox 14
- Photoshop

c) Platform Used:

- Windows 7

d) Other tools used:

- Virtual Studio [2]
- Photo animation gallery [2]

6.2 Home Page of Technical High School Website[4]

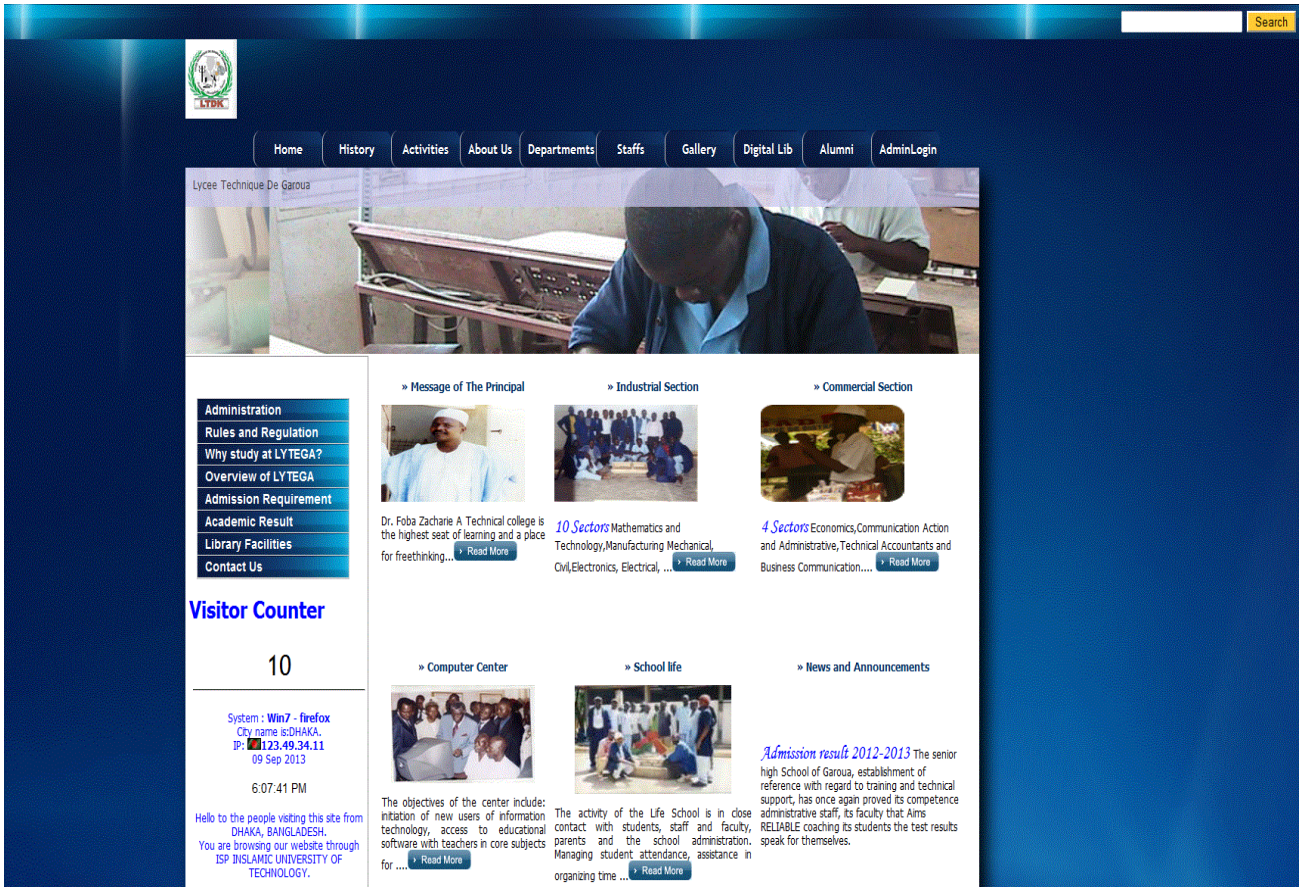


Figure 6.2.1: Main Home Page with all the modules implemented

6.3 Website Gallery: [2]

Figure 6.3.1: All albums in the Gallery

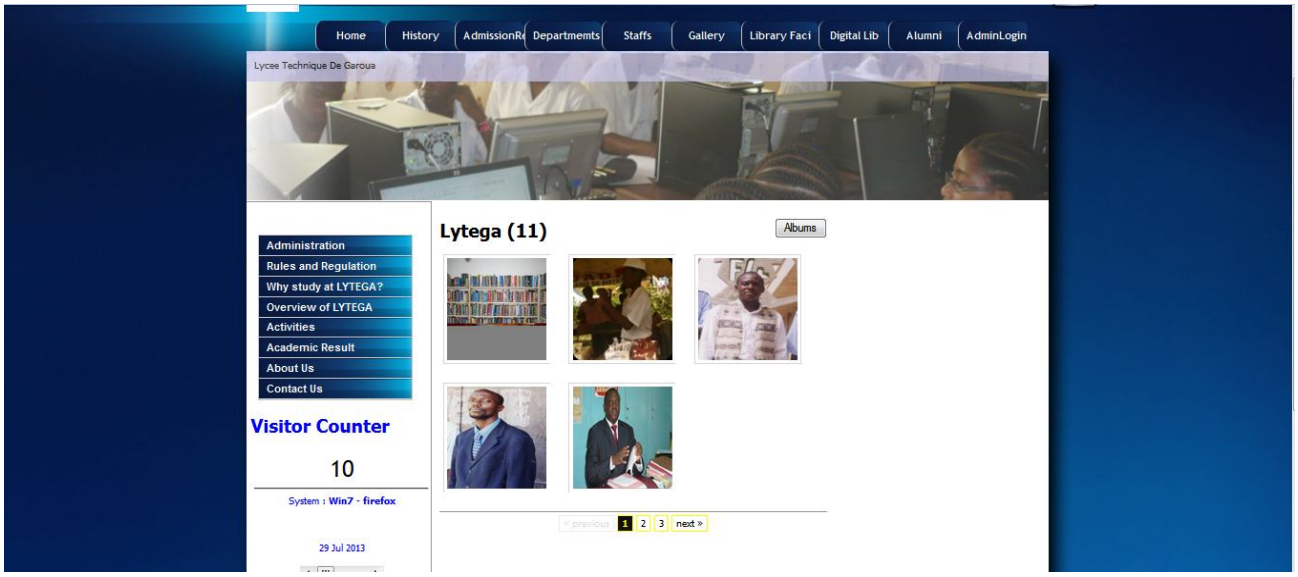
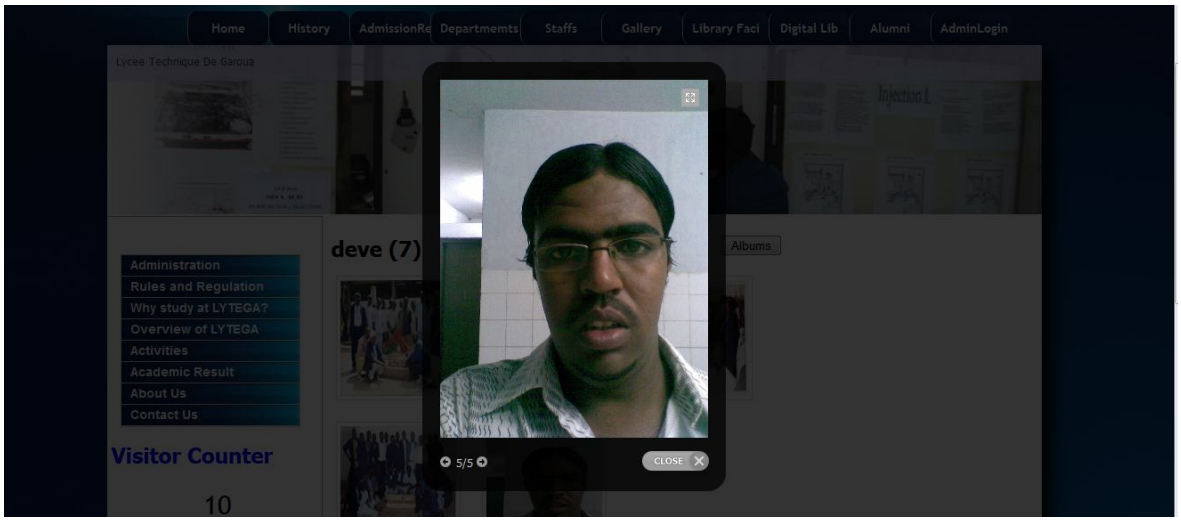


Figure 6.3.2: Photos in a Specific Album

6.4 Photo View [2]



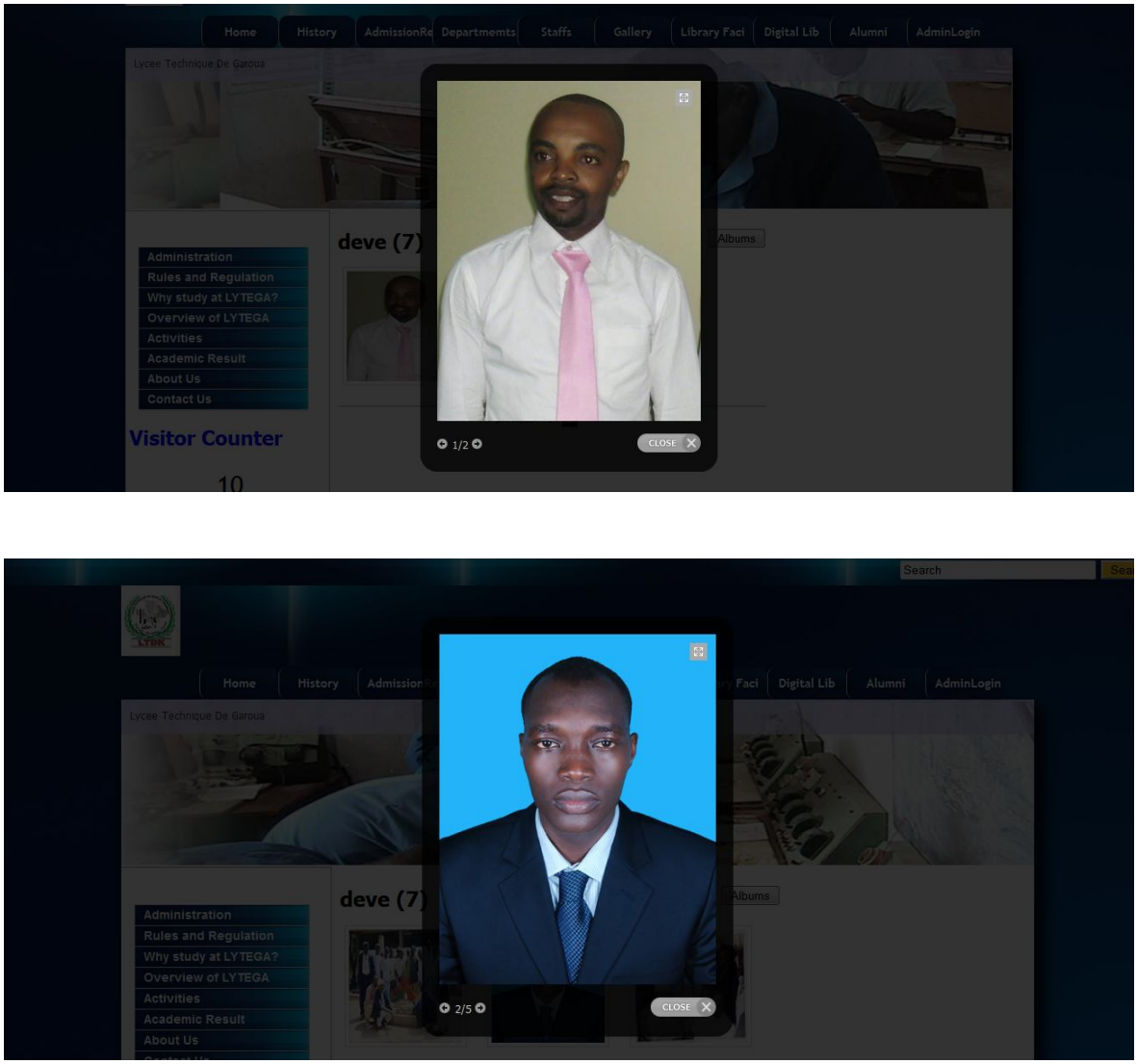


Figure 6.4: Photo Displayed in the Gallery

6.5 Alumni Home Page: [1]

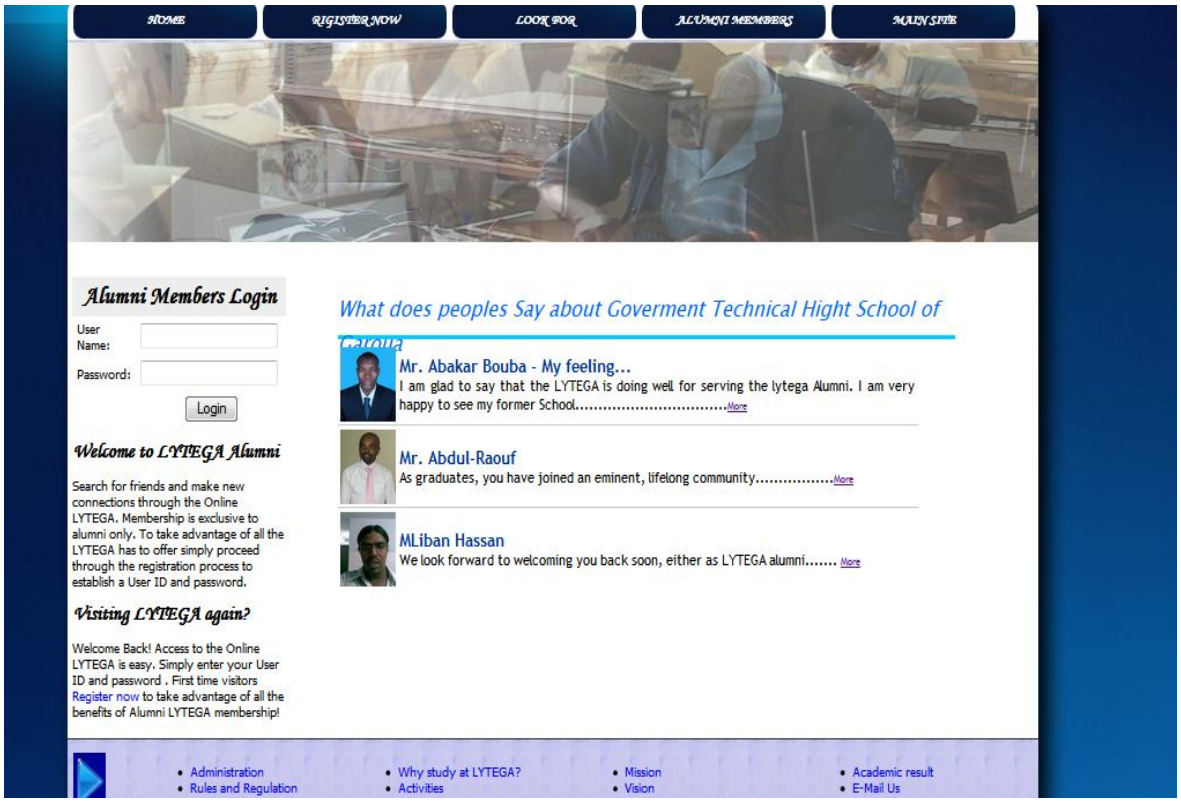
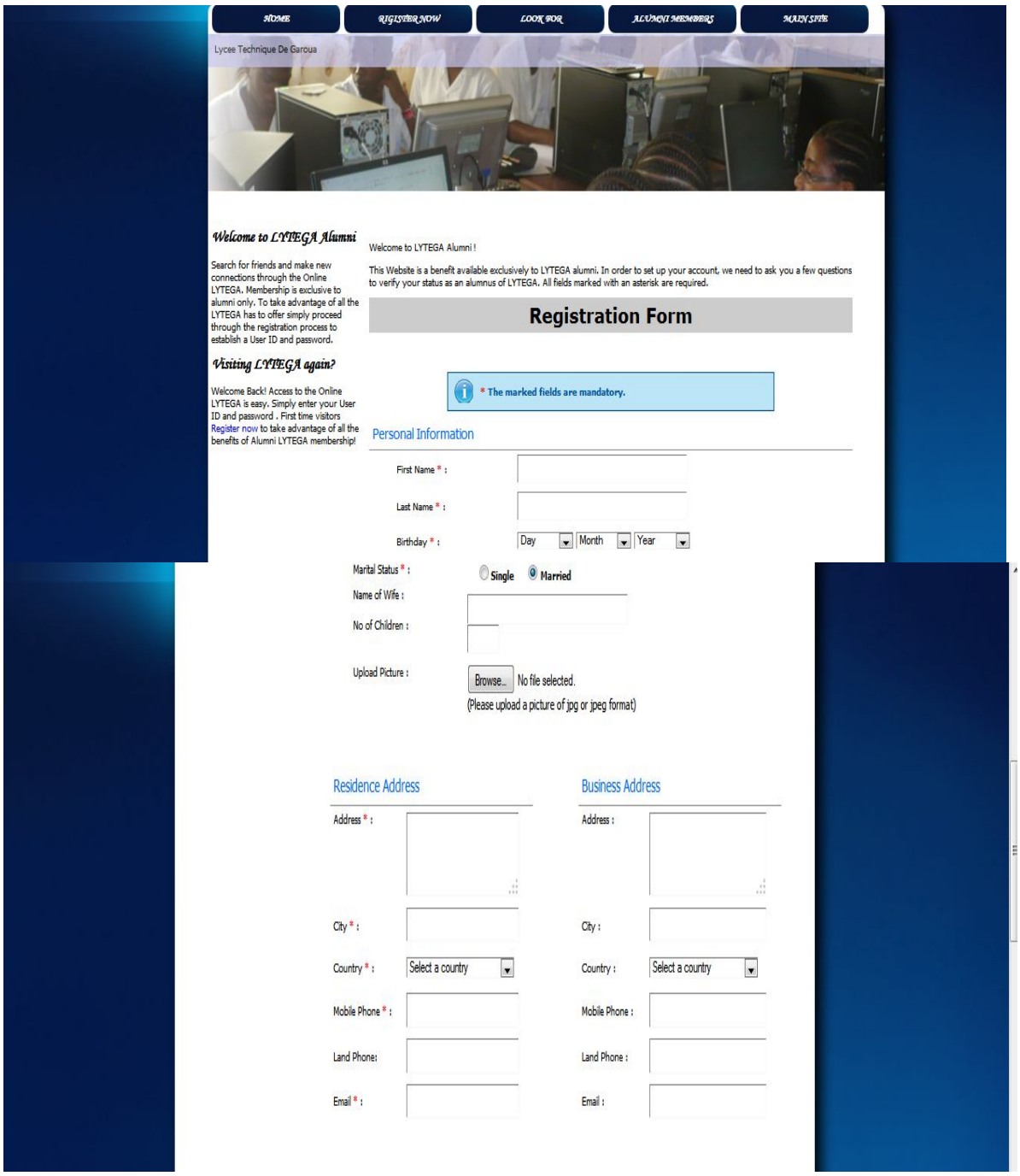


Figure 6.5: Alumni Home Page with all the modules implemented

6.6 Alumni Registration Form [1]



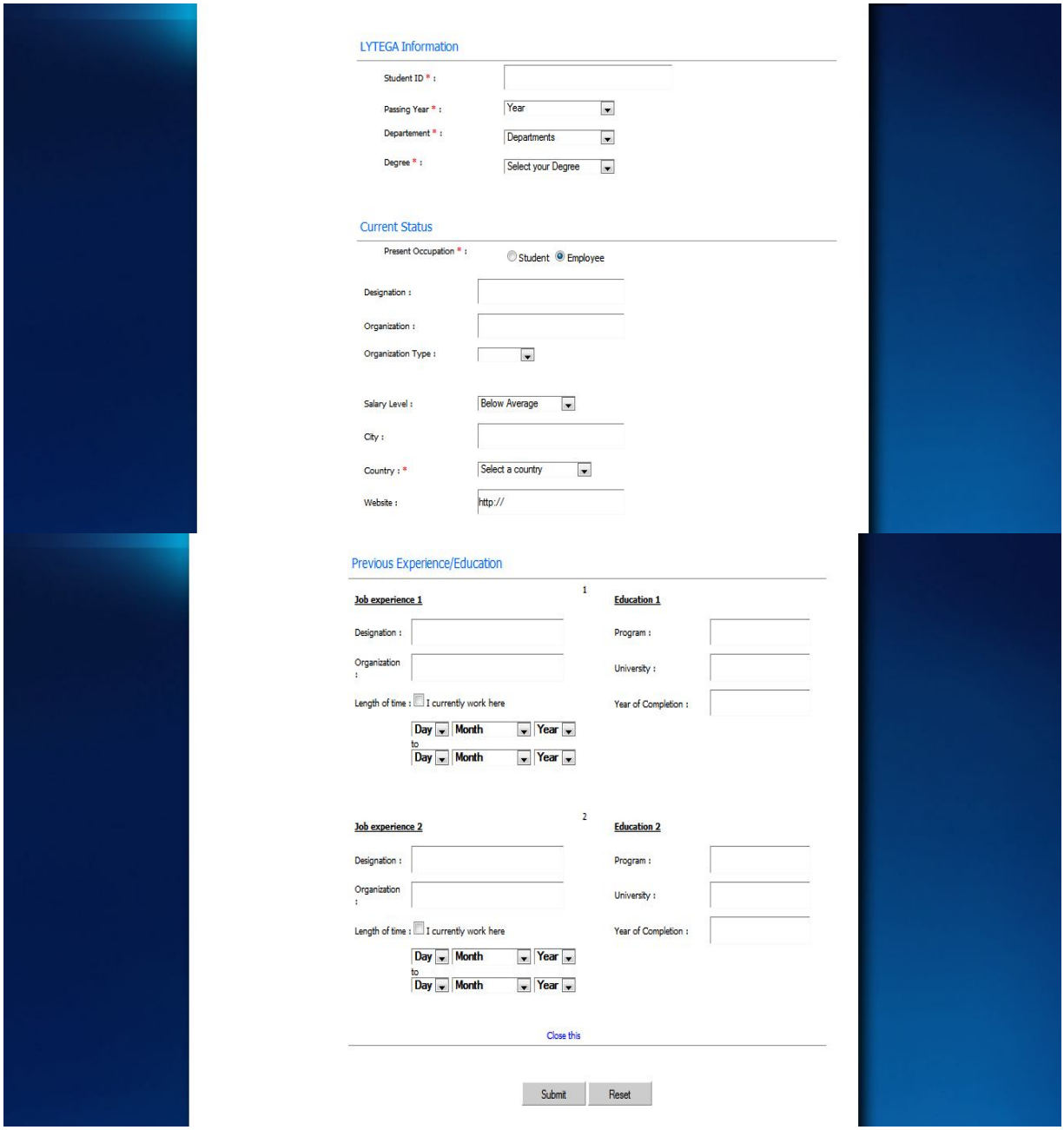


Figure 6.6: Mandatory fields of the alumni Registration Form

6.7 Alumni Registration Process Details [1]

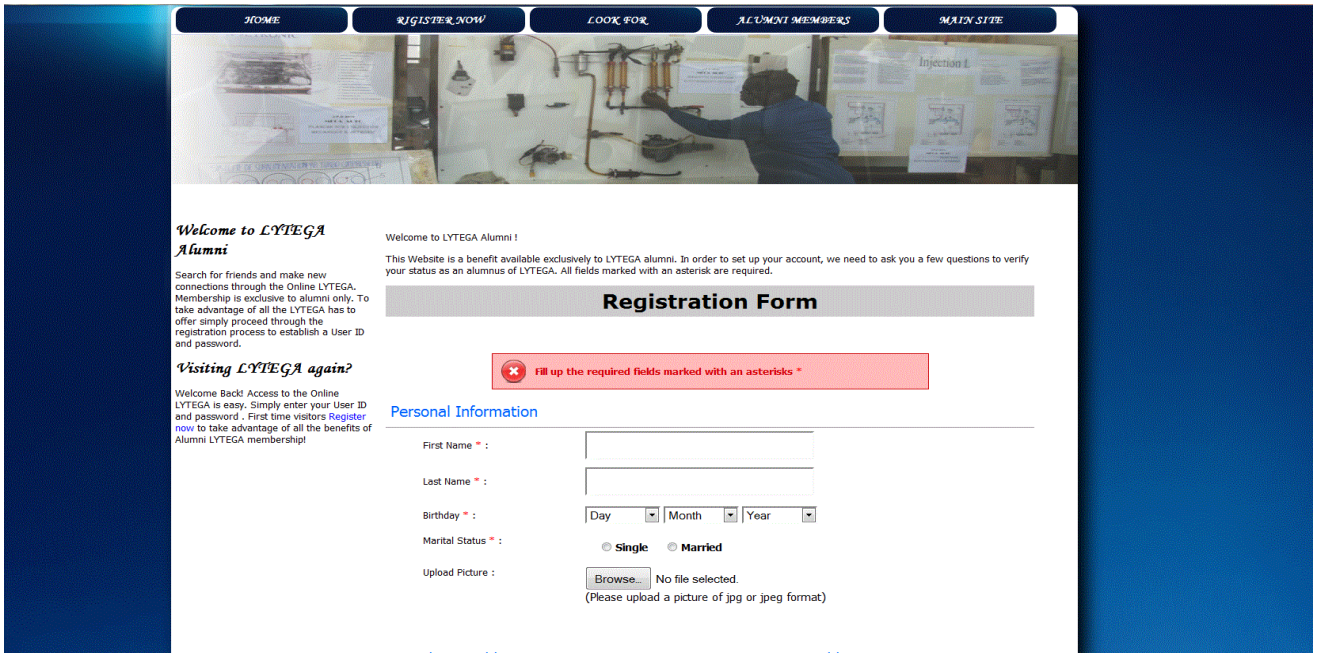


Figure 6.7.1: All the fields to be filled during Alumni Registration Process

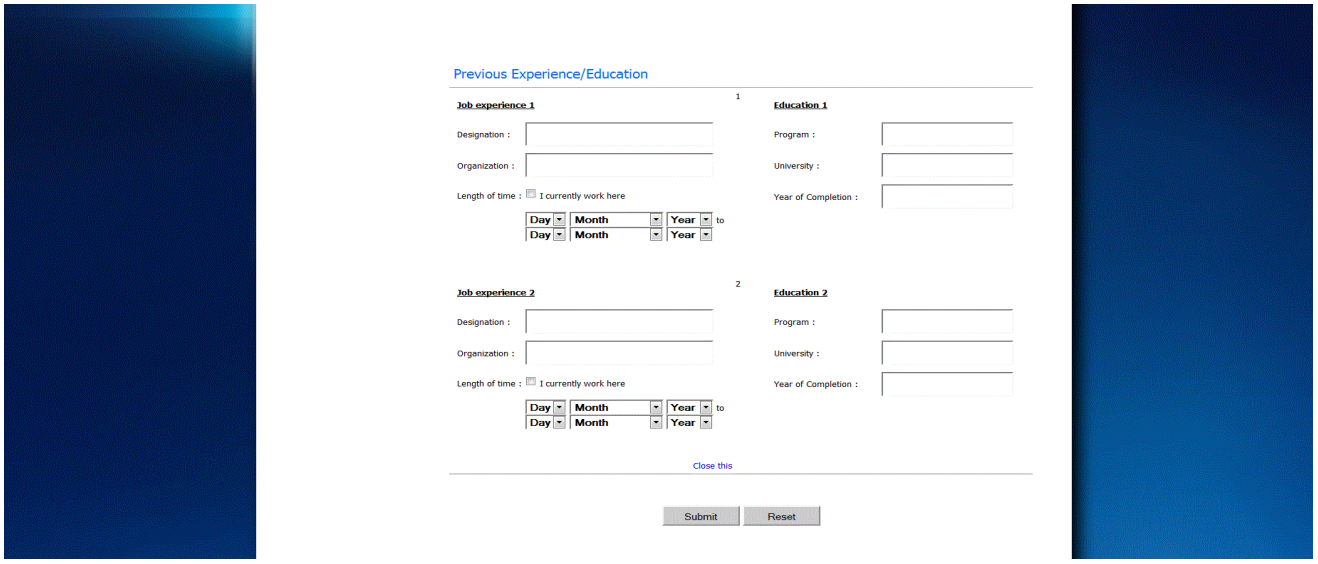


Figure 6.7.2: Optional fields to be filled during the Alumni Registration Process

6.8 Alumni Search

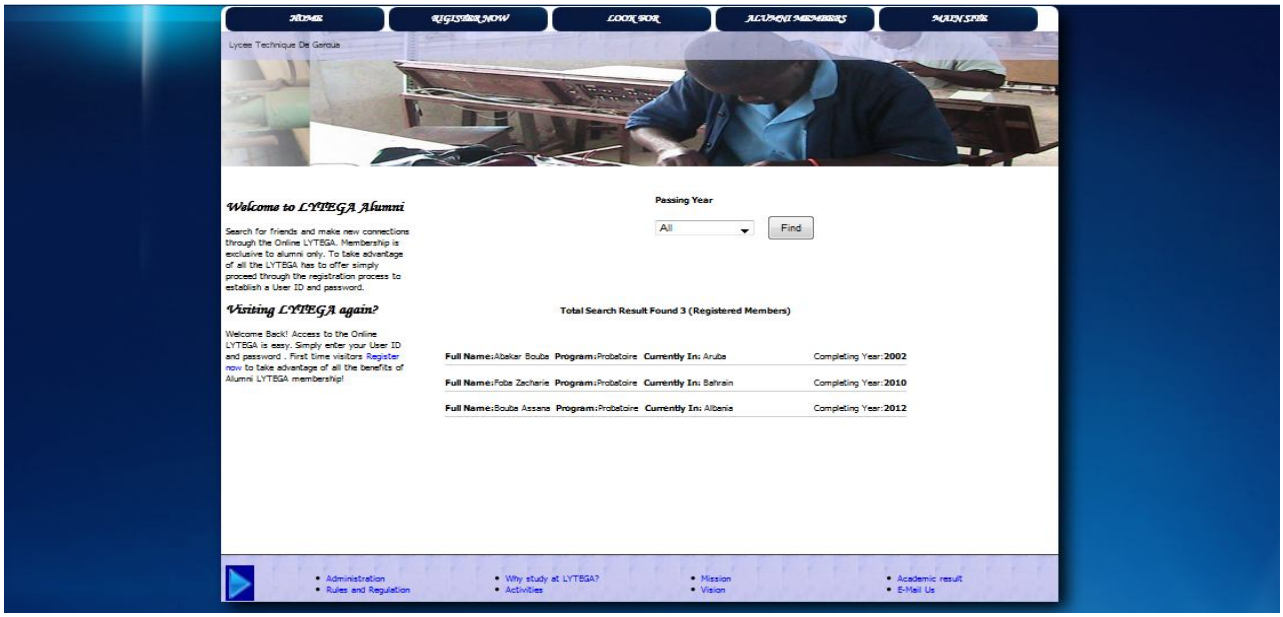


Figure 6.8.1: Display of all Alumni Search Result

Figure 6.8.2: Specific Alumni Search Result

6.9 Alumni Detail Information

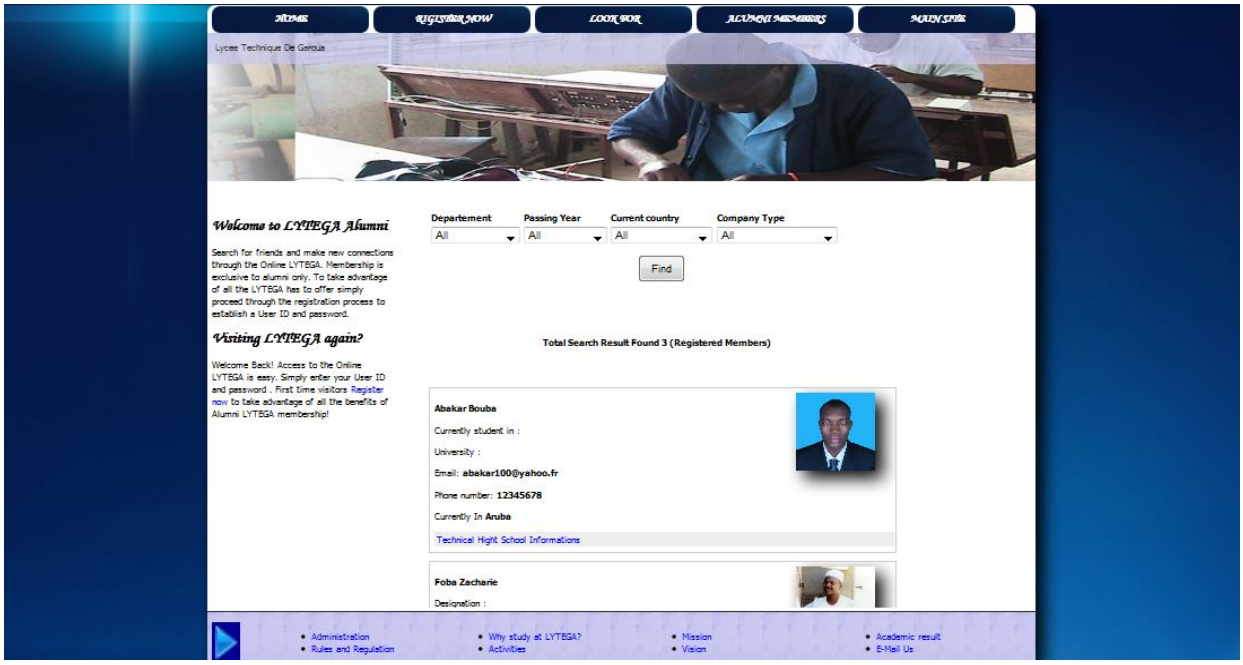


Figure 6.9: Detailed Information of Alumni members

6.10 Contact us Form

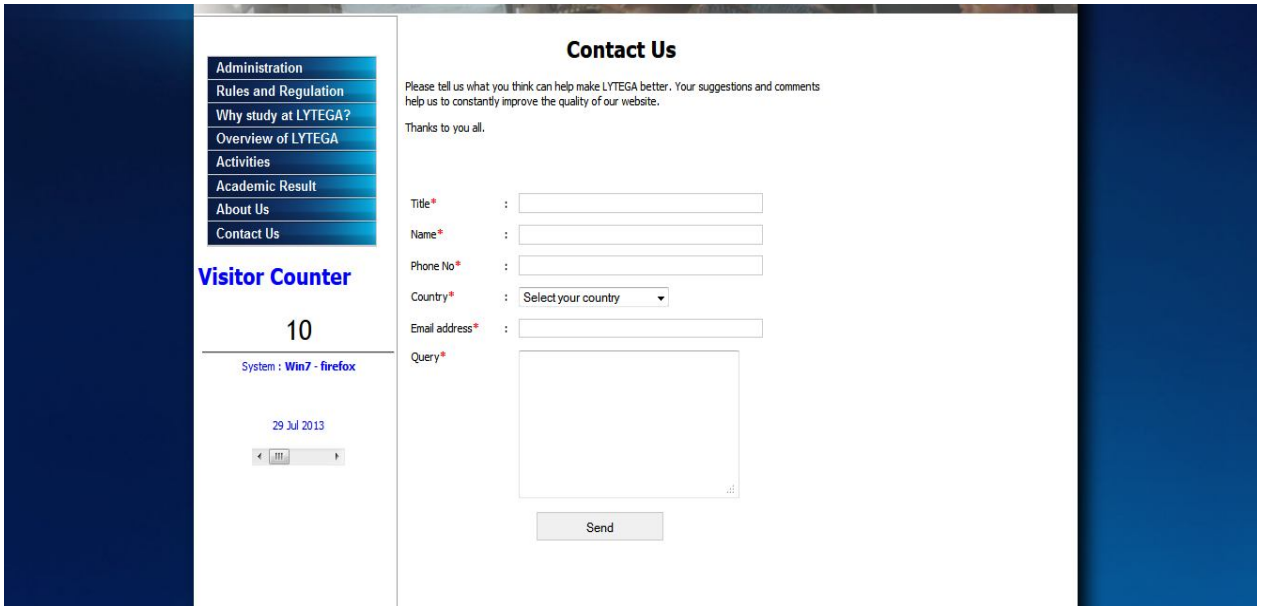


Figure 6.10: Mandatory fields to be filled when contacting us via the Admin of the Website.

6.15 Main Website Search Engine [4]

Figure 6.15: Search contents are displayed automatically whenever a user starts typing the desired keyword.

6.16 Administrator's Home Page

Figure 6.16: Admin Home Page with all the privileges he has over the implemented modules.

6.17 Administrator's Alumni Privileges

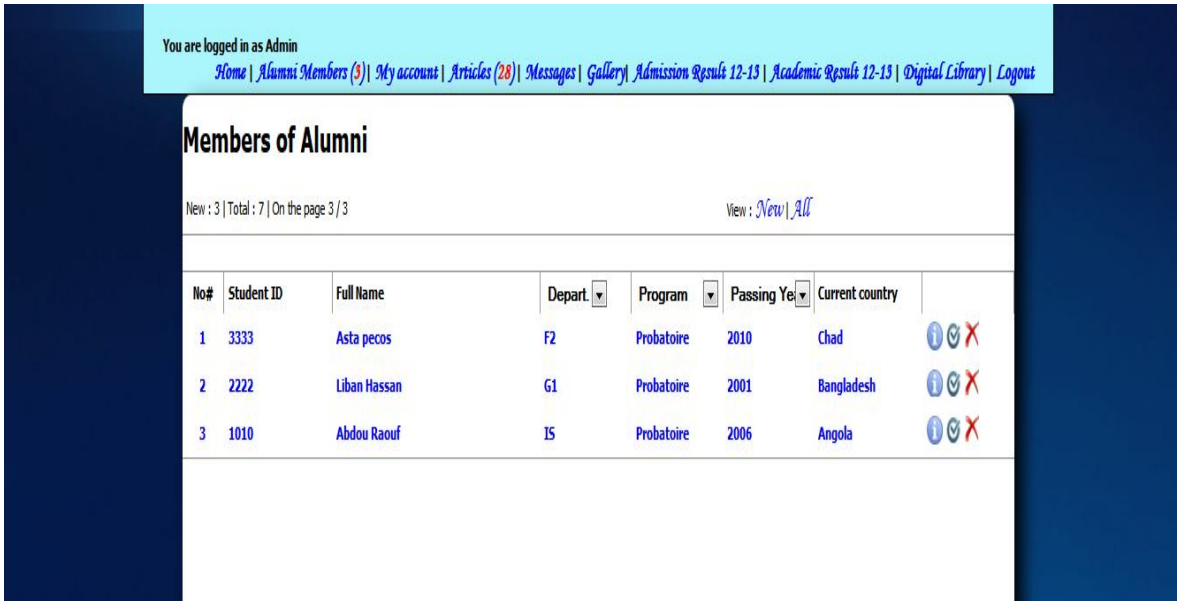


Figure 6.17.1: Records in Blue indicate new members who are not yet approved by the Admin.

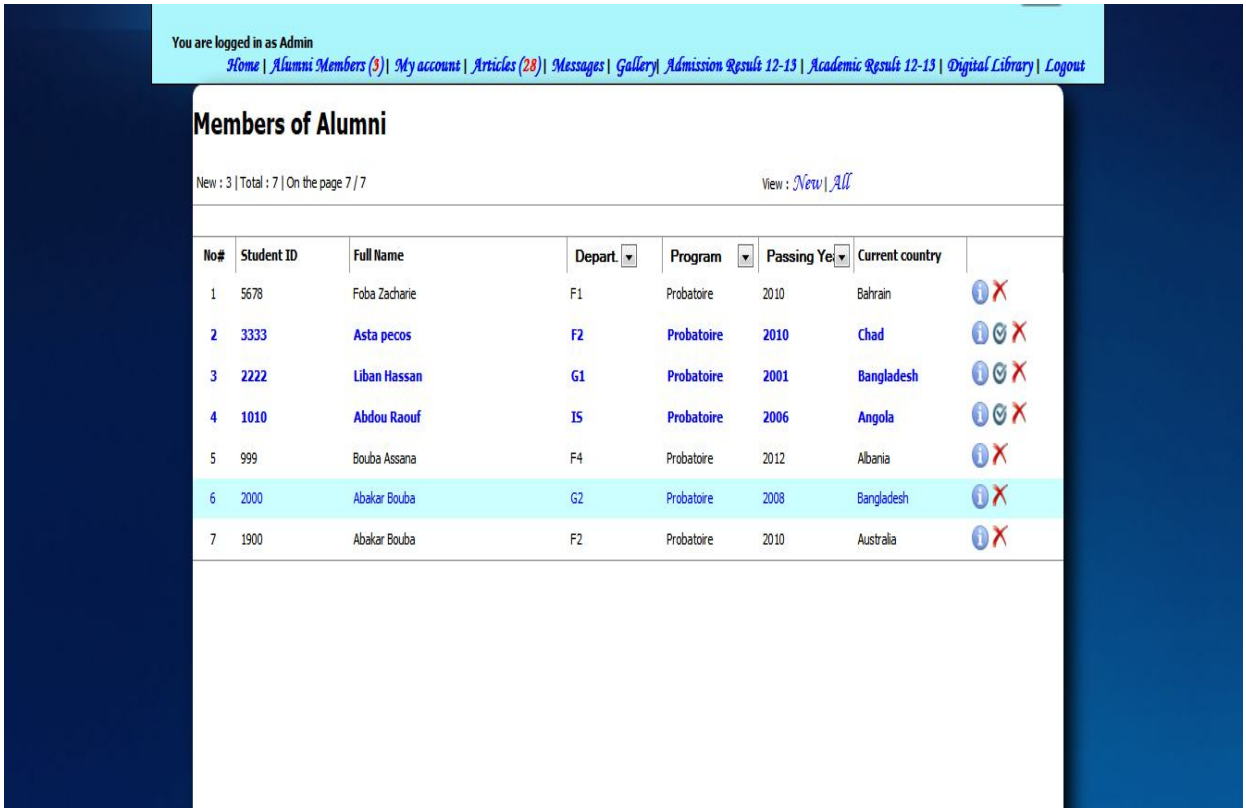


Figure 6.17.2: The Admin approves newly registered members and can also delete registered members.

6.18 Administrator's Gallery Privileges

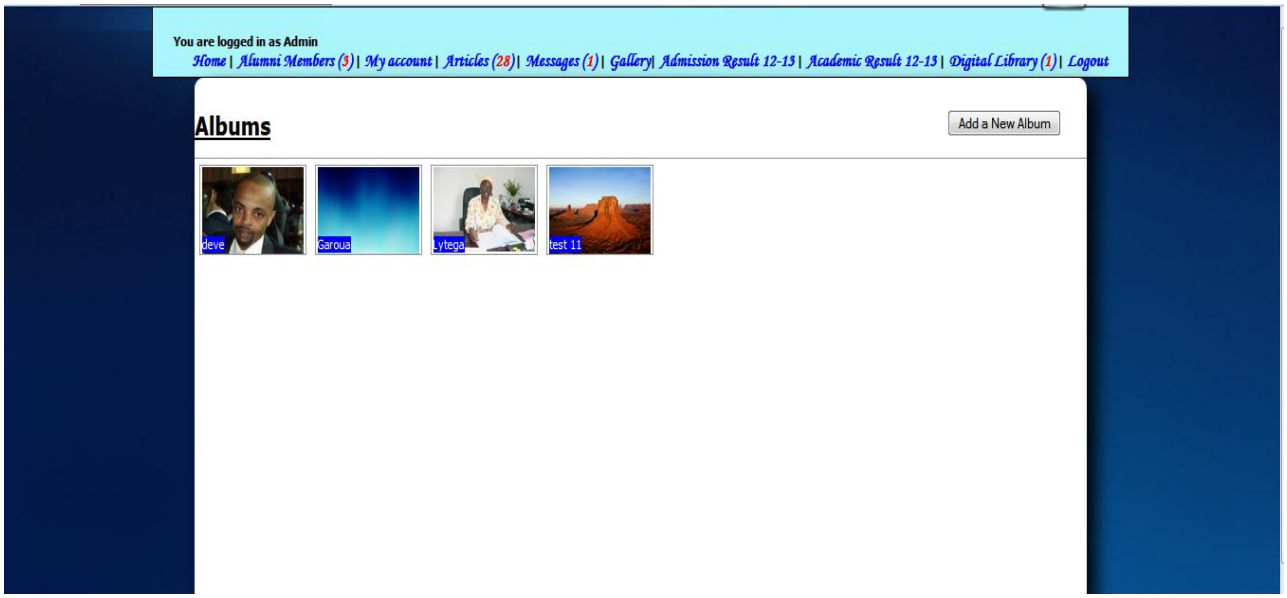


Figure 6.18.1: Administrator can add new Album into the Gallery

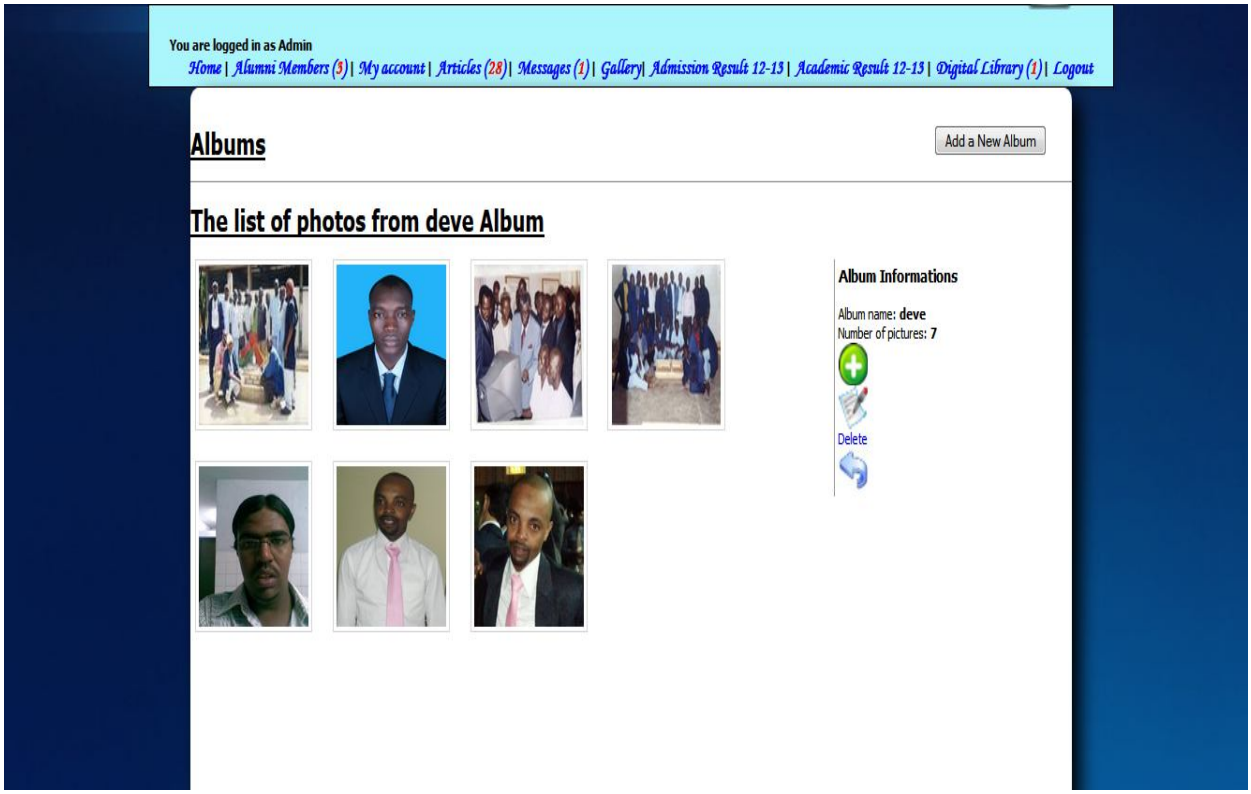


Figure 6.18.2: Administrator can edit the content and information of Albums already existing.

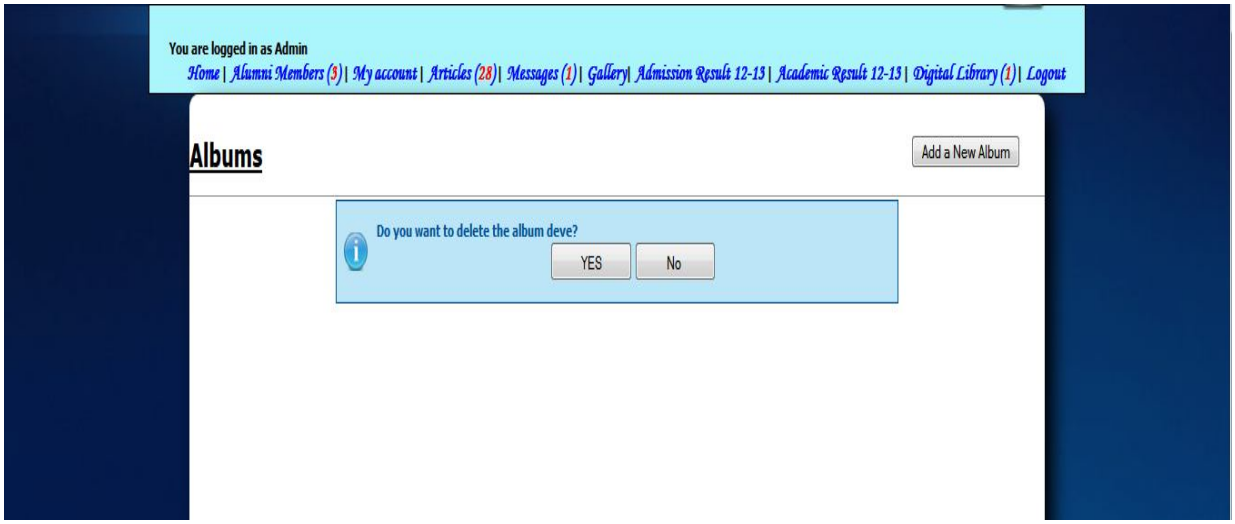


Figure 6.18.3: Administrator can delete the album already existing.

6.19 Administrator's Message Privileges

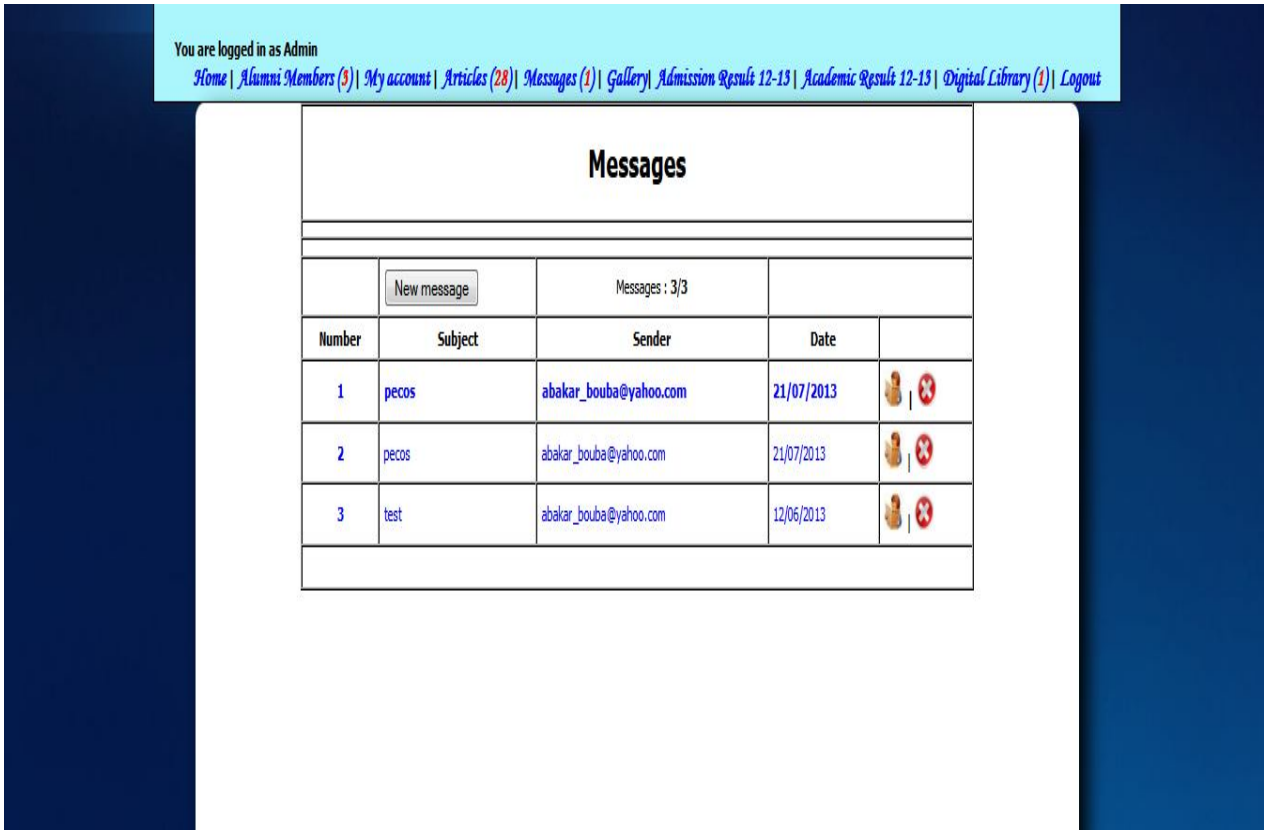


Figure 6.19.1: Admin can view, read or delete messages sent by users and members

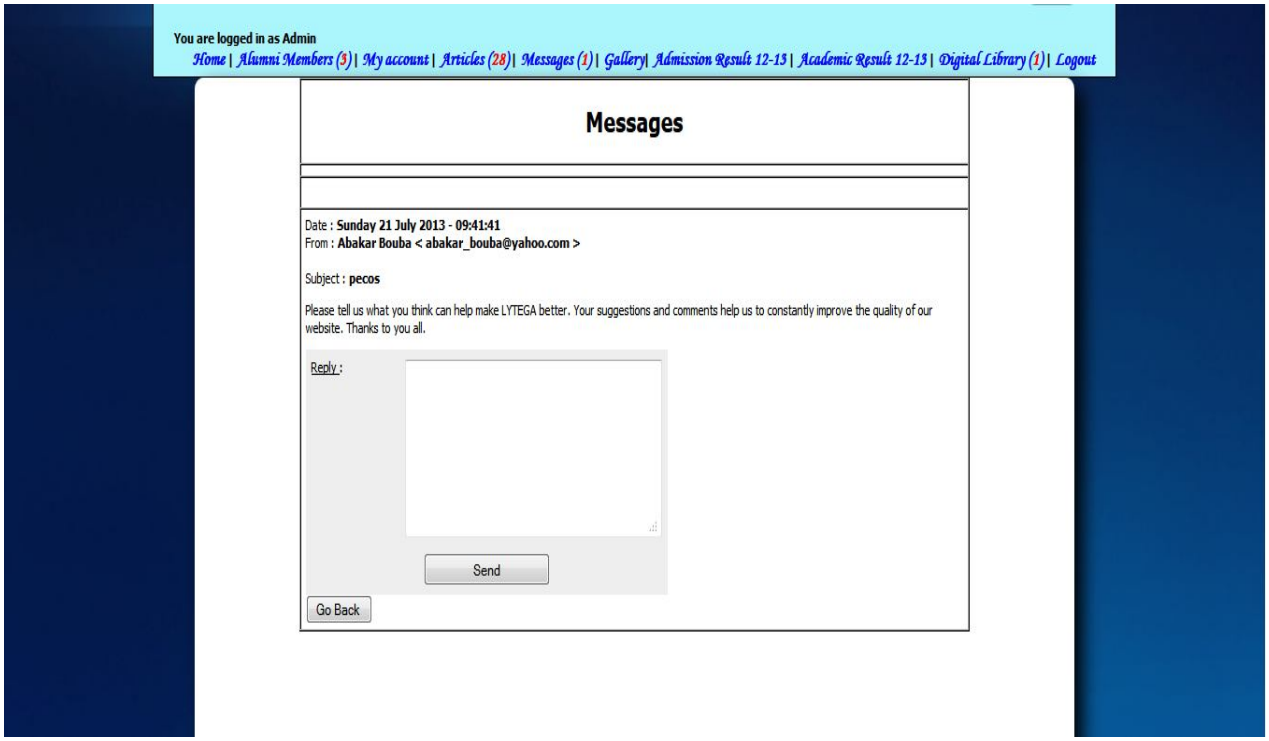
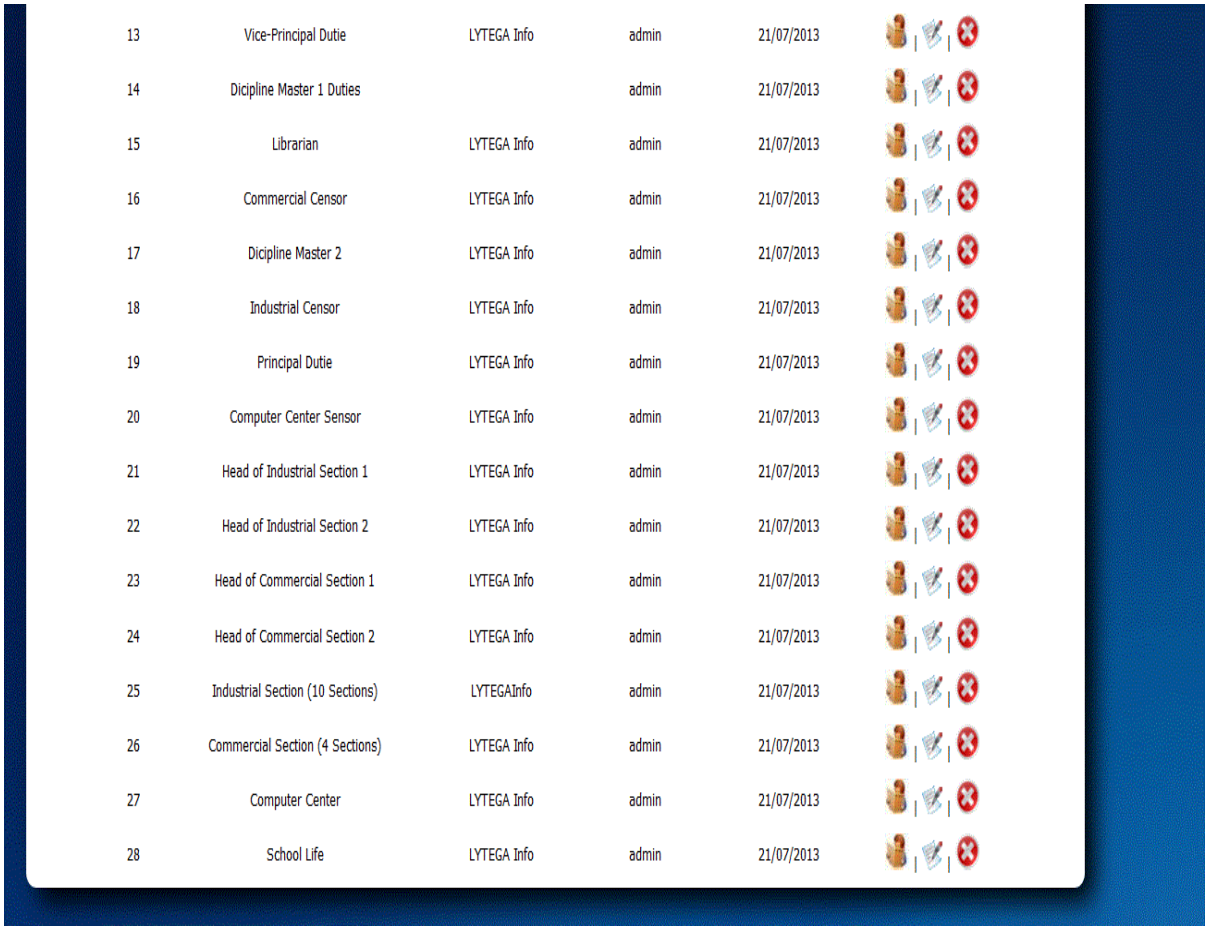


Figure 6.19.2: Admin can reply to messages sent by members and users via the contact us form

6.20 Administrator's Article Privileges

Figure 6.20.1: Admin can post new articles for members to read



13	Vice-Principal Dutie	LYTEGA Info	admin	21/07/2013
14	Dicipline Master 1 Duties		admin	21/07/2013
15	Librarian	LYTEGA Info	admin	21/07/2013
16	Commercial Censor	LYTEGA Info	admin	21/07/2013
17	Dicipline Master 2	LYTEGA Info	admin	21/07/2013
18	Industrial Censor	LYTEGA Info	admin	21/07/2013
19	Principal Dutie	LYTEGA Info	admin	21/07/2013
20	Computer Center Sensor	LYTEGA Info	admin	21/07/2013
21	Head of Industrial Section 1	LYTEGA Info	admin	21/07/2013
22	Head of Industrial Section 2	LYTEGA Info	admin	21/07/2013
23	Head of Commercial Section 1	LYTEGA Info	admin	21/07/2013
24	Head of Commercial Section 2	LYTEGA Info	admin	21/07/2013
25	Industrial Section (10 Sections)	LYTEGAInfo	admin	21/07/2013
26	Commercial Section (4 Sections)	LYTEGA Info	admin	21/07/2013
27	Computer Center	LYTEGA Info	admin	21/07/2013
28	School Life	LYTEGA Info	admin	21/07/2013

Figure 6.20.2: Admin can view, edit and delete articles posted by him.

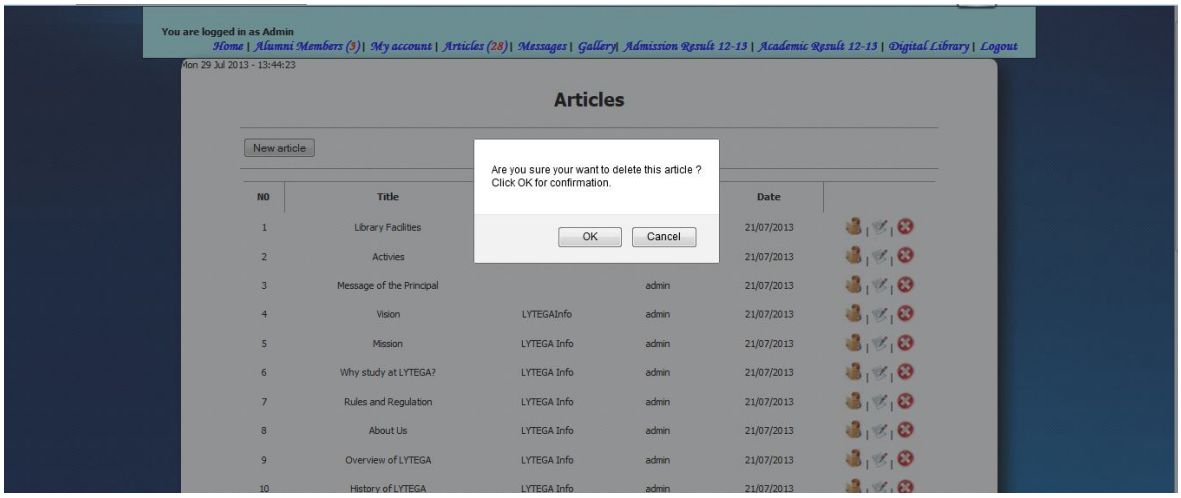


Figure 6.20.3: Admin can delete, articles posted by him.

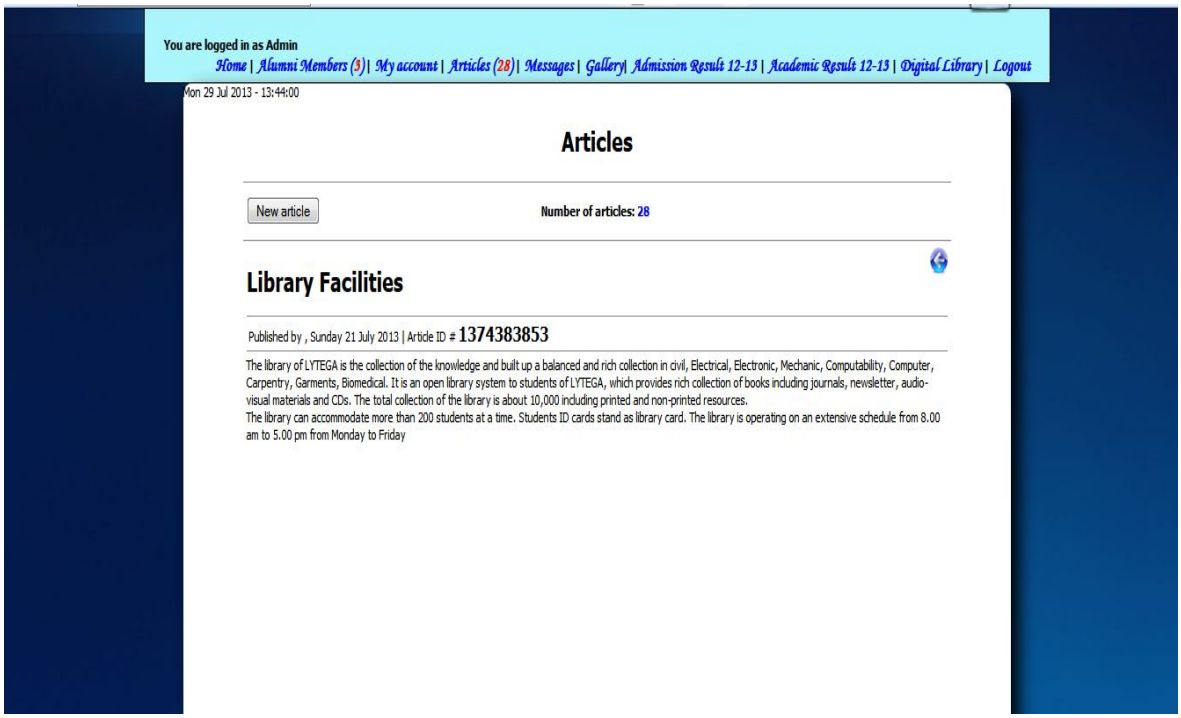


Figure 6.20.4: Admin can read, articles posted by him.

6.21 Administrator's Digital Library Privileges

Figure 6.21.1: Admin can view and delete pdf book posted by him.

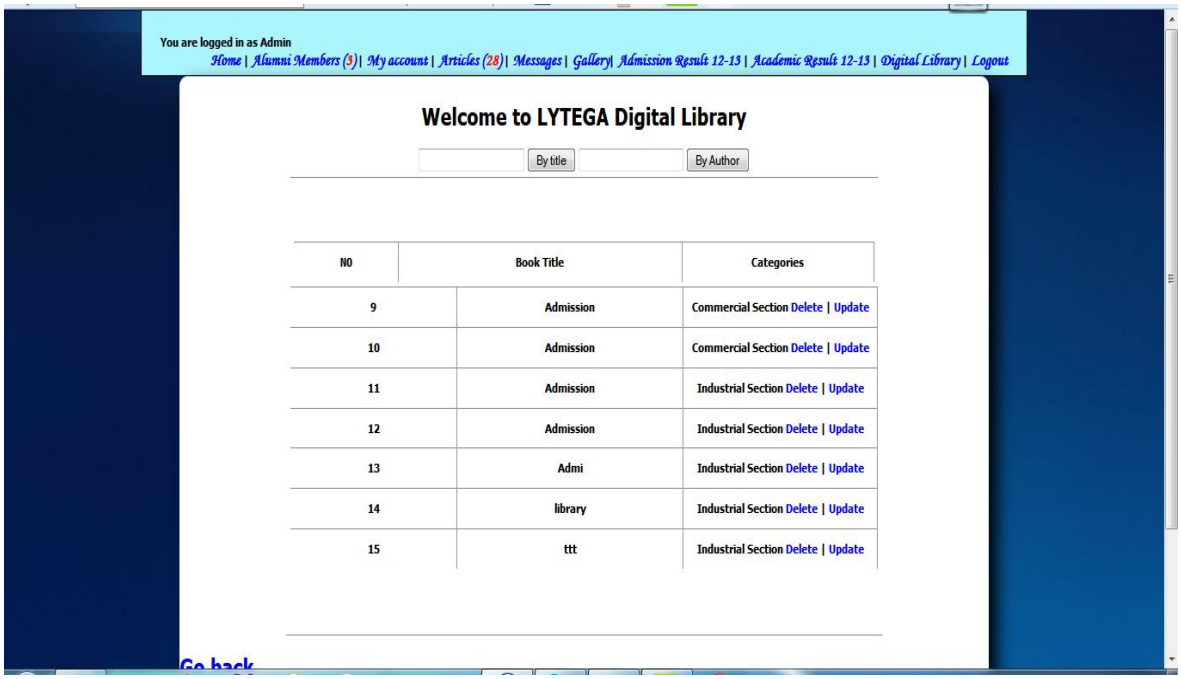


Figure 6.21.2: Admin can update and delete pdf book posted by him.

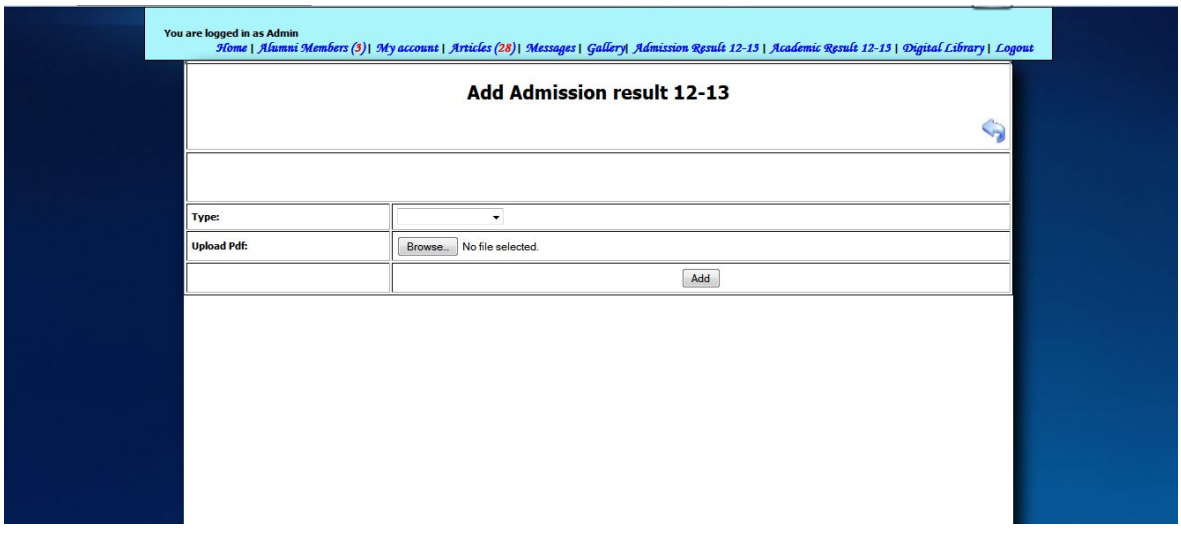


Figure 6.21.3: Admin can add new admission result in pdf format.

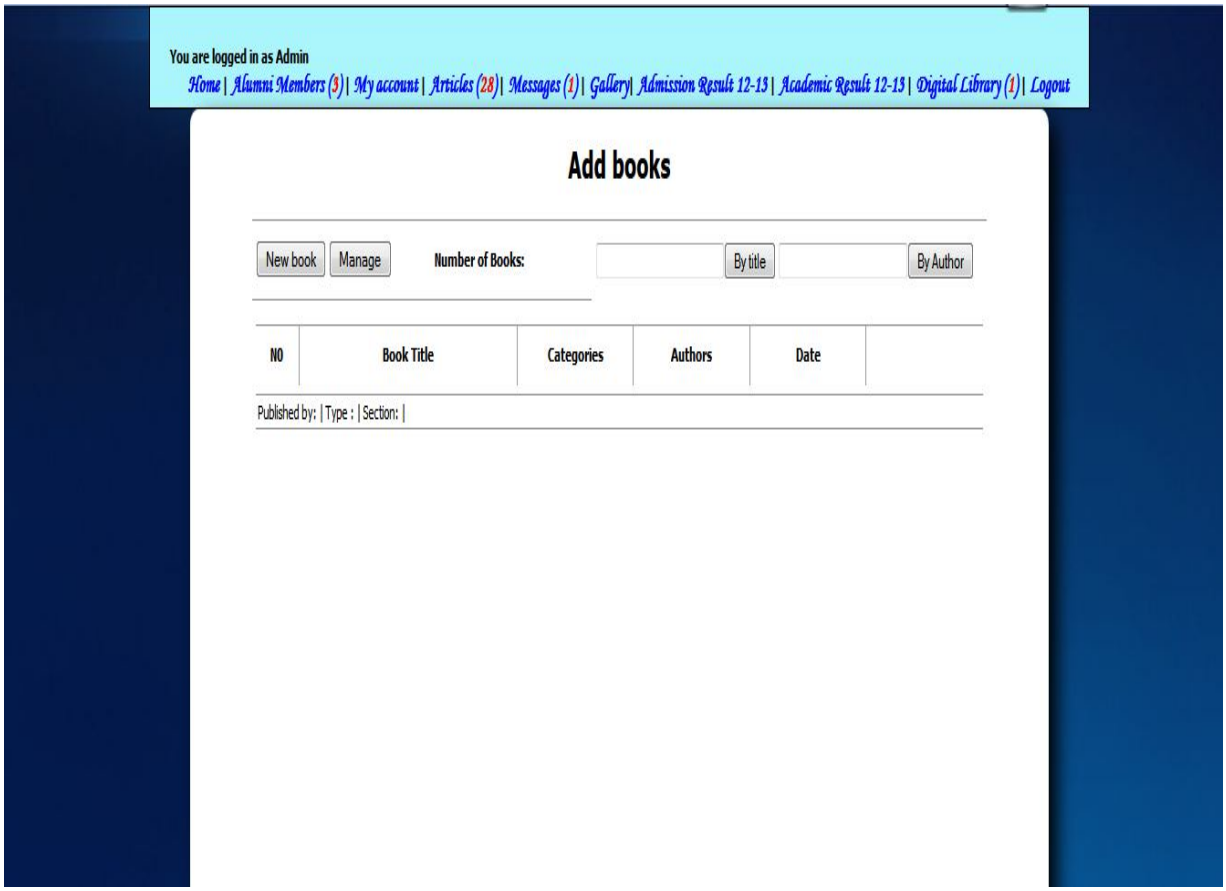


Figure 6.21.4: Admin can add new books in pdf format.

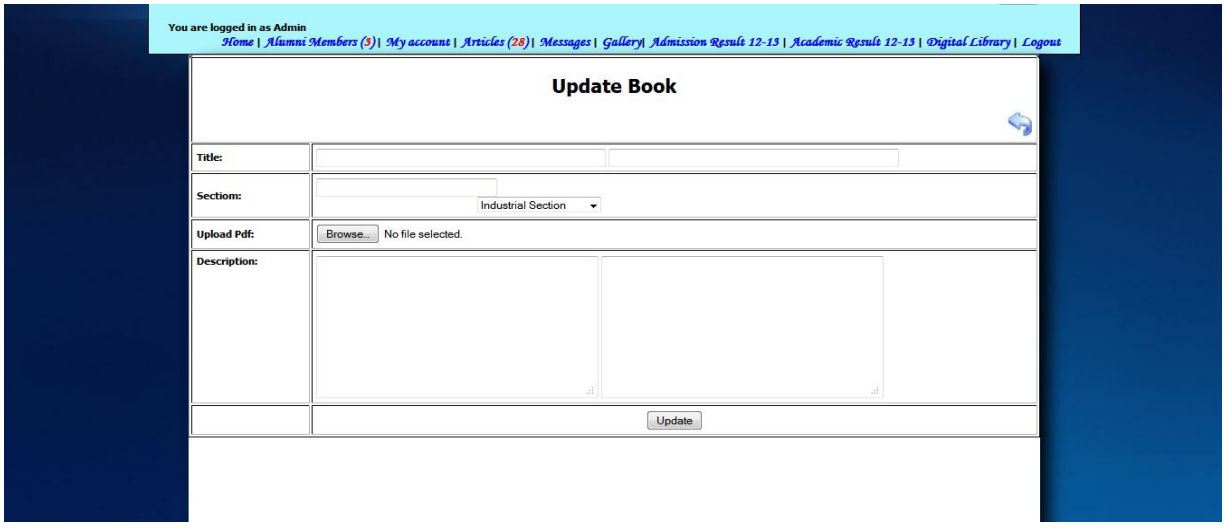


Figure 6.21.5: Admin can update pdf books posted by him.

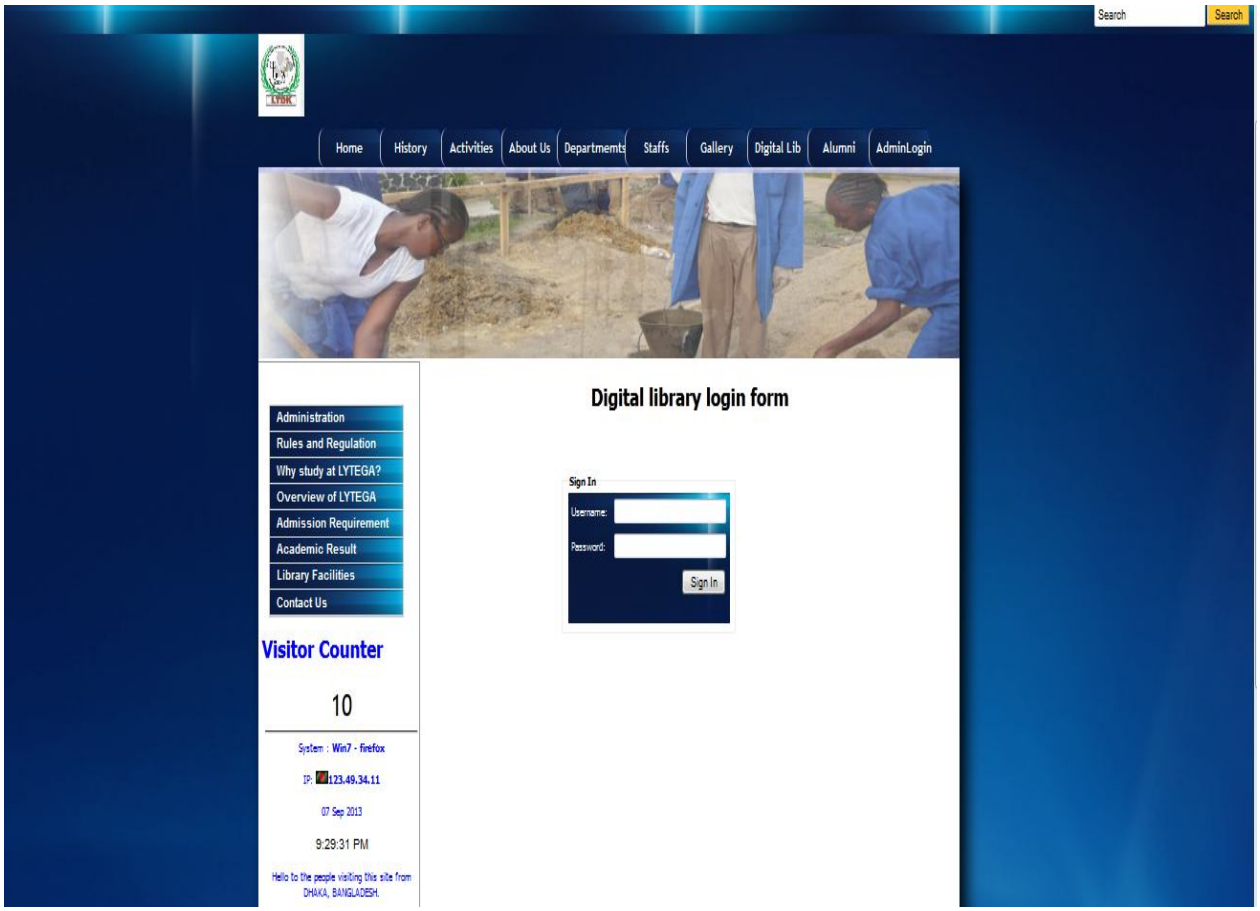


Figure 6.21.6: Digital library login form. [3]

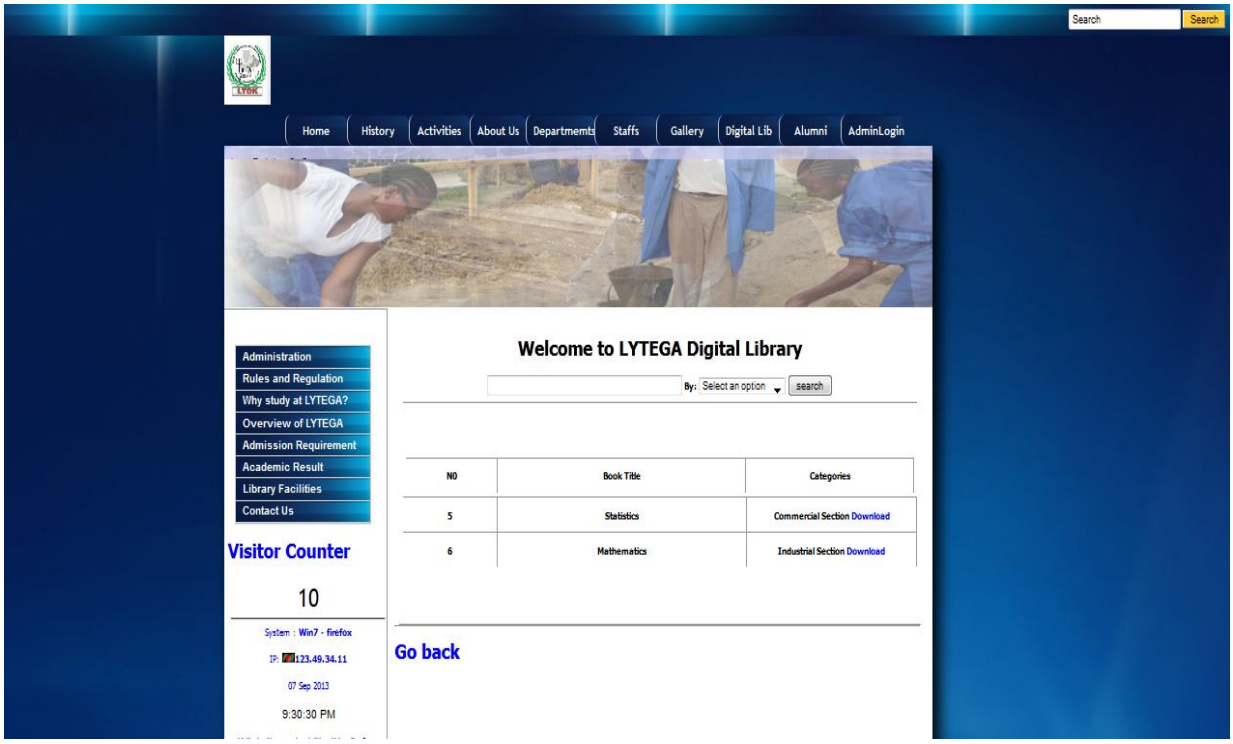


Figure 6.21.7: Digital library home page. [3]

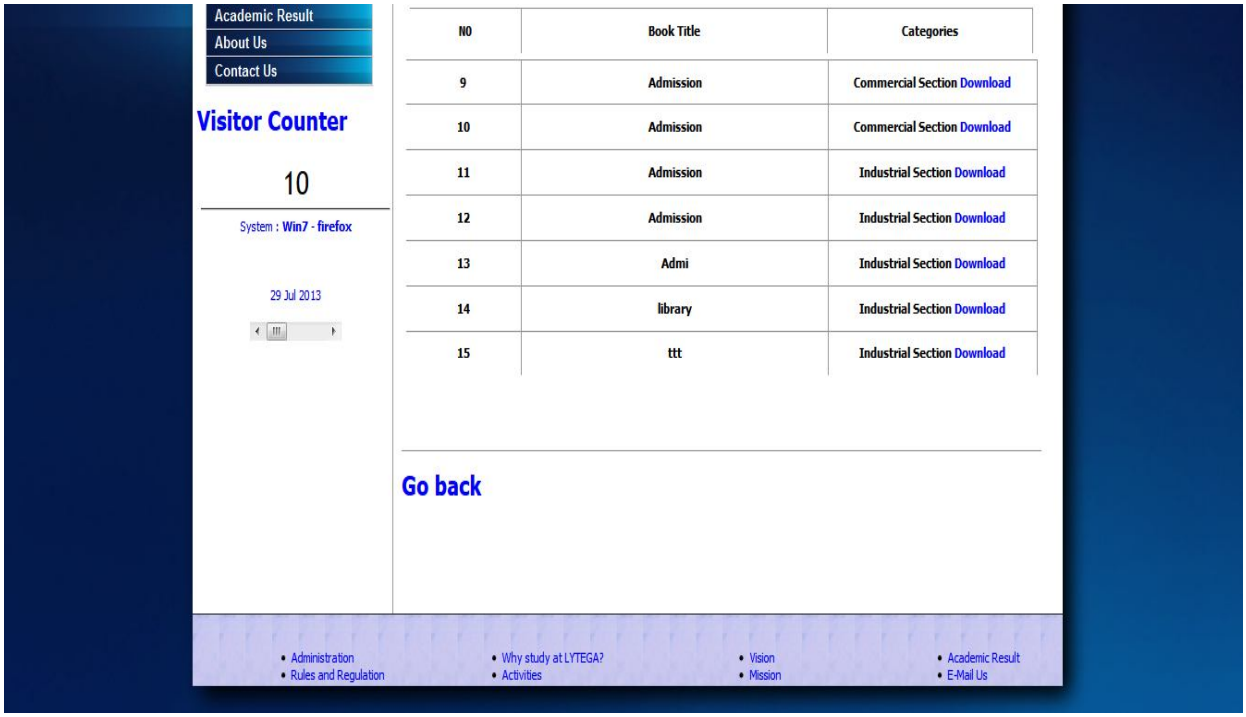


Figure 6.21.7: Users can download pdf books. [3]

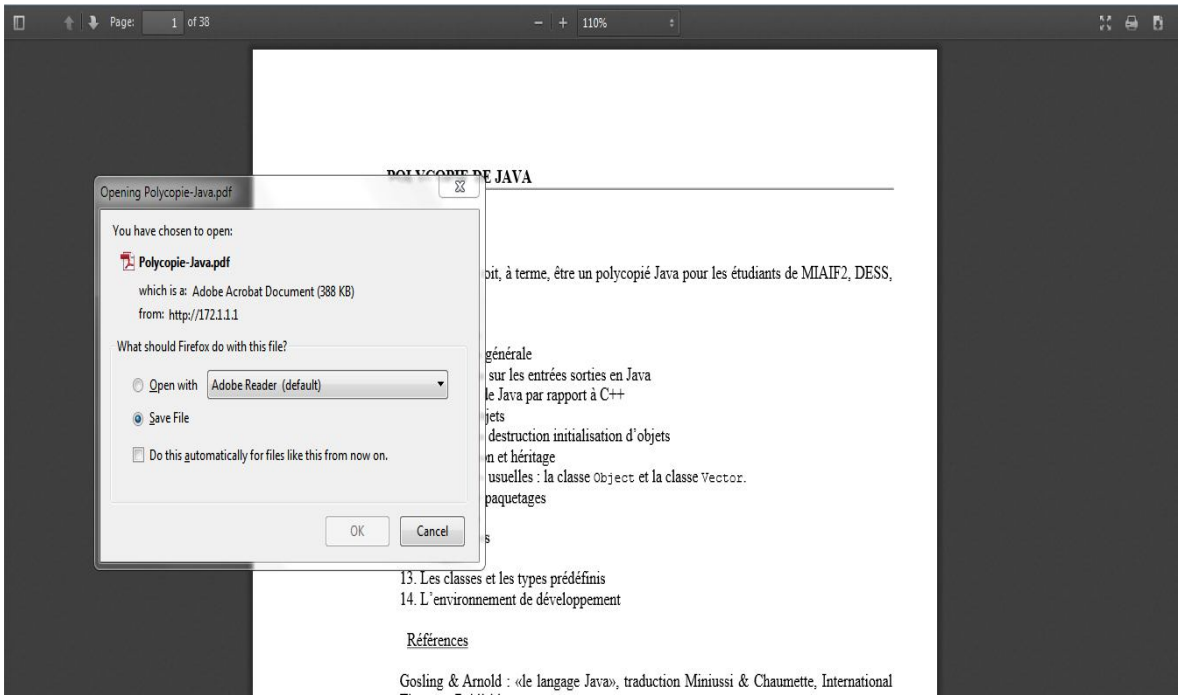


Figure 6.21.8: Users can download pdf books [3]

6.22 Academic Result page.

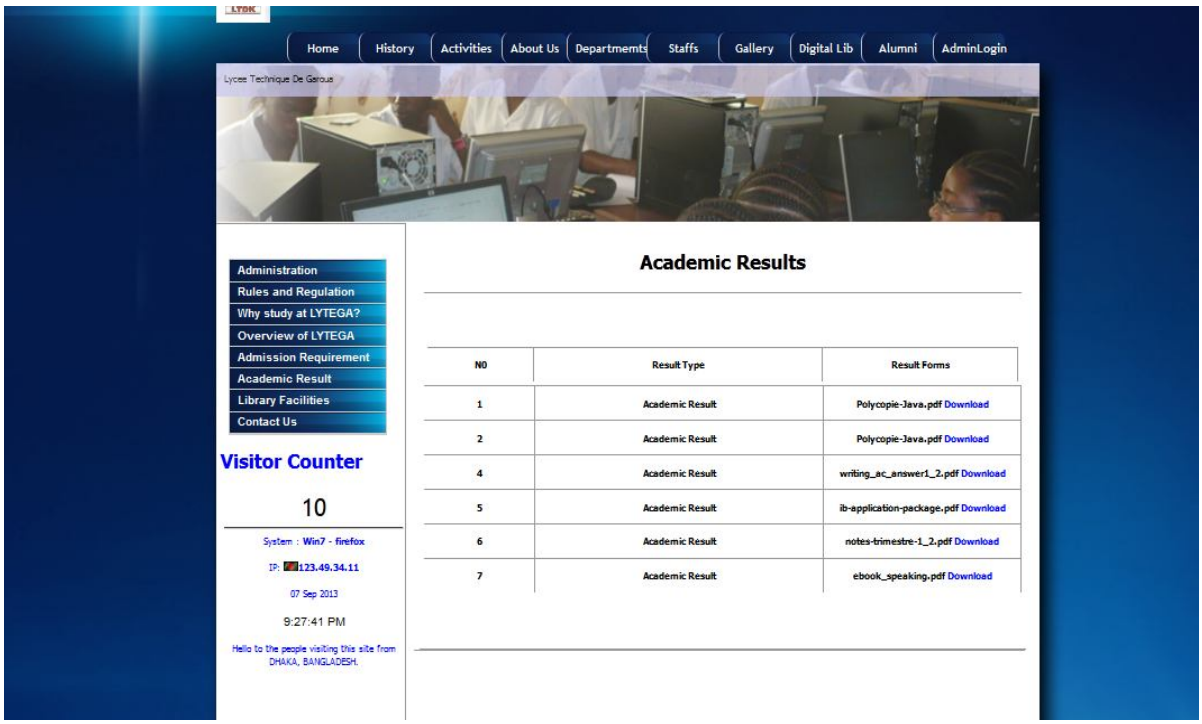


Figure 6.22.1: Academic Result page. [3]

6.23 Admission Result page.

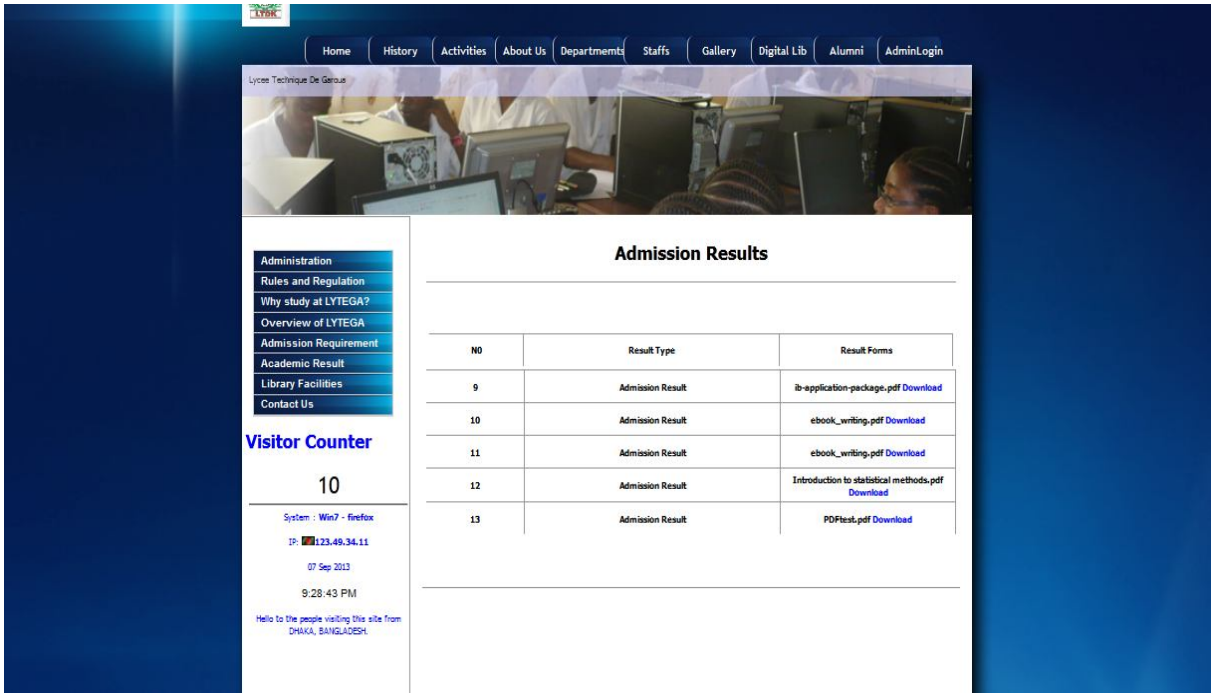


Figure 6.23.1: Admission Result page. [3]

6.24 Reset Alumni members' password.

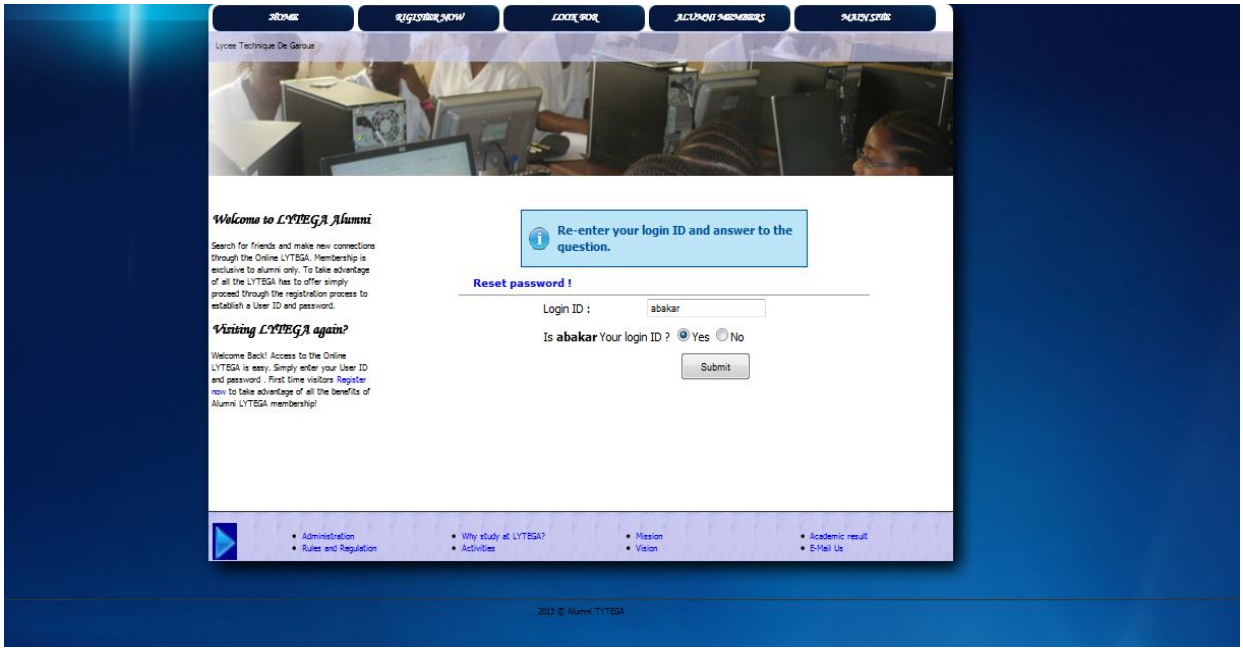


Figure 6.24.1: Reset Alumni members' password. [3]

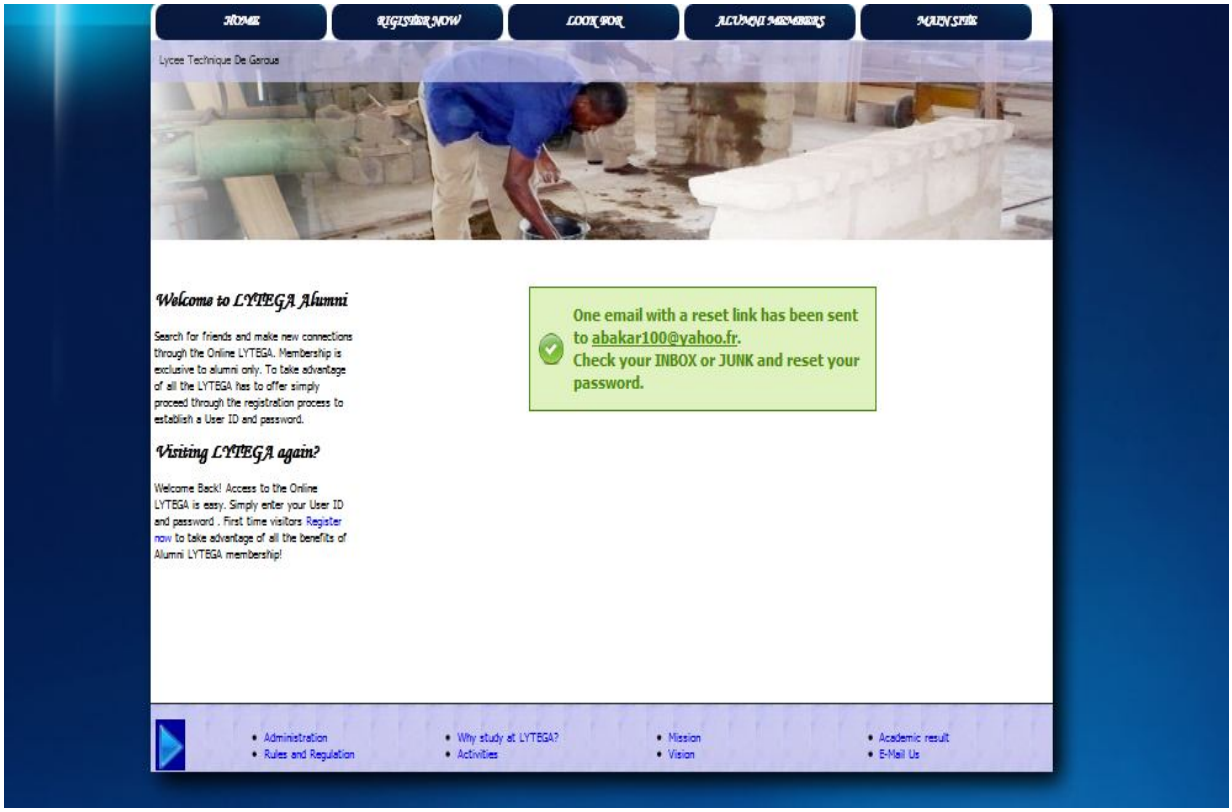


Figure 6.24.2: Reset Alumni members' password. [3]

Date : Saturday 07 September 2013 - 10:03:56
From: Support < reply@lytega.org >
To : abakar100@yahoo.fr
Subject : Reset password.

Hello Abakar Bouba !

You got some problems accessing your account in 127.0.0.1. You requested to change your password.

Click on the following link to reset your password.
http://127.0.0.1/alumni/?ref=ext&case=rst&mid=1377839274&sid=16130&token=af3b6a54e9e9338abc54258e3406e485

If you never requested this, then someone else did it on your behalf. Just ignore this message.

Thank you

This is an automatic message. Don't reply to it.

Date : Tuesday 03 September 2013 - 10:58:34
From: Support < reply@lytega.org >
To : abakar100@yahoo.fr
Subject : Reset password.

Hello Abakar Bouba !

You got some problems accessing your account in 127.0.0.1. You requested to change your password.

Click on the following link to reset your password.
http://127.0.0.1/alumni/?ref=ext&case=rst&mid=1377839274&sid=25331&token=f7bbcc6ef14fd79655f09efb14b99316

If you never requested this, then someone else did it on your behalf. Just ignore this message.

Thank you

This is an automatic message. Don't reply to it.

Figure 6.24.3: Reset Alumni members' password. [3]

6.21 Table Design of the System

Digital Library: Table

No.	Field Name	Data Type
1	id	Int(5)
2	title	Varchar(10)
3	author	Varchar(10)
4	date	Varchar(15)
5	Description	Varchar(50)

Admission Result: Table

No.	Field Name	Data Type
1	Admin_id	Int(6)
2	title	Varchar(10)
3	date	Int(15)
4	author	Varchar(15)
5	desciption	Varchar(30)

Visitor Counter: Table

No.	Field Name	Data Type
1	id	Int(5)
2	counter	Bigint(10)
3	ip	Varchar(1)
4	browser	Varchar(1)
5	country	Varchar(1)

Alumni Members: Table

No.	Field Name	Data Type
1	date	Int(15)
2	fname	Varchar(50)
3	lname	Varchar(50)
4	bday	Varchar(60)
5	M_status	Varchar(10)
6	Mar_st_details	Varchar(150)
7	Residence_add	text
8	Business_add	text
9	Student_id	Varchar(10)
10	Pass_year	Int(4)
11	Department	Varchar(10)
12	program	Varchar(10)
13	photo	Varchar(15)
14	occupation	Varchar(10)
15	Occup_detail	text
16	Current_country	Varchar(50)
17	Cu_website	Varchar(100)
18	Job_experience	text
19	education	text

Gallery: Table

No.	Field Name	Data Type
1	Gal_id	Int(15)
2	Al_description	Varchar(10)
3	author	Varchar(25)
4	Gal_date	Varchar(150)
5	Al_name	Varchar(50)
6	photo	Varchar(15)

Message: Table

No.	Field Name	Data Type
1	title	Varchar(50)
2	name	Varchar(50)
3	photo	Varchar(15)
4	country	Varchar(50)
5	email	Varchar(50)
6	query	Varchar(200)
7	Message_date	Int(15)

Articles: Table

No.	Field Name	Data Type
1	Art_id	Varchar(15)
2	Art_date	Int(15)
3	title	Varchar(140)
4	image	Varchar(15)
5	Read_time	Int(3)
6	author	Varchar(25)

Login: Table

No.	Field Name	Data Type
1	id	Int(15)
2	username	Varchar(10)
3	password	text
4	email	Varchar(60)
5	Type	Varchar(10)

6.22 General View of the Database [19]

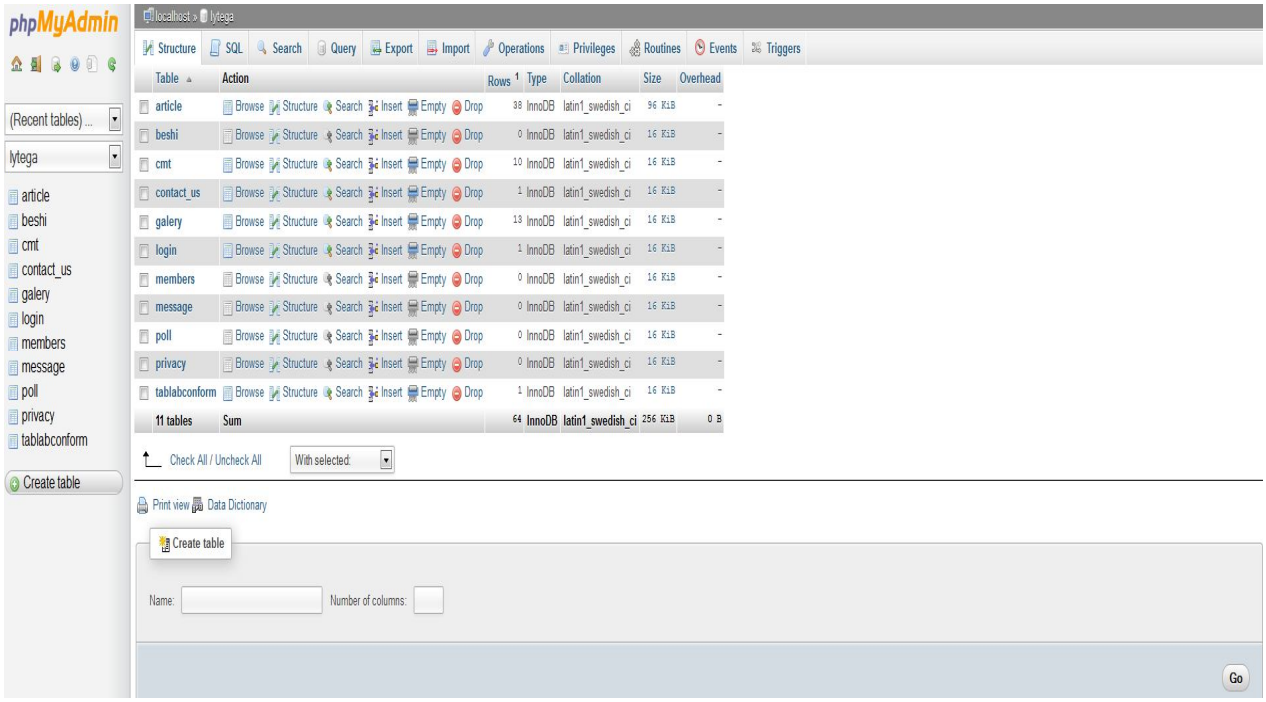


Figure 6.22: Database showing all the tables created.

6.23 Tables Created in the Database [19]

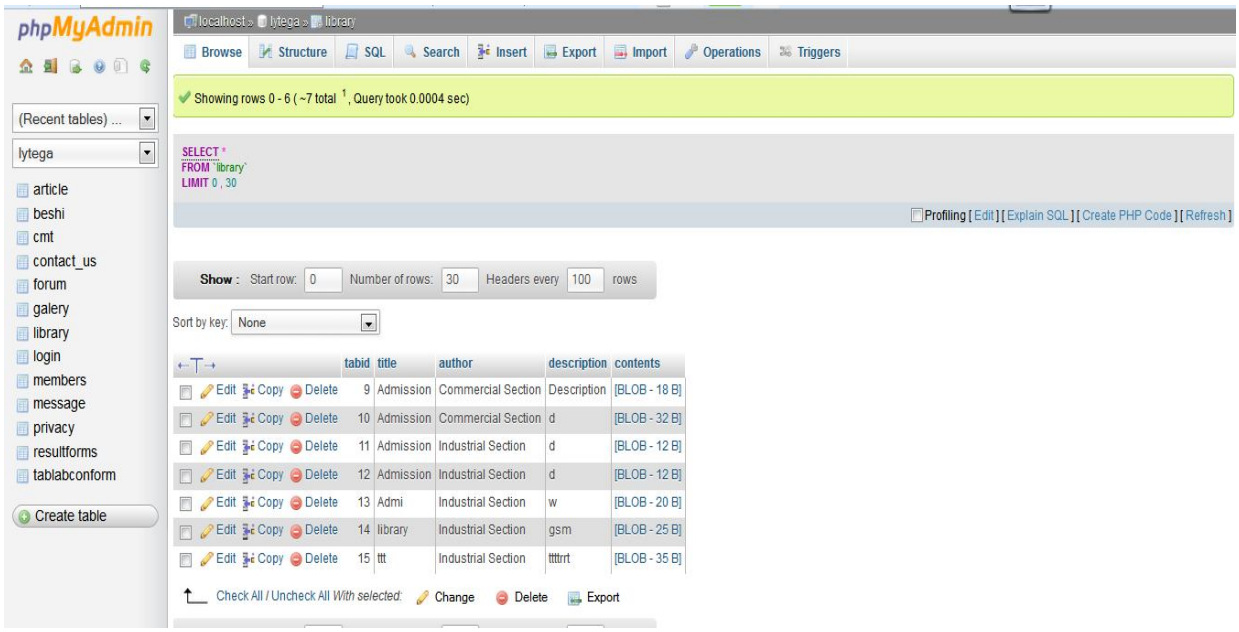


Figure 6.23.1: Digital Library table showing all the fields created

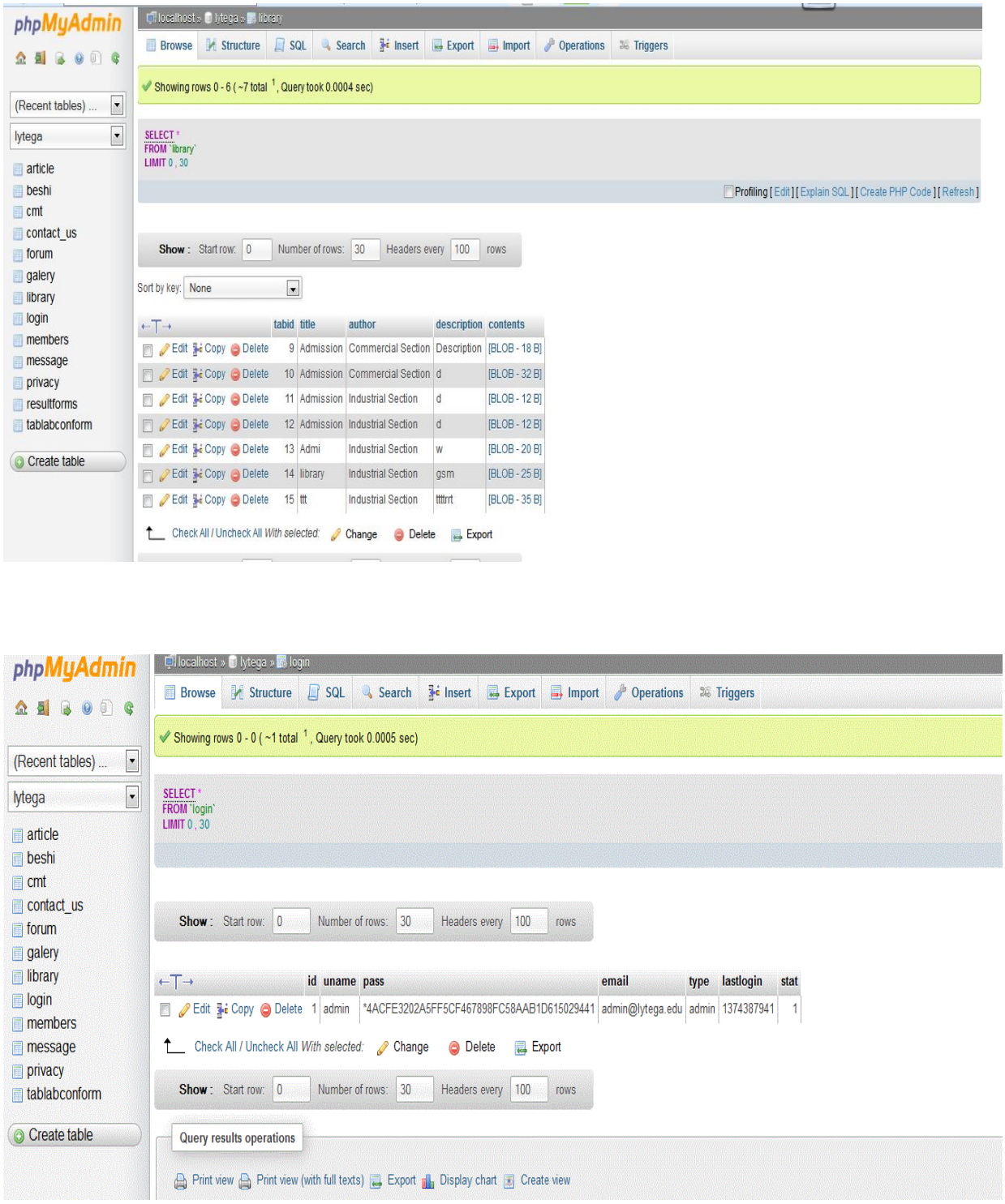
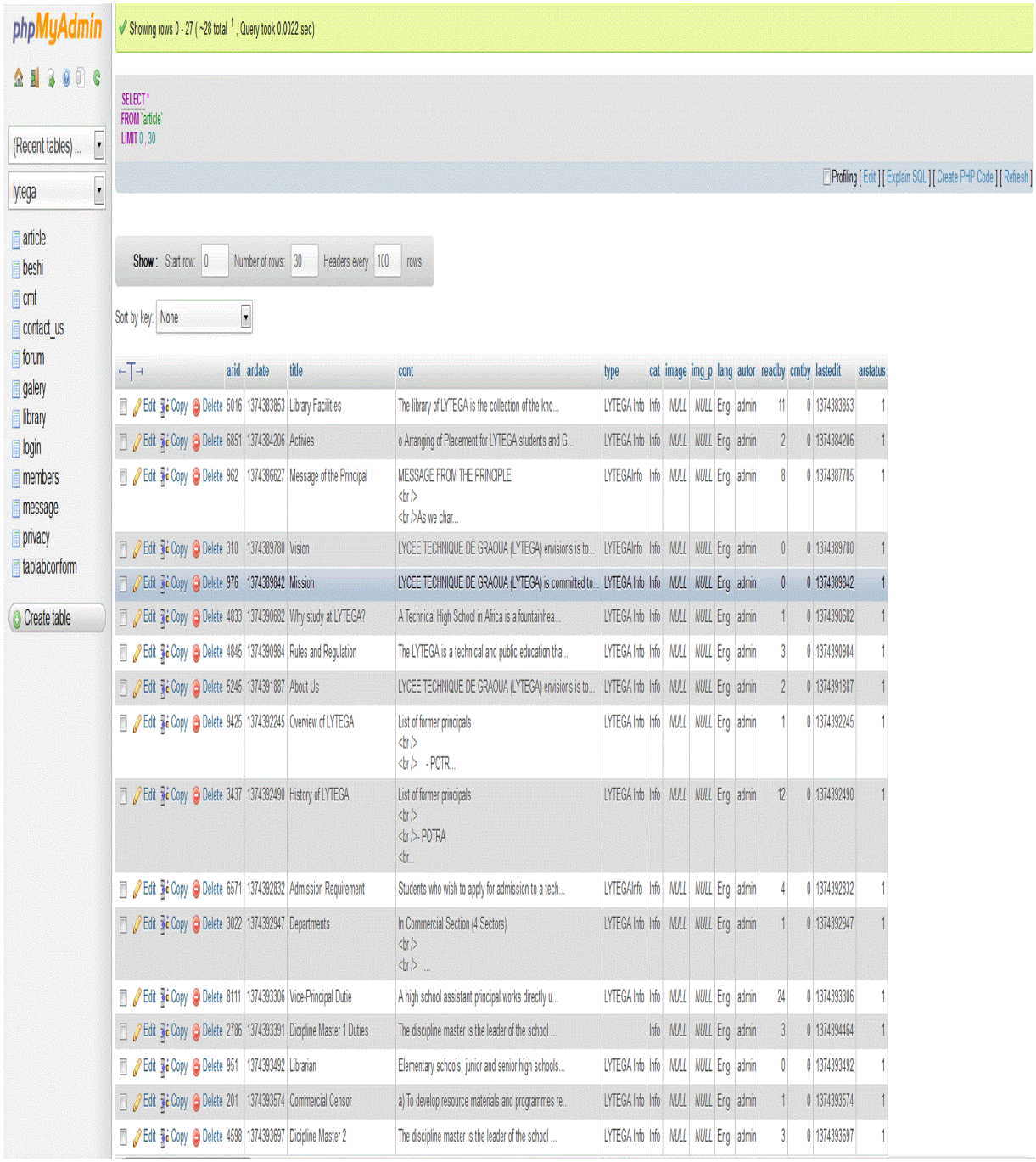


Figure 6.23.2: Login table showing all the fields created


phpMyAdmin
(Recent tables) ...
lytega
article
beshi
cmt
contact_us
forum
galery
library
login
members
message
privacy
tablabconform
Create table
Showing rows 0 - 27 (~28 total , Query took 0.0022 sec)
SELECT *
FROM `article`
LIMIT 0 , 30
Profiling [Edit] [Explain SQL] [Create PHP Code] [Refresh]
Show : Start row: 0 Number of rows: 30 Headers every 100 rows
Sort by key: None
arid ardate title cont type cat image img_p lang autor readby cmtby lastedit arstatus
Edit Copy Delete 5016 1374383853 Library Facilities The library of LYTEGA is the collection of the kno... LYTEGA Info Info NULL NULL Eng admin 11 0 1374383853 1
Edit Copy Delete 6851 1374384206 Activies o Arranging of Placement for LYTEGA students and G... LYTEGA Info Info NULL NULL Eng admin 2 0 1374384206 1
Edit Copy Delete 962 1374386627 Message of the Principal MESSAGE FROM THE PRINCIPLE

As we char... LYTEGAInfo Info NULL NULL Eng admin 8 0 1374387705 1
Edit Copy Delete 310 1374389780 Vision LYCEE TECHNIQUE DE GRAOUA (LYTEGA) envisions is to... LYTEGAInfo Info NULL NULL Eng admin 0 0 1374389780 1
Edit Copy Delete 976 1374389842 Mission LYCEE TECHNIQUE DE GRAOUA (LYTEGA) is committed to... LYTEGA Info Info NULL NULL Eng admin 0 0 1374389842 1
Edit Copy Delete 4833 1374390682 Why study at LYTEGA? A Technical High School in Africa is a fountainhea... LYTEGA Info Info NULL NULL Eng admin 1 0 1374390682 1
Edit Copy Delete 4845 1374390984 Rules and Regulation The LYTEGA is a technical and public education tha... LYTEGA Info Info NULL NULL Eng admin 3 0 1374390984 1
Edit Copy Delete 5245 1374391887 About Us LYCEE TECHNIQUE DE GRAOUA (LYTEGA) envisions is to... LYTEGA Info Info NULL NULL Eng admin 2 0 1374391887 1
Edit Copy Delete 9425 1374392245 Overview of LYTEGA List of former principals

 - POTR... LYTEGA Info Info NULL NULL Eng admin 1 0 1374392245 1
Edit Copy Delete 3437 1374392490 History of LYTEGA List of former principals

- POTRA <br... LYTEGA Info Info NULL NULL Eng admin 12 0 1374392490 1
Edit Copy Delete 6571 1374392832 Admission Requirement Students who wish to apply for admission to a tech... LYTEGAInfo Info NULL NULL Eng admin 4 0 1374392832 1
Edit Copy Delete 3022 1374392947 Departments In Commercial Section (4 Sectors)

 ... LYTEGA Info Info NULL NULL Eng admin 1 0 1374392947 1
Edit Copy Delete 8111 1374393306 Vice-Principal Dutie A high school assistant principal works directly u... LYTEGA Info Info NULL NULL Eng admin 24 0 1374393306 1
Edit Copy Delete 2786 1374393391 Dicipline Master 1 Duties The discipline master is the leader of the school ... Info NULL NULL Eng admin 3 0 1374394464 1
Edit Copy Delete 951 1374393492 Librarian Elementary schools, junior and senior high schools... LYTEGA Info Info NULL NULL Eng admin 0 0 1374393492 1
Edit Copy Delete 201 1374393574 Commercial Censor a) To develop resource materials and programmes re... LYTEGA Info Info NULL NULL Eng admin 1 0 1374393574 1
Edit Copy Delete 4598 1374393697 Dicipline Master 2 The discipline master is the leader of the school ... LYTEGA Info Info NULL NULL Eng admin 3 0 1374393697 1

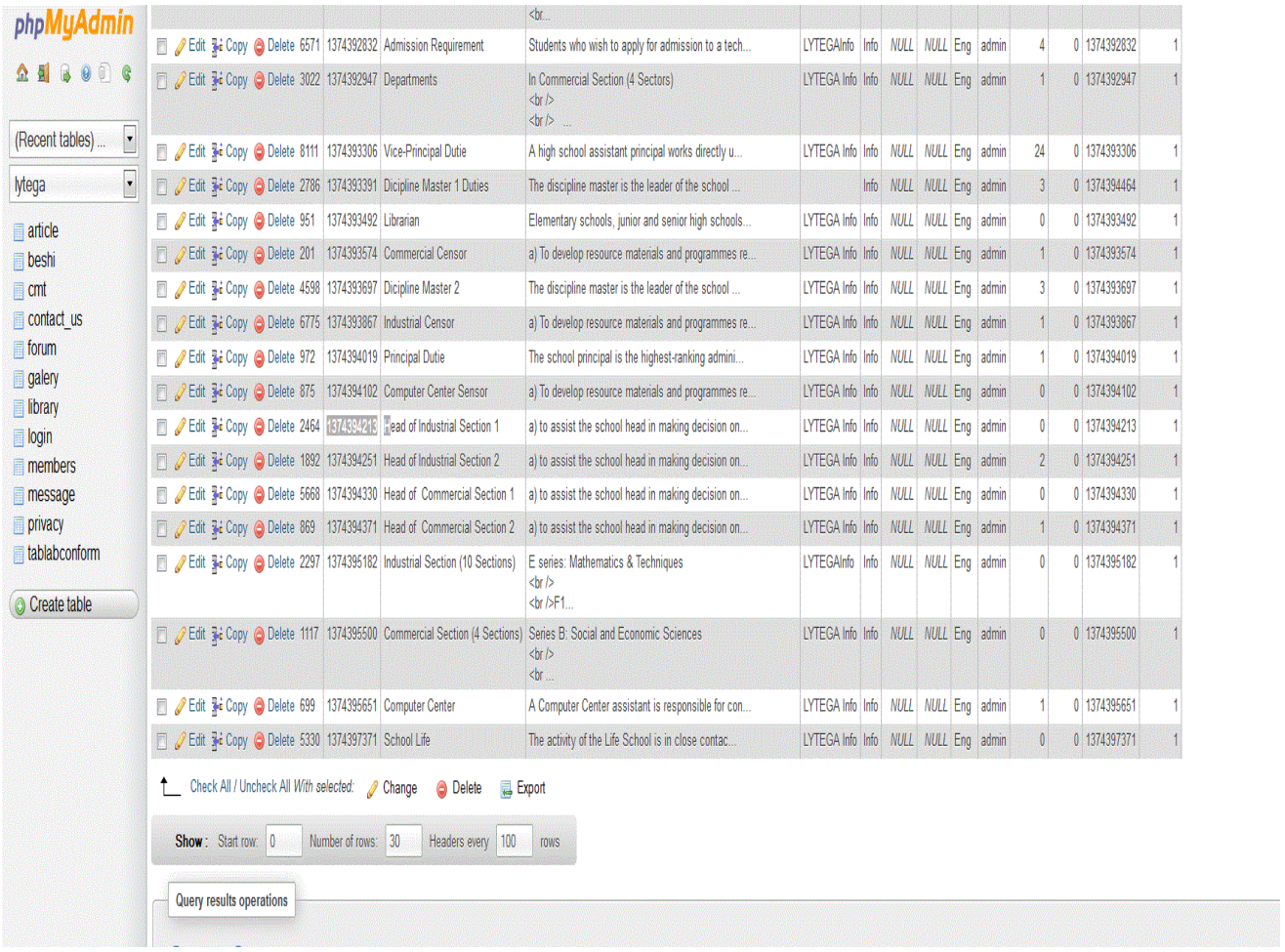


Figure 6.23.3: Article table showing all the fields created

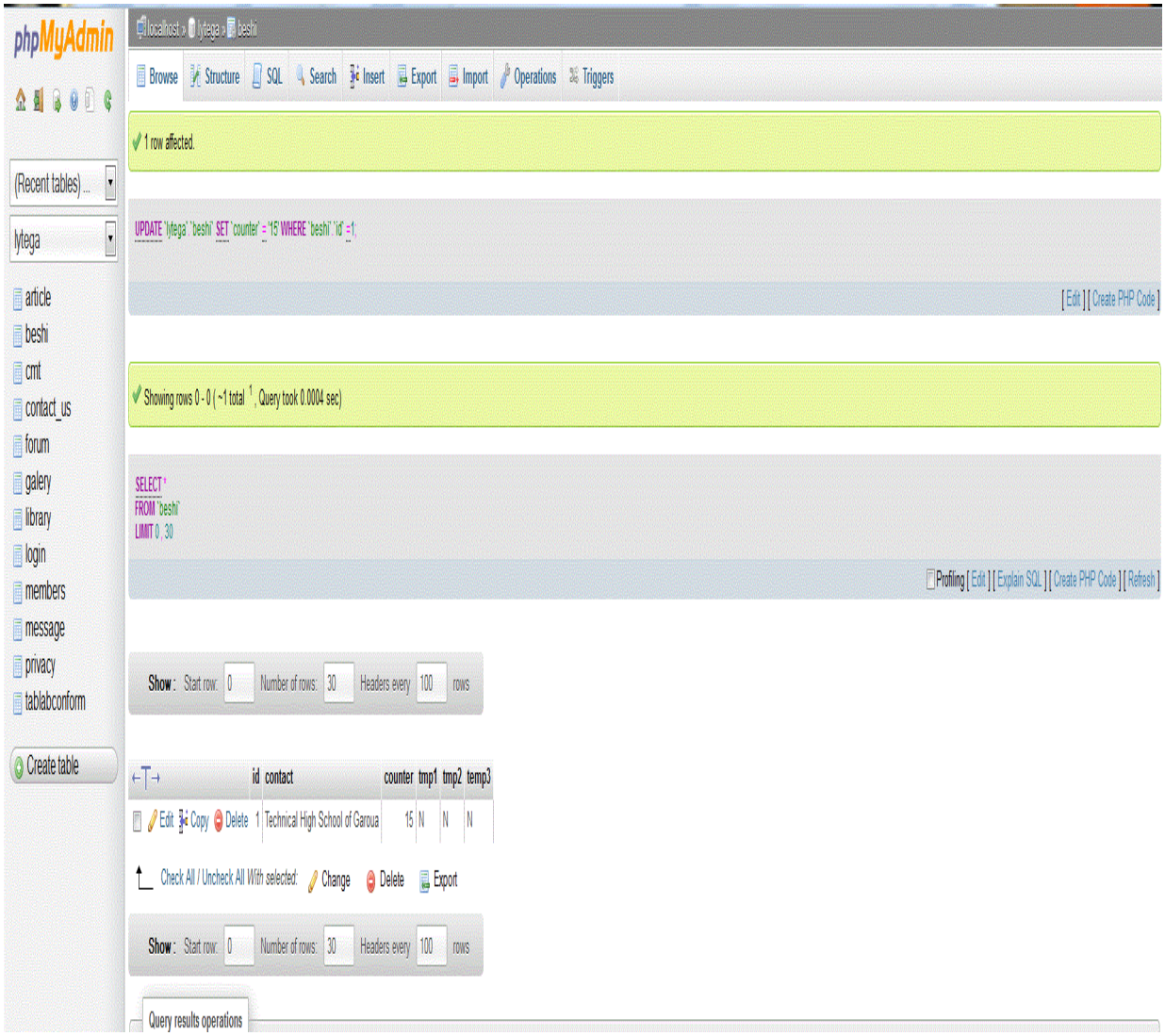


Figure 6.23.3: Visitor Counter table showing all the fields created

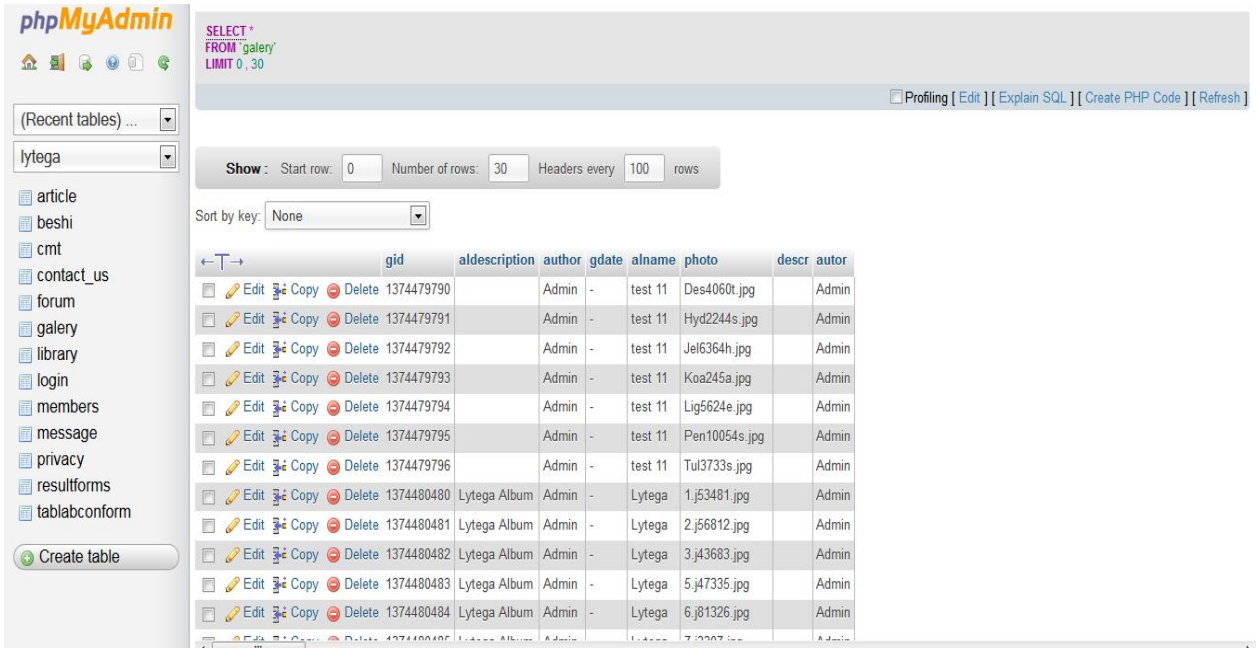


Figure 6.23.5: Gallery table showing all the fields created

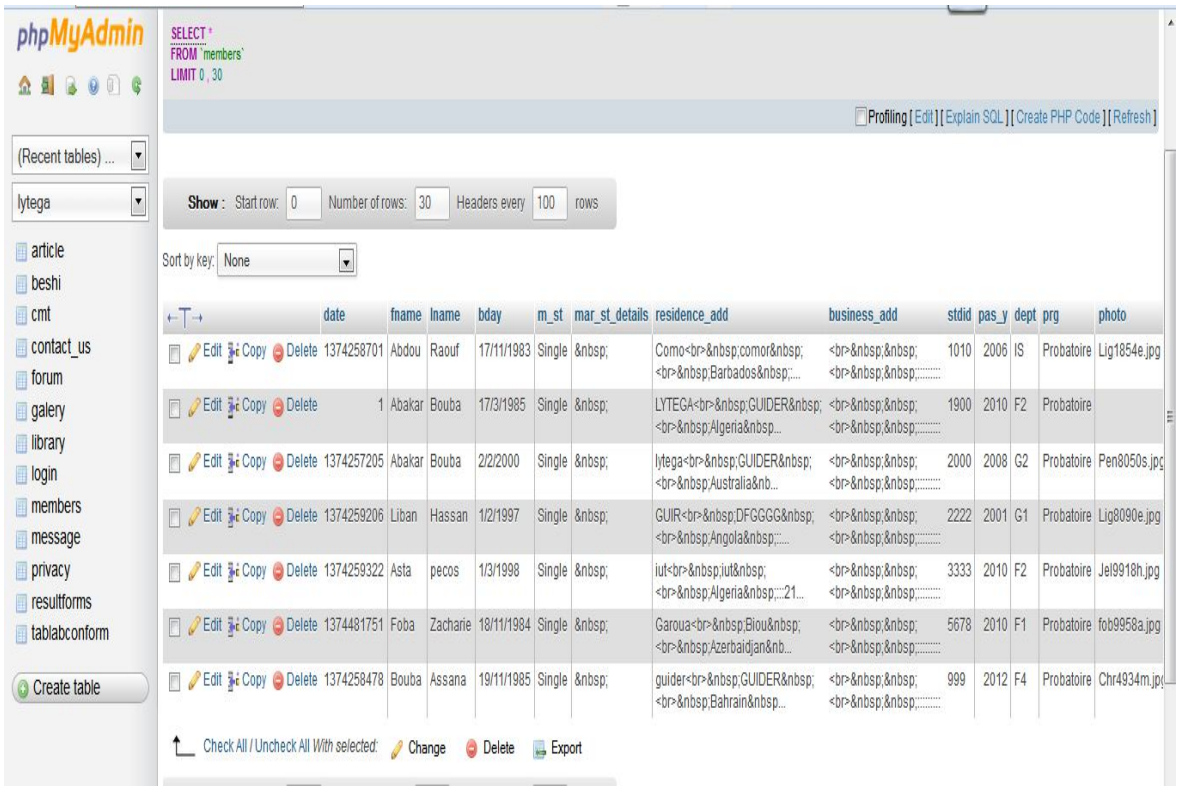


Figure 6.23.6: Alumni Member table showing all the fields created

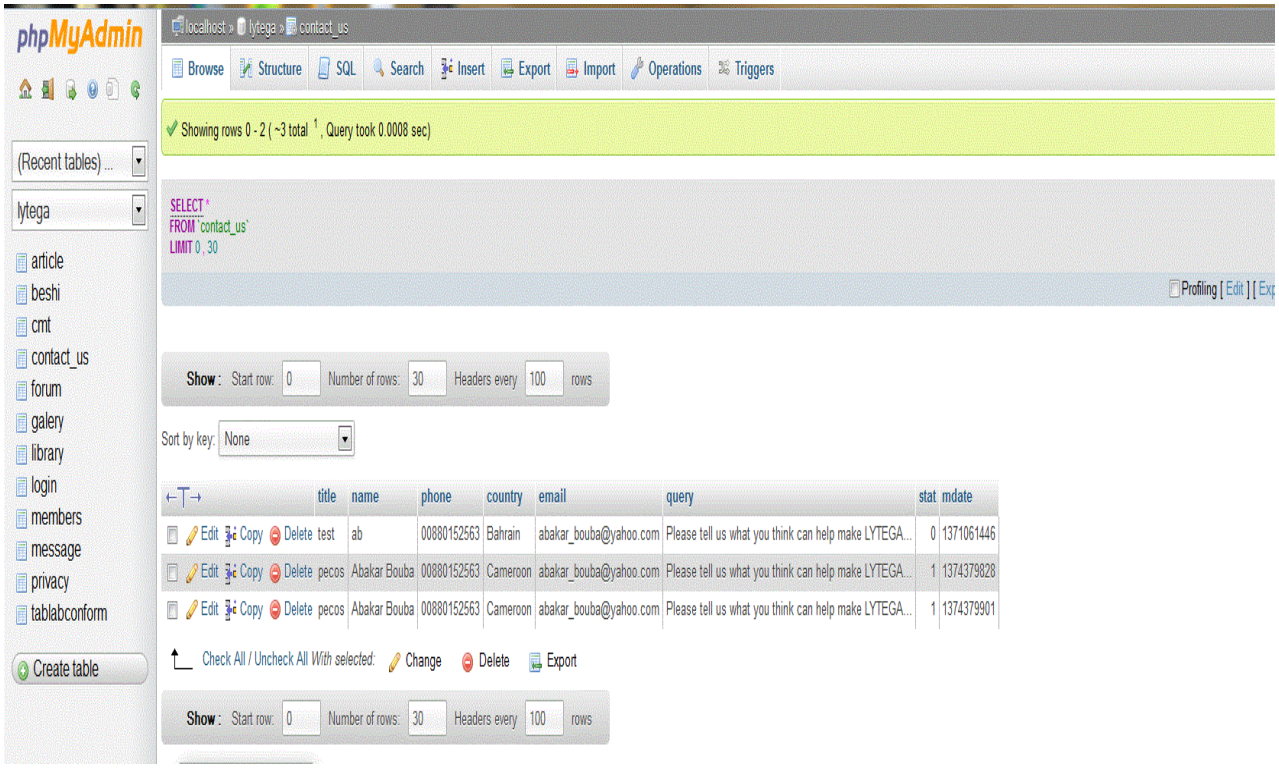


Figure 6.23.7: Contact us table showing all the fields created

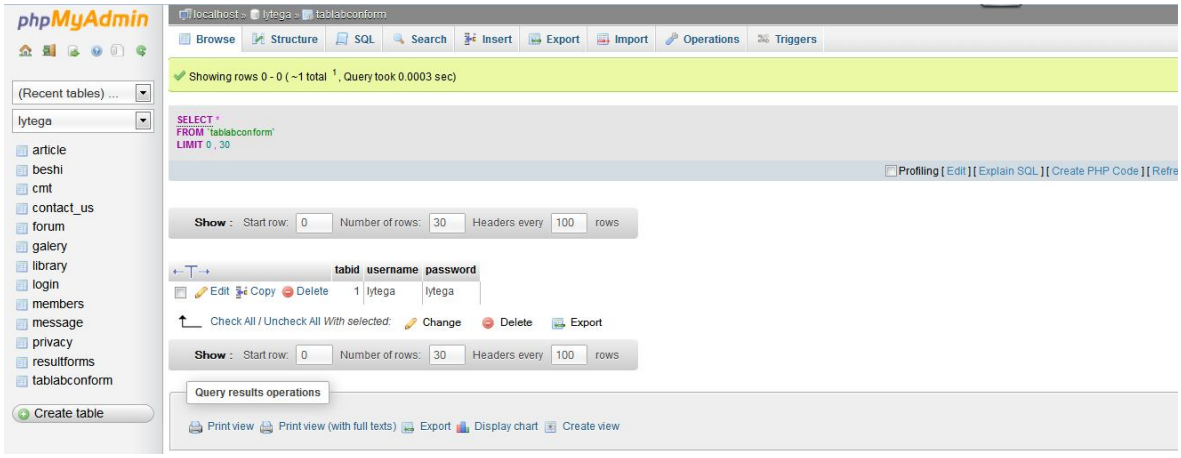


Figure 6.23.8: Digital library login table showing all the fields created

6.24 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:

- Complexities and difficulties related to prototyping, gathering of user requirements and adjusting the website according to their changing needs.
- Integrating the different modules of the website also turned out to be a very challenging task during our work.
- Issues related to the choice of the Technical High School 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.
- 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.

Chapter 7: System Testing

7.1 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.

7.2 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 [].
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.

7.3 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 [14].
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.

7.4 Unit Testing

In unit testing we test each module individually and integrate it with the overall system [14]. 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.

7.5 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, Digital Library, Visitor counter, Administration, 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.

7.6 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.

7.7 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 8: Evaluation and Conclusion

8.1 An Evaluation of the Project Objectives

The Technical High School website 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 that the Technical High School website is working and addressing the needs of users (students and staffs) 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 data being input by performing the above mentioned methods.
- The system is capable to show alert, confirmation, information messages to the user as per requirements.
- The site 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

8.2 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 of Technical High School website as impedance to software development.

To find out how well the 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 other Technical High School websites omitted?

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.

8.3 Future Work

Future work is what we intend to do in future to improve on our Technical High School 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: It must be easily accessible, more flexible and very easy to use even by non-computer literates.
- More powerful database system like Oracle will be used in future.

8.4 Conclusion

A website for the Technical High School in Africa has 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:

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[12] Cascading Style Sheets (CSS) Tutorial on http://www.w3schools.com/c ss/ , March-April 2013.

[13] JavaScript Tutorials on http://www.w3schools.com/js/ , March-April 201 3.

[14] System Analysis and Design by Elias M. Awad, Pg. 8 to 66.

[15] Software Engineering: A Practitioner Approach, 6th Edition by Pressma n, Pg. 55 to 79.

[16] Dreamweaver Tutorials from http://www.entheosweb.com/dreamweaver/, March 2013.

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[19] MySQL Bible by Tim Converse Joyce with Clark Morgan. Pg. 45 to 60.

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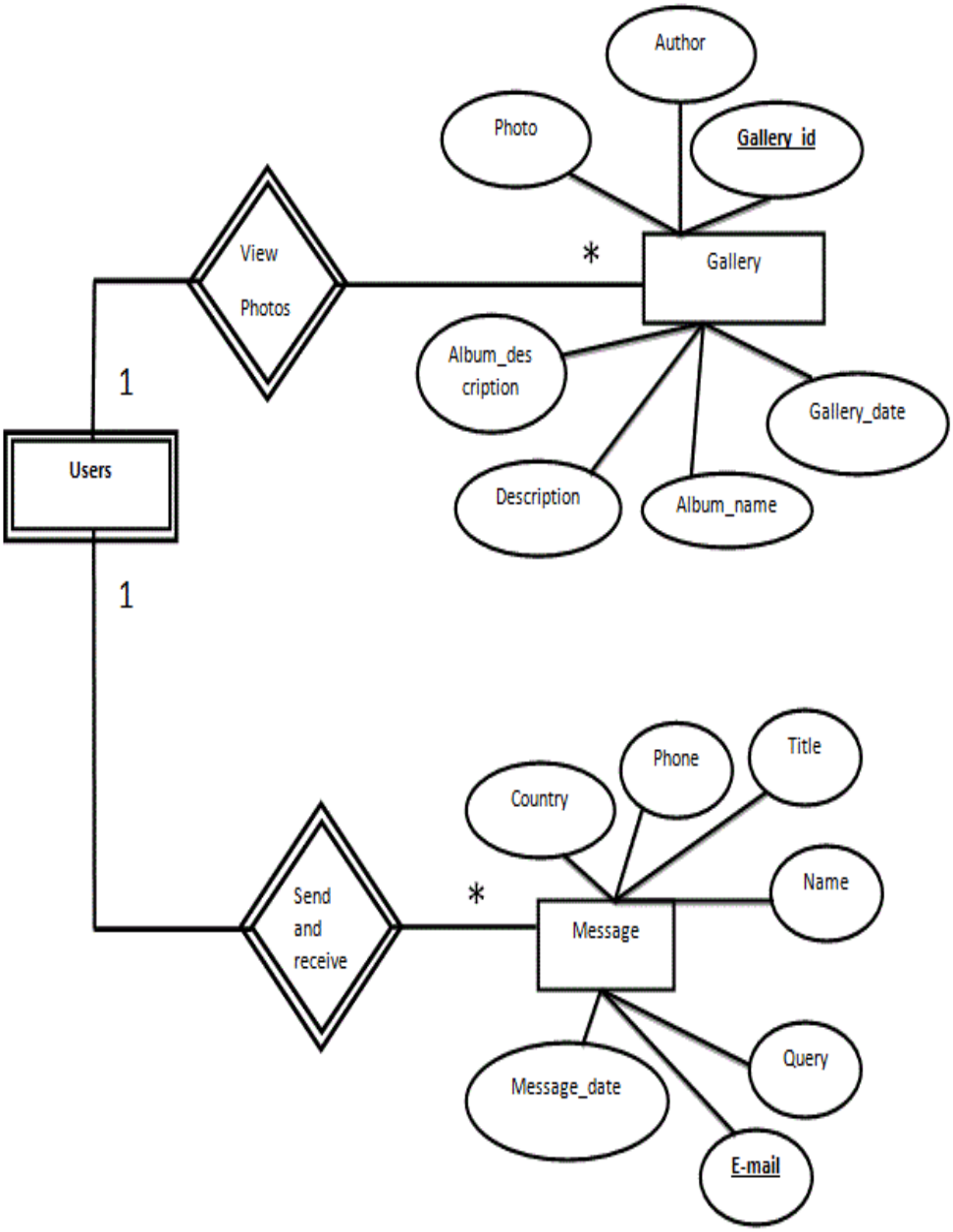
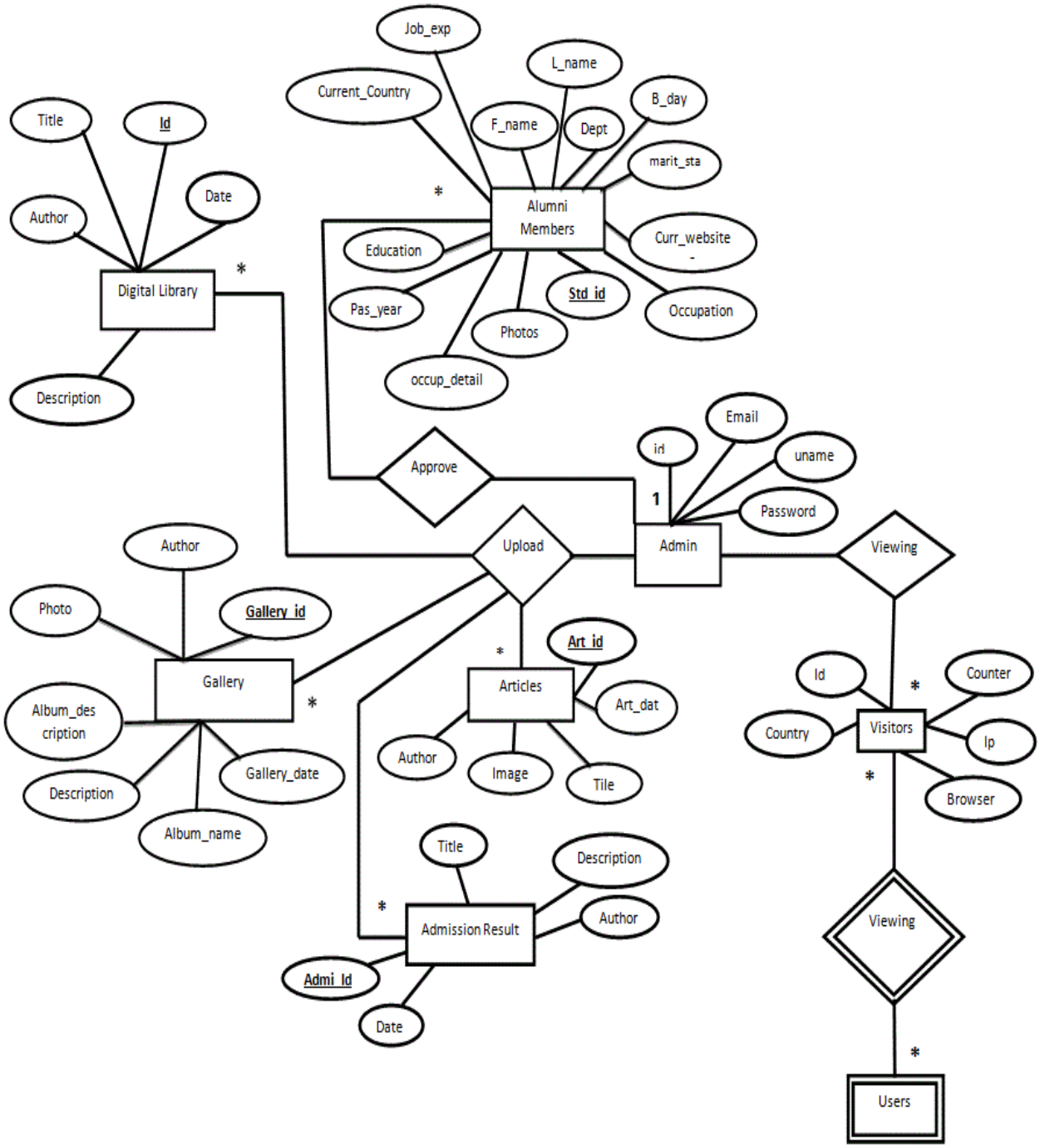
[21] MySQL Web Development by Wrox P2P, Pg. 9, 25, 36, 49.

Appendix A: Entity-Relationship Diagrams

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

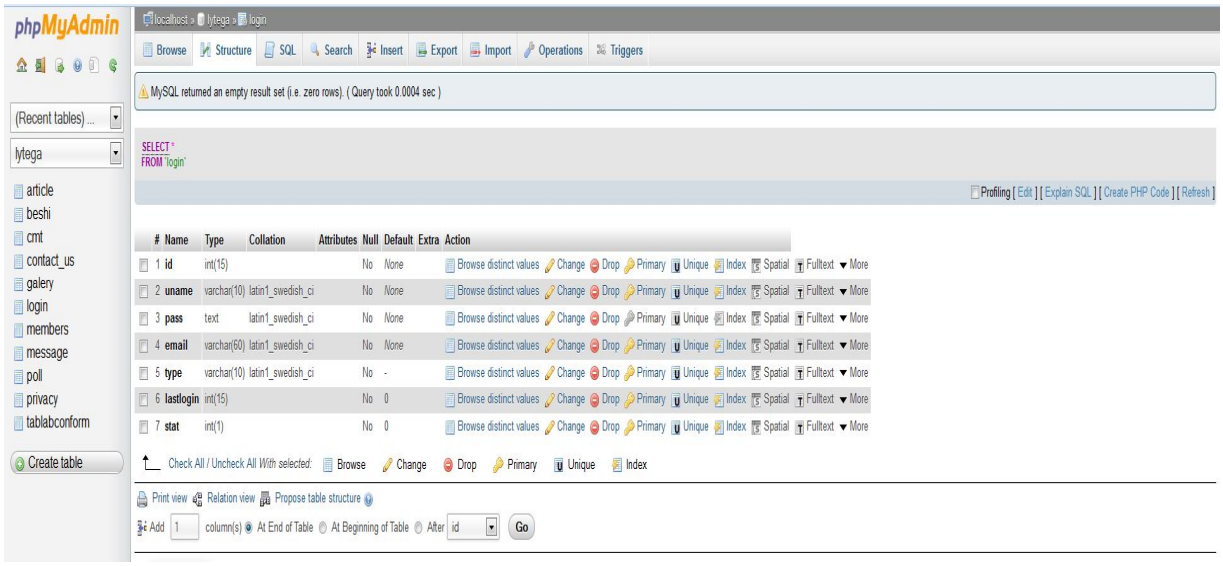


E-R Diagram showing the relationship between the Admin and the various modules

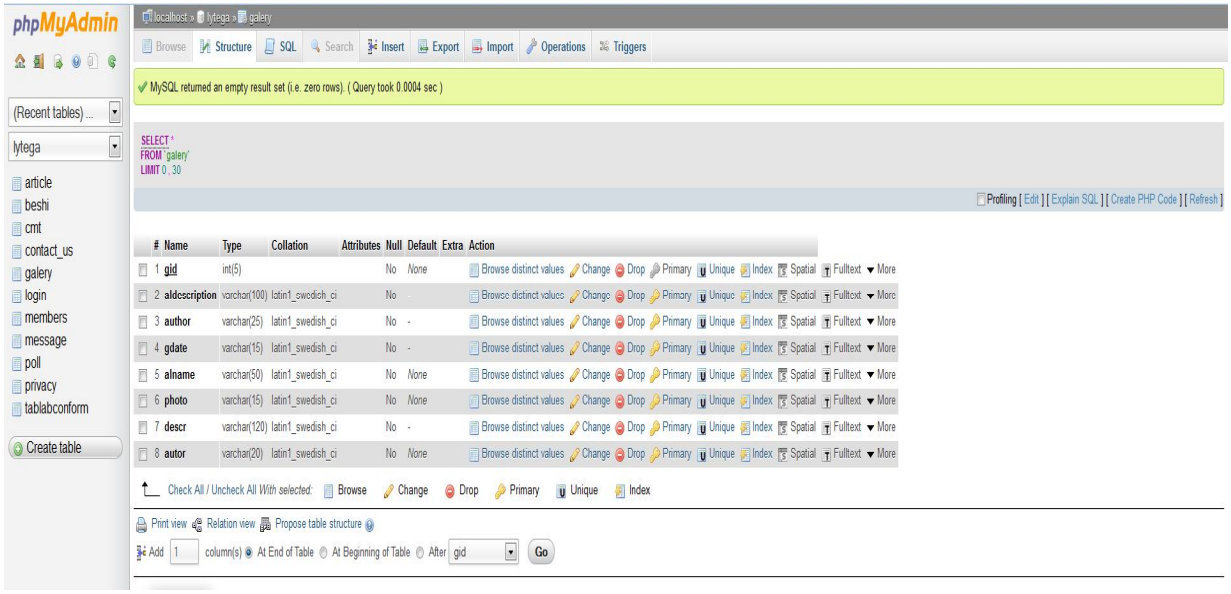


Appendix B: Tables created in the Database

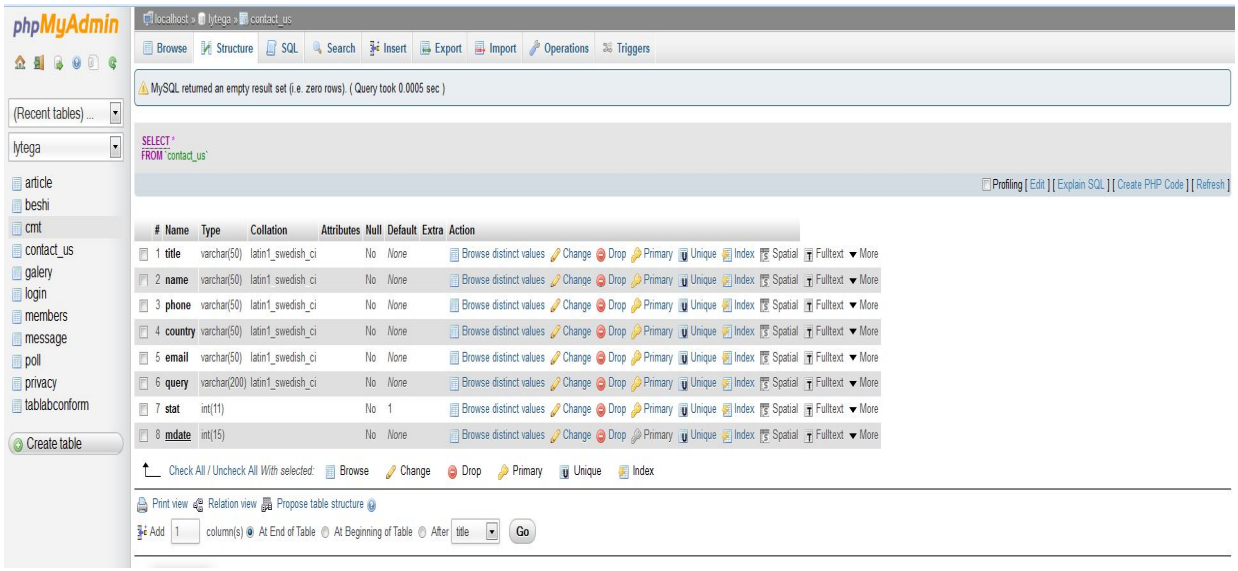
Login Table



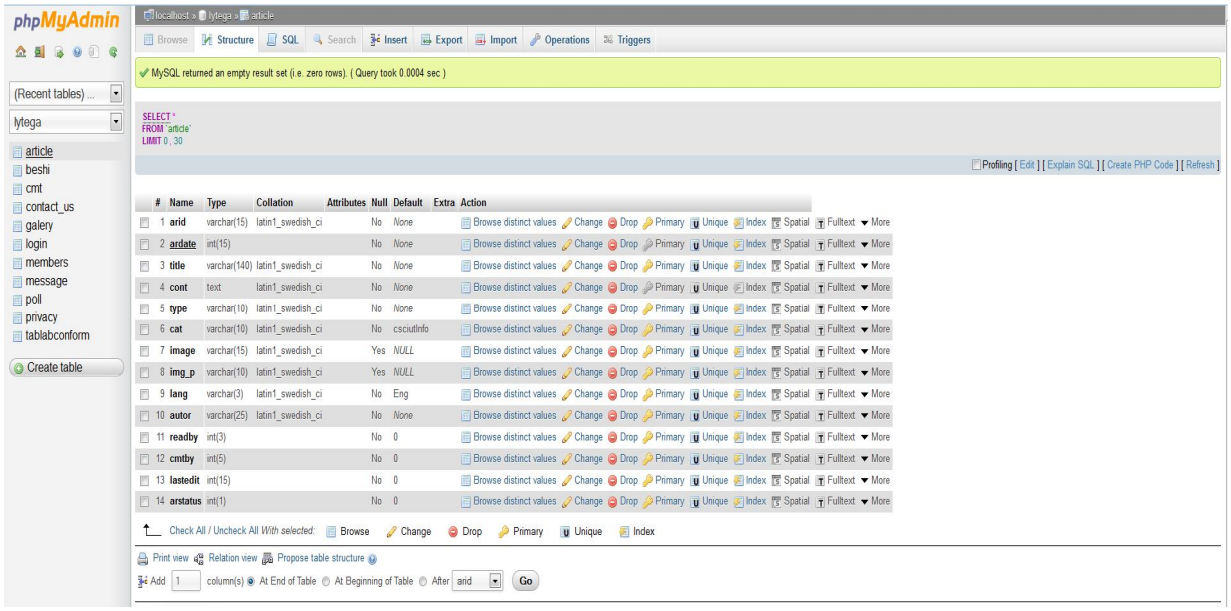
Gallery Table



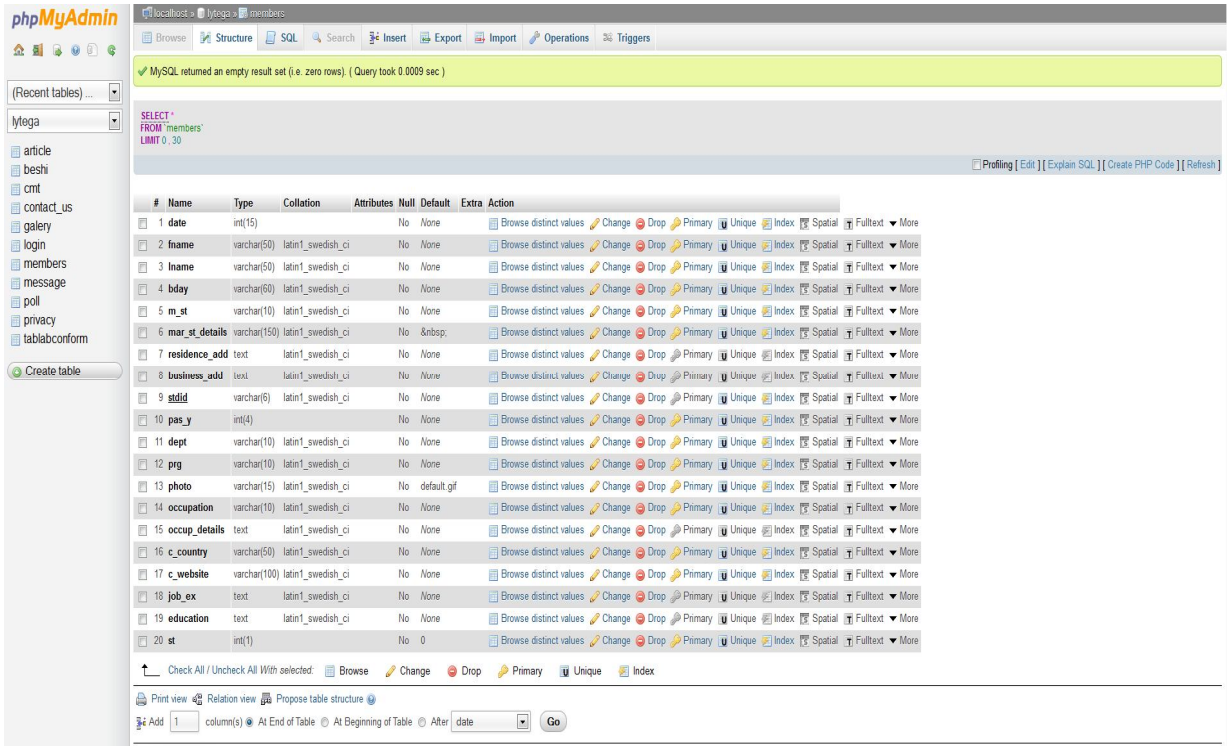
Contact Us Table



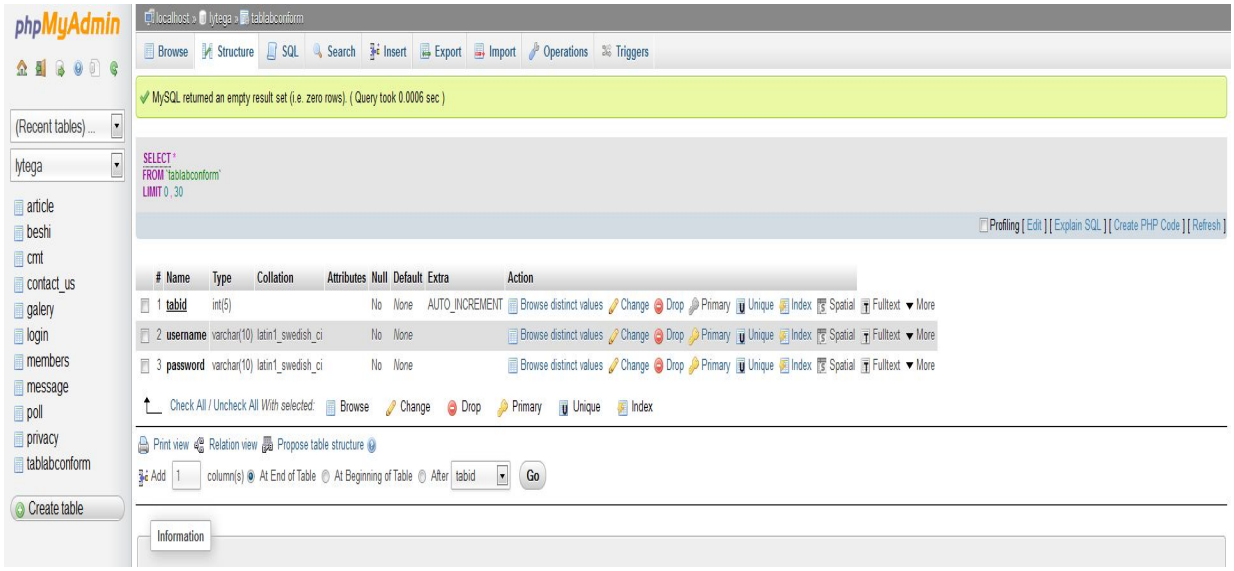
Article Table



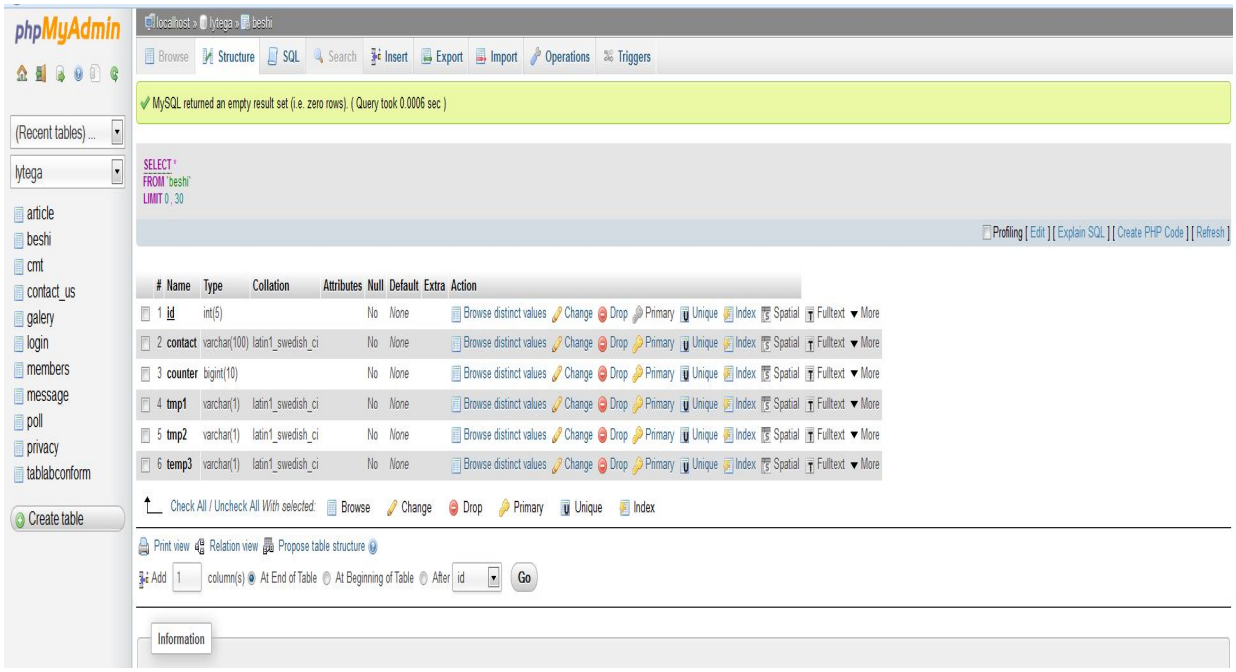
Alumni Table



Digital Library Table



Visitor Counter Table



Appendix C: Business logic implemented in the Website

----------THMT CODE----------

```
<table width="800" border="1" cellspacing="0" cellpadding="5" align="center" style="background-color:#FFF;">
  <tr>
    <td colspan="5"  align="center"><h1>Messages</h1></td>
                <tr align="left">
                     <th align="center">Number</th>
                     <th align="center">Subject</th>
                          <option value="">Departments</option>
                <option value="F4">F4</option>
                <option value="F3">F3</option>
                <option value="F2">F2</option>
                          <option value="F1">F1</option>
                <option value="IS">IS</option>
                 <option value="IH">IH</option>
                <option value="B">B</option>
                <option value="G1">G1</option>
                          <option value="G2">G2</option>
                <option value="G3">G3</option>
                <option onClick="assign('pdert','Your departement here','value');wait('', 'pdert')">Other</option>
              </select>
    <
              <option value="Networking" class="hid">Networking</option>
              <option value="Faculty">Faculty</option>
```

```
        <option value="Research">Research</option>
        <option onClick="assign('indu','Type of organization', 'value');wait(','indu')">Other</option>

</body>
</html>
```

----------CSS CODE----------

```
ul{ margin-left:50px }

ul#menu ul{
    margin:0;list-style:none;padding:0;background-image:url(../images/blue.PNG);border-width:1px;border-style:solid;border-color:#063; }
ul#menu ul{
    display:none;position:absolute;left:0;top:100%; box-shadow:3.5px 3.5px 5px #000000;padding:0 10px 10px;/*background-color:#F99;*/border-color:#000;}

ul#menu li:hover>*{
    display: block; }

ul#menu li:hover{
    position:relative;}
ul#menu ul ul{
    position:absolute;left:100%;top:0;
ul#menu{
    display:block;font-size:0;float:left;}
ul#menu li{
```

----------JAVA SCRIPT CODE----------

```
// JavaScript Document
function sizeFrame(id)
{
	var F = document.getElementById(id);
	if(F.contentDocument) F.height = F.contentDocument.documentElement.scrollHeight+30; //FF 3.0.11, Opera 9.63, and Chrome
	else F.height = F.contentWindow.document.body.scrollHeight+30; //IE6, IE7 and Chrome
}

function wait(hid, show)
{
	var hi, sh;
	if(document.getElementById)
	{
		if(hid!='')
hi = document.getElementById(hid).style.display='none';
		if(show!='')
sh = document.getElementById(show).style.display='block';
	}
}
function livesearch(term)
{
	var num = term.length;
	if(term=='') wait('search_result','');
```

```
	else if(term=='Search'){ wait('search_result',''); document.getElementById('q').value=''; }


function printDiv(id)
{
	var printer = window.open('','print','width=700,height=auto,scrollbars=yes,location=no,titlebar=no');
	printer.document.open("text/html");
	printer.document.write(document.getElementById(id).innerHTML);
	if(printer.print())
	printer.document.close();
	printer.window.close();
}


------------------------------JQUERY CODE----------------------
/*
 * jQuery JavaScript Library v1.3.2
 * http://jquery.com/
 */
(function(){var l=this,g,y=l.jQuery,p=l.$,o=l.jQuery=l.$=function(E,F){return new o.fn.init(E,F)},
D=/^[^<]*(<(.|\s)+>)[^>]*$|^#([\w-]+)$/,f=/^.[^:#\[\.,]*$/;o.fn=o.prototype={init:function(E,H)
{E=E||document;if(E.nodeType){this[0]=E;this.length=1;this.context=E;return this}if
(typeof E==="string"){var G=D.exec(E);if(G&&(G[1]||!H)){if(G[1]){E=o.clean([G[1]],H)}
```

----------PHP CODE----------

```
<?php
if($_SESSION['whosonline'])
{
	$verifyifforummember = select('*','login, forum',"(login.id={$_SESSION['whosonline']} and forum.id =login.id)");
	if(!$verifyifforummember['id'])
	{
		$hidmenu = "class=\"hid\"";
		$profileLink = "/alumni/?ref=info&mid={$on['id']}&cid=".time()."pid=".md5(rand()."&token=".rand();
	}
	else $profileLink = "/forum/?ac=profile&pid={$on['id']}";
}

$fm = mselect('*','forum',"st=1 order by rand() limit 12 ");

?>
<?php
include '../include/core.php';
```

----------SQL CODE----------

```
function select($field, $table, $cond)
{
	$sql = "select $field from $table where $cond"; //echo "<br><font color=\"#FF0000\">$sql</font> <br> ";
	$result = mysql_query($sql) or die("<br><font color=\"#FF0000\">$sql</font> -> ".mysql_error());
```

```
	if($result) $data = mysql_fetch_assoc($result);
	return $data;
}
function mselect($key, $table, $conditon)
{
	$data = array();  $n=0;
	$sql = "select * from $table where $conditon";

	$result = mysql_query($sql) or die("<br><font color=\"#FF0000\">$sql</font> -> ".mysql_error());
	if($result)
	{
		while($row = mysql_fetch_assoc($result))
		{
			$data[$n] = $row;
			$n++;
		}
		$num = mysql_num_rows($result);
	$data['numrow']=$num;	//echo $data['numrow'];
	}
	return $data;
}
```

Appendix D: Definition of the Terms Used

- **Administration:** Gives the details of the different administrators, their respective duties, privileges, and prerogatives.
- **Home:** The main welcome page of the website. It displays all the modules implemented in the project.
- **History:** Provides an overview of the history.
- **Departments:** List all the departments and the specialties being offered there.
- **Computer Center:** This is a research facility that provides students and staffs with internet and computing facilities. To enhance their academic performance and productivity.
- **Admission Requirement:** Outlines all the admission criteria for the different levels of qualification.
- **Admission Result:** Give the list of candidates successfully admitted.
- **Contact Us:** User admin interaction.
- **Visitor Counter:** A count of how many different people access a Web site. For example, if a user leaves and comes back to the site five times during the measurement period, that person is counted as one unique visitor. Unique visitors are determined by the number of unique IP addresses.
- **Admin:** 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.

- **Digital Library:** The digital library is a facility that provides e-books and other academic materials in soft copy form.

- **User:** Any ordinary member of the public who uses the Internet. He/she has limited access to the website. They can only read about our Technical High School. , 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 member of Technical High School 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 Alumni members.

- **Article:** It refers to a piece of information carrying an announcement, event, news or of general public interest. To prevent any abuse of the website, an article is exclusively published by the Admin.

- **IIS Server:** 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.

- **Alumni members:** This regroups all the former students of the school. Former students will have to register and get approved by the admin

- **Gallery:** A photo gallery on a website is collection of images or photos that is uploaded to a website and available for website visitors to view.