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Undergraduate Thesis Design

Topic: STUDENT ACHIEVEMENT MANAGEMENT SYSTEM

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Expert

This project is gear towards tackling this huge problem of academic fraud and corruption in the Liberian society. The Student Achievement Management System will enable schools to upload students transcript into the system from their schools in order for other schools to authenticate their records before enrolling into another institution. The system will also enable schools to manage students records, user management system and a live search engine that helps find students records in previous institutions.The aim of this project is to provide up to date technology that will enable the reduction in academic fraud through check and balance of student records by institutions.

The Student achievement system will make the job easy for colleges and other institutions admission officers to track applicants academic documents for enrolment for enrolment because when completed it will contain live search engine

This project is developed with HTML AND CSS and the bootstrap framework for ease of user experience. All logical and operational functions are done with the help of PHP programming language. This project make use of MYSQL database in order to order and receive data.

Abstract

It is a struggle to get a good education in Liberia. The long-lasting effects of a 14-year civil war, compounded by the 2014 school closure due to the Ebola outbreak, had a huge impact on the education system. The conflict also destroyed or damaged close to 60 per cent of school buildings, including water and sanitarian facilities which are key to keeping children, especially girls, in school. Teachers fled the country or took up other forms of employment which broke down the entire education system of Liberia. Liberia my home is a land full of opportunities and possibilities with smart and innovative people. In the wake of a civil war that took place about 20 years ago, many Liberians were left in abject poverty. This devastating conflict lead to destruction in so many sectors causing many people to have limited access to quality education. The lack of quality educational infrastructure and modern technology introduced the increase in academic fraud and document verification among many students and academic institution. Many people take advantage of the failed and damage system to carry on academic fraud by failing in their past institutions and enrolling into another Institution and promoting themselves with fake papers and Grades that they do not earned. Since the end of the conflict, significant progress has taken place in the education sector. In 2015, close to 1.4 million children were registered in pre-primary, primary and high school. In addition, the Ministry of Education, UNICEF and other partners teamed up and continue to repair or build new classrooms, train teachers, revise curricula and develop policies and plans for the education sector.

In light of this, this project is gear toward developing and increasing the efficiency of Liberia education in promotion of academic transparency by providing academic necessary details and information that are necessary that fight against fraud.

Student Achievement Management System is a project which is helpful for students as well as the school authorities. In the current system, all the activities are done manually, it is very time consuming and costly to discover academic fraud and check up students grades. Our student search engine provide the solution to this long age problem and help fight against academic fraud.

Content

Chapter 1 Introduction

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This project is gear towards tackling this huge problem of academic fraud and corruption in the Liberian society. The Student Achievement Management System will enable schools to upload students transcript into the system from their schools in order for other schools to authenticate their records before enrolling into another institution. The system will also enable schools to manage students records, user management system and a live search engine that helps find students records in previous institutions.The aim of this project is to provide up to date technology that will enable the reduction in academic fraud through check and balance of student records by institutions.

If this project is approve by you my supervisor and completed by me,It will help my country education system as a security to stop fake documents.

The Student achievement system will make the job easy for colleges and other institutions admission officers to track applicants academic documents for enrolment for enrolment because when completed it will contain live search engine

This is done by creating a database that enable students records to be tracked for the purpose of academic transparency. The Student Achievement Management System improve accuracy and enhance safety and efficiency in dealing with academic fraud in Liberia.

1.1 Project Development Background

The development of Student Achievement Management System is essential to the growth of the educational sector in Liberia. This system enable schools in Liberian to have access to information that fight against academic fraud and effectively communicate with other institutions. This project constantly promote the growth of access to information in the educational sector in Liberia and helps to educate many educational institutions about students records from previous schools before being admitted into a new school. This project also enable many educational institutions to have unlimited access to students original documents for the purpose of authentication before admitting them into other institutions. This project also encourages students to score better grades and study hard in order to meet their required potential and become a better citizens of Liberia and serve their nation. With the help of such information, it will become easy for educational institutions in Liberians to track student records before enrolling them into another educational institution. This project is a huge step towards promoting ease of access to academic information and a bight fight against academic fraud in Liberia.

1.2 Significance of project development

The Republic of Liberia is a low-income country located on the West African coast. The country's population was recently estimated to be 5.2 million. Liberia as a Republic struggle with access to education and a fight against academic fraud. Many Liberians do not have equal distribution to quality education thus causing a high increase in academic fraud among students and academic fraud in the country. Due to this lack of access to these information and inadequate educational system, many students in Liberians practiced academic fraud and boycott the broken system for their own personal reasons. Thus, this project is gear towards helping many educational institutions in Liberia to have easy access to academic transcripts in order to fight against academic fraud in the country and maximize the growth of the educational sector in Liberians.

1.3 Dissertation Organizational Structure

Thesis organization

The paper is divided into six chapters, and the brief content of each chapter is as follows:

Chapter 1: Briefly explain the significance of website research and the organizational structure of the paper.

Chapter 2: Details the website requirements analysis, including technical feasibility analysis, economic feasibility analysis, and project functional analysis.

Chapter 3: Provides an overview of some of the key technologies, development environments, and development tools used in the website.

Chapter 4: Describes the overall design of the project, mainly including the project objectives, design principles, structural framework and the design of each functional module, and the design of the database.

Chapter 5: Detailed design and implementation of the project, as well as detailed implementation of each functional module.

Chapter 6: Conducted a strict black box test on the website as a whole, and tested each functional module in detail whether there was a vulnerability through test cases and corrected it in time.

Chapter 2: Needs Analysis

2.1 Project feasibility analysis

2.1.1 Technical feasibility analysis

The overall architecture of the Student Achievement Management System is carried out using up to date technology that is easy to ingratiate and improve user experience and development. This project uses MYSQL Database Server to manipulate data, store data and retrieve data. In the development of this project, the use of up to date framework is extremely important for the developmental stage of the project. These rapid development technology, can be integrated with third-party application framework. The framework used in this website is mainly Bootstrap 5, and it follows the convention greater than the configuration, so the configuration of the XML file is reduced to be developed in the form of annotations, which greatly reduces the configuration file and is more in line with lightweight development, and the embedded MYSQL Server runs in PHP which is a major use language for server side programming.

2.1.2 Economic feasibility analysis

Based on Student Achievement Management System development, IDEA can directly develop the projects and the software integrates a lot of plug-ins and controls that we can use to provide convenience so using IDEA, the database is the use of MySQL The software is free, and SQL Server is fully enough to store data for small and medium-sized projects. Access to quality academic transcripts and information is made easy with just a click. All the plugins used for the development of the Student Achievement Management System is free and affordable for ease of use.

2.2 Project Functional Analysis

The main functional modules of the website are as follows:

1. **User module:** user login, registration, user account activation.
2. **Student module:** Add, Edit, Delete new student from the database.
3. **School module**: Add, Edit, Delete new schools from the database and displ ay it to the front end of the project for the users to review schools that are available on the platform.

(2) School management: student listing, student removal, information change,

(3) Student management: student deletion, check the student records and grades and send from the back-end to the front-end of the project.

(4) User management: View the list of all user s and their basic information from the system back-end.

Chapter 3: Project Development Techniques and Tools

3.1 Key Technologies for Project Development

MySQL relational database management system.

SQLYOG is a fast and concise tool for graphical management of MySQL database. It can effectively manage your database anywhere. It is produced by the famous webyog company in the industry. Using sqlyog, you can quickly and intuitively maintain the remote MySQL database from any corner of the world through the network. [1]

Sublime Text Editor

Sublime Text is a commercial source code editor. It natively supports many programming languages and markup languages. Users can expand its functionality with plugins, typically community-built and maintained under free-software licenses to facilities plugins, Sublime Text features a Python API.[1]

HTML & CSS

CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language. The separation of HTML from CSS makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments.

HTML (the Hypertext Markup Language) and CSS (Cascading Style Sheets) are two of the core technologies for building Web pages. HTML provides the structure of the page, CSS the (visual and aural) layout, for a variety of devices. Along with graphics and scripting, HTML and CSS are the basis of building Web pages and Web Applications. Learn more below about: [1]

PHP PROGRAMMING

PHP is a general-purpose scripting language geared towards web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994. The PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the recursive initialism PHP: Hypertext Pre-processor.

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of an HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. [1]

3.1.1 Student Achievement Management System Framework

This project is build using a relational database framework that support the relationship of data in order to increase the level and flow of user data in a unique and efficient manner. Data flow is drown form one table to the next in order to have a solid and concrete relationship between user health data. With this framework, doctors will easily know the record of users and act accordingly in order to promote efficiency in access to quality and professional distribution of students records to institution for the purpose of fighting against academic fraud and improving the educational sector of Liberia.

3.1.2 BootStrap Framework

BootStrap is a front-end rapid development framework that blends HTML, CSS, and JavaScript. On the basis of the native jQuery, many personalized designs have been added to make the style more perfect, and most of the jQuery plugins are compatible with a rich UI library that can help developers quickly build front-end pages. There is no need for developers to manually add CSS styles, there are various predefined styles to choose from without taking too much time. BootStrap has the following features:

1. BootStrap is highly extensible and can be well combined with web projects in actual development.
2.BootStrap provides a lot of rich components and plugins, including small icons, button groups, drop-down lists, menu navigation, etc., and can be open to users for customization.
3. BootStrap framework provides users with a better visual experience, simple and easy to write, mature performance with a complete framework structure, the overall effect is harmonious, Google, Firefox, IE browser can be supported, project development is convenient and fast.

3.1.3 MYSQL Database

MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language. A relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

3.2 Project Development Tools

Sublime Text Editor as the main development tool, the tool integrates a lot of plug-ins without us to download and install, bringing us convenience especially in terms of intelligent code, code automatic prompting, refactoring, J2EE support, various version tools (git, svn, etc.), JUnit, CVS integration, code analysis can reduce our work.

MYSQL PHPMYADMIN as the main software for database graphical interface operations, the database storage engine preferred to use Innodb because it supports the safe operation of transactions, and as a graphical visual interface in the creation of database tables can save us time, without us writing the code to create databases and tables is conducive to our efficiency.

Redis as a kind of NoSQL mainly to complete the caching task, improve the response time and performance of the project to reduce the query pressure of the database, in the project development of the redis service should not be closed, otherwise it will not respond. What limits Redis is only the system's memory, not the system's performance, and if you need to cache more things, you only need to increase the memory.

3.2.1 Project Development Environment

The requirements for the development environment of the Student Achievenemt Management System in terms of software, hardware and development language are as follows:

System requirements: Windows 7 operating system and above.

Hardware requirements: disk capacity 500G, computer processor Core i5, running memory 12GB.

Development Technology: Sublime Text Editor.

Programming language: HTML, CSS JavaScript, PHP and MYSQL Query.

Chapter 4: Overall Project Design

4.1 Project Objective

In the demand analysis, it is determined which functions will be implemented in Student Achievement Management System, and the project can meet the user's norma l demands in the promotion of access to quality student information and accessibility. Student transcript search engine process attached to the project is easy and reliable for every user,and the development of the project should also have the following charact eristics:

1. Schools diversification is not limited to one institution.
2. The user's login functionalities are secure and efficient for every user.
3. Student Achievement Management System implements the user fraud request in order to complain about any academic fraud for the purpose of investigation.

4.2 Project Design Principle

The project adopts the design pattern of the MVC architecture, which makes the layout of the entire project look particularly obvious, and the hierarchical structure is clearer. It is also conducive to the subsequent expansion of the project with the principle of low coupling and high maintainability.

1. Low coupling: The View module and the Controller module are separated, which makes the two modules independent in the later expansion of the function is also very convenient, in the case of changing the view, there is no need to change the controller's code or recompile the model, the entire structure is very clear and easy to understand.

2. High maintainability: if you want to change the business logic, only use to change the business logic, if you want to change the view, only use the change view, if you want to increase the function, you only need to increase it, the biggest advantage of layering is that it is easy to reduce maintenance costs in the later stage, and add new functions, improve code reuse, thereby improving development efficiency.

4.3 Project Structure Framework

The functional structure diagram of this website is shown in Figure 4.1.

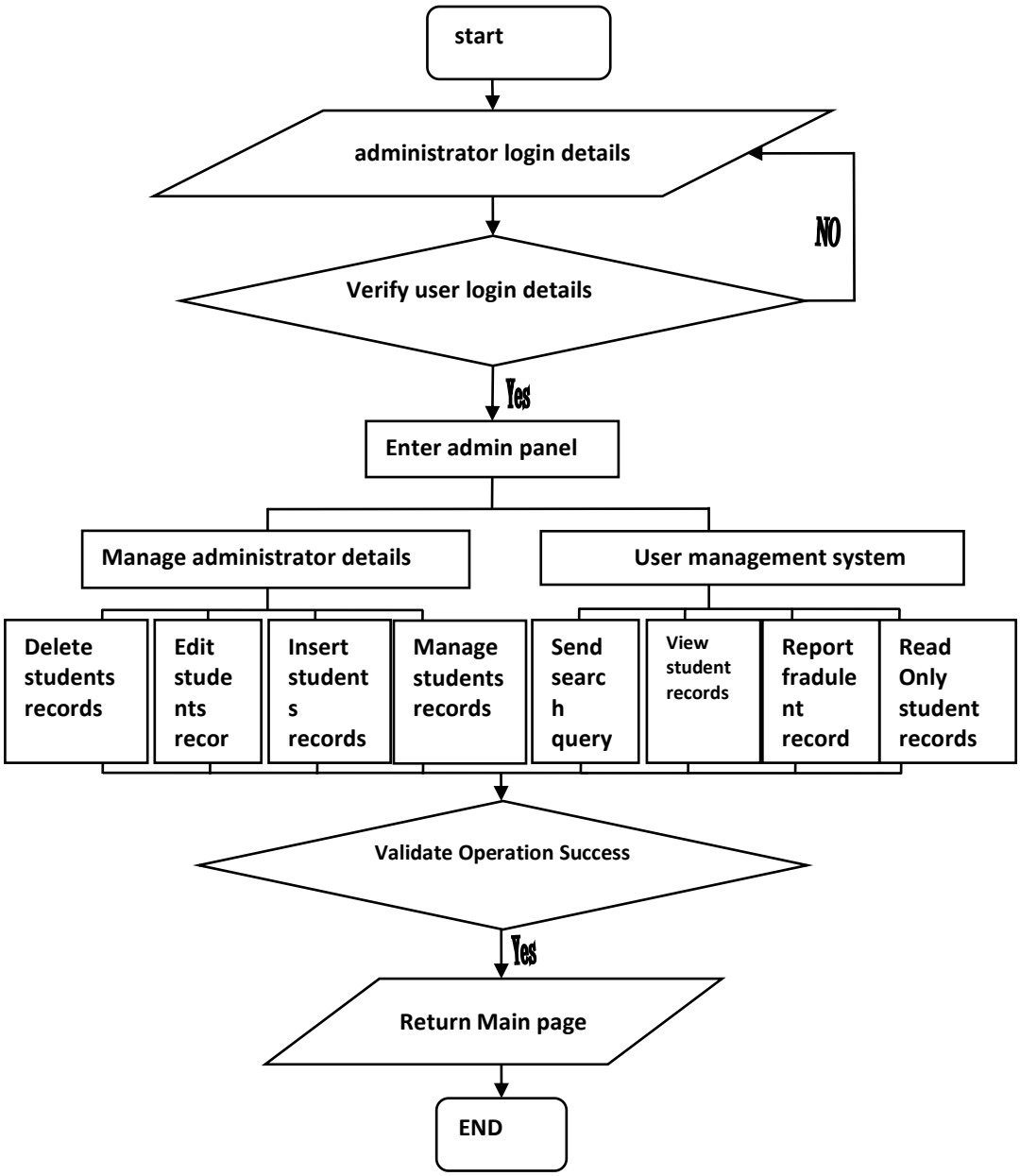

Figure 1: Overall system flow chart

Login of administrator information:

1. Module description

Admin must log in before entering the student achievement management system in order to access user rights.

2. **Function**

The user login module can enter two items: admin name and password. When the two items are consistent with those in the database, you can enter the system according to the authority of the entered admin name.

3. **Performance**

Security and confidentiality

The permissions of the admin after login are designed. Login protection is designed. If the admin enters the wrong password, the system will give a prompt of password error. If the admin enters the wrong password password but correct name, the system will flag error, if the admin enter the right password but wrong admin name, the system will flag error. The rest are visual interfaces, and admin can select functions according to the system prompt.

4**. Input**

(1) Admin name: the type is character type and the length is 30 bytes;

(2) Password: the type is character type, with a length of at least 8 bytes and a maximum of 30 bytes;

5. Output item

If the admin name and password is correct, you will be prompted that the password is true

If the admin name and password are incorrect, you will be prompted that the admin name or password is incorrect. Please re-enter correct password.

6. Design Method

The module is a page that submits the admin name and password through the button. Then connect to the database for verification. To determine whether the admin name and password are true and whether they can enter the system.

7. Interface

Click login and enter the system interface if the password is correct. If the password is wrong, you will be prompted that the admin name or password is wrong. Please re-enter correct login details.

4.4 Project Function Module Design

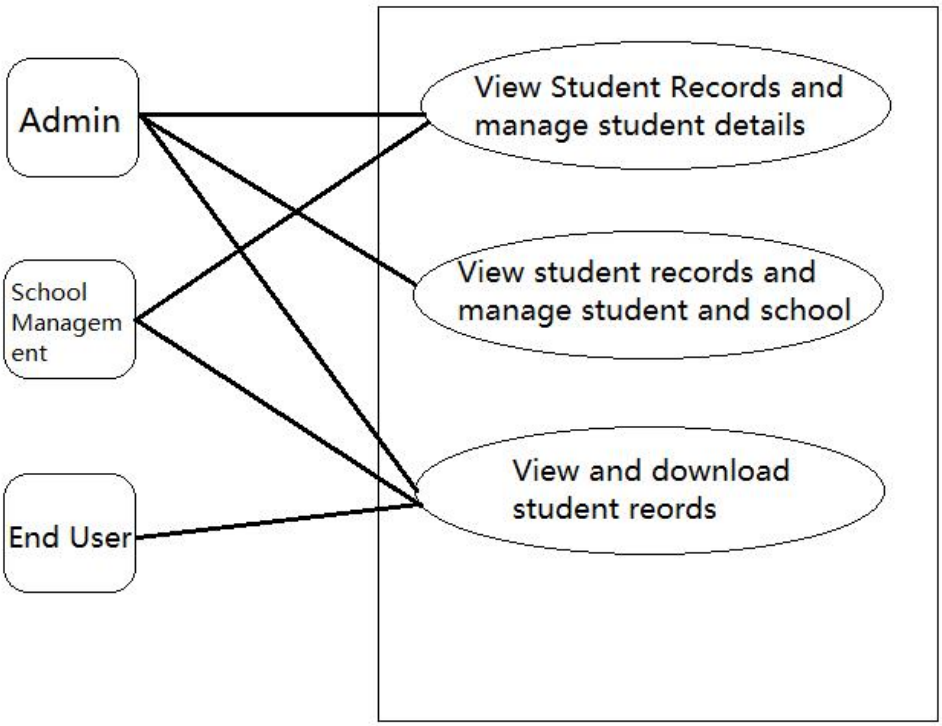

Figure 2: Overall use case diagram

Figure 2: Only the administrator of the whole system has the authority to operate the information of the system. However, the precondition is that the administrato r can log in successfully, that is, only the system administrator can simply add, de lete, modify and query the system. According to the needs of the website, the syst em is finally divided into user management module, the specific functions under e ach module are as follows:

1. **User Management Module:** The system administrator manages the user detai ls by reviewing and deleting users, view the list of all users and student records in details
2. **School Management Module:** The administrator manages all the school in the system, he/she add and delete student and schools, review school records, student records, and view the list of all the students and schools in the system.

4.5 **Database Design**

Relational model is the most widely used and technologically mature database model at present. It is characterized by simple and clear concept, easy to be mastered and accepted by user, strict mathematical basis and relational data theory, which can greatly simplify database development and maintenance, and is deeply welcomed by a wide range of users, It is the foundation and core of modern computer information system and computer application system.

The student achievement management system Connect the database with the browser. Through the processing of the foreground page, the server operates the target data in the background database through HTTP protocol. After triggering the operation update in the database, it responds the data to the front page, so that the manager can operate and manage the system conveniently. When the administrator updates the information, he submits the information to the background database, and the database saves the data.

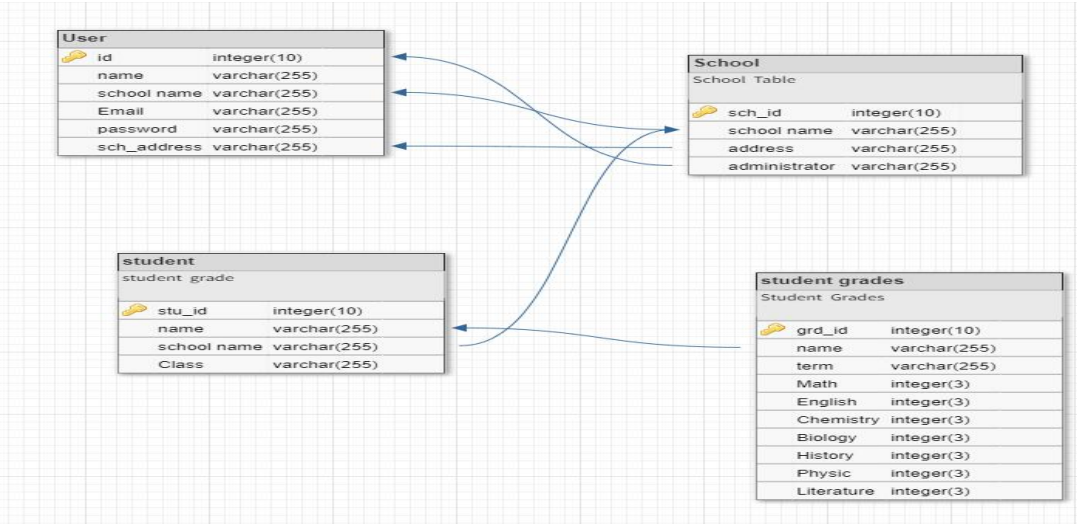

Figure 3: Database Diagram

Figure 3: The student achievement management system uses a relational database design in order to relate data in a way that is efficient, reliable and easy to use for the purpose of easy query. This type of database structure helps interpret data relationship and makes it easy to observe dirty and redundant data within the database.

4.5.1 Entity E-R Figure

Admin User， School Management， Student Management， Student Grades Management，E-R：

E-R diagrams, also known as entity-link diagrams, are commonly used in software engineering to represent the connections between database tables and the fields of database tables, which can make people see the design of this database very intuitively. E-R diagram contains data objects, relationships and attributes and other 3 basic relationships, usually with a rectangular box to represent the entity, with a diamond box to represent the relationship connecting related entities, with an ellipse or rounded rectangle to represent the attributes of the entity, this project mainly contains four entities, there are Admin User， School Management， Student Management，Student Grades Management, its E-R diagram is as follows in figure 4 and figure 5

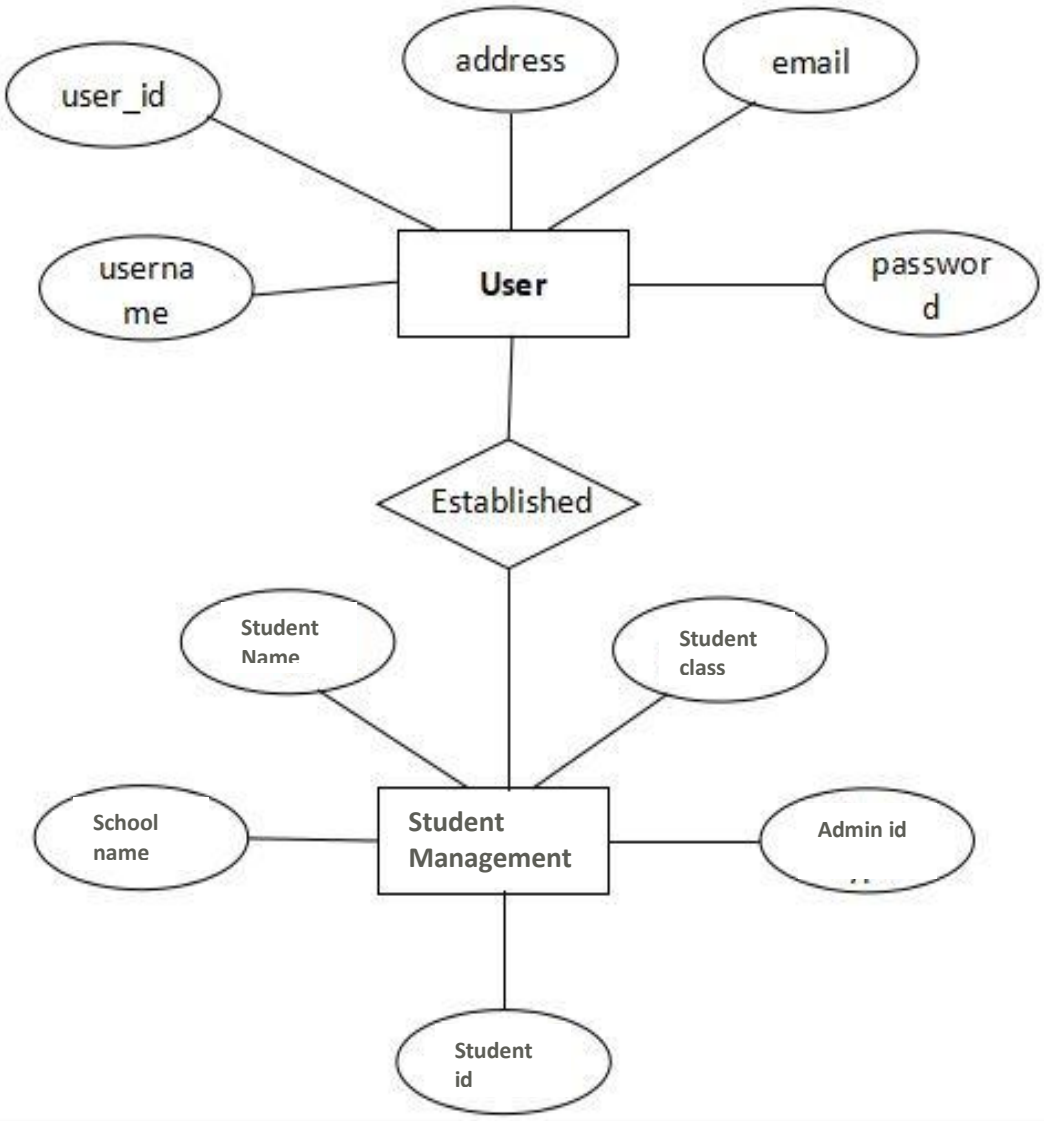

Figure 4: Student Management ER Diagram

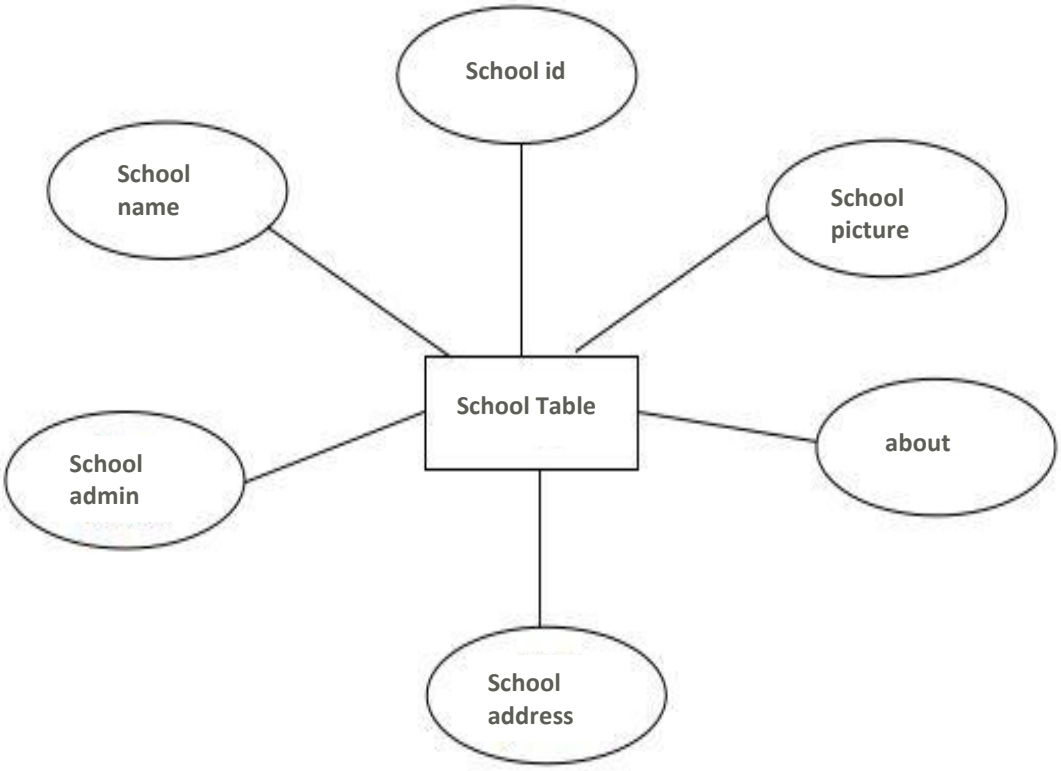

Figure 5: School Management ER Diagram

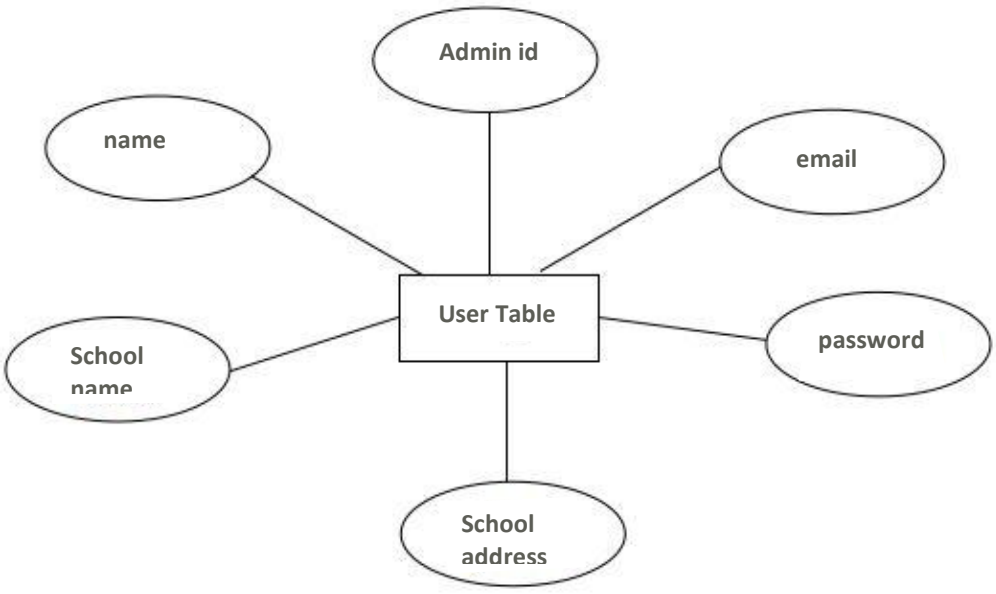

Figure 6: Admin User ER Diagram

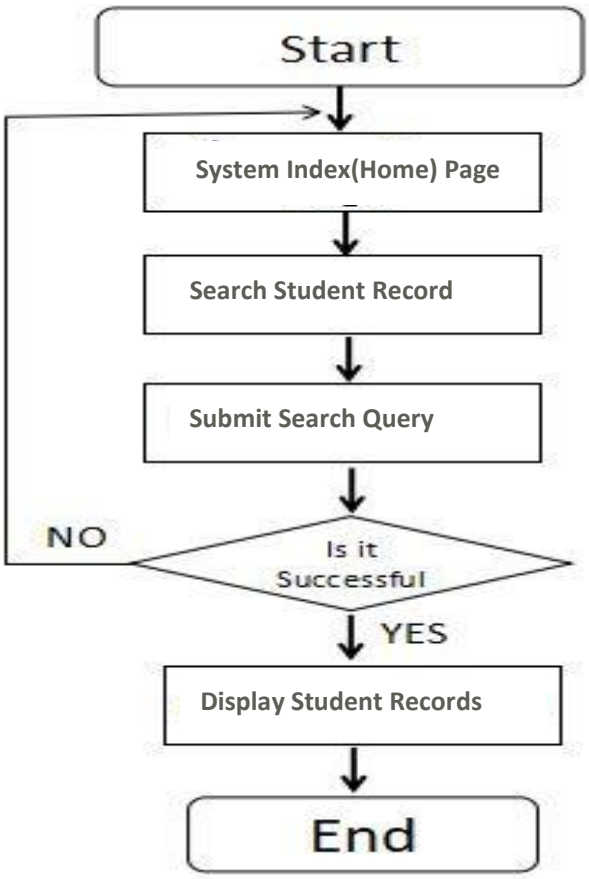

Figure 6: Student Transcript Search Module Diagram

Figure 6: The user visit the project main page and search for a specific student transcript record, submit the search request and wait for the system to load the query. If the query is successful, the system display the student transcript record else the system report no student record found. If the student record is inconsistent with the institution by clicking the report fraud button, the user submit a fraud complain to the system.The submission is successful, the user than receive a success message and than directed to the main page of the project. The fraud complain will than be waiting for the admin to verify and contact the user for further information if necessary.

Chapter 5: Detailed Project Design Functional Description and Implementation

5.1 User Module

5.1.1 User Login

The system displays the login interface. The administrator enters his account and password, and the system verifies the admin information. If the information is wrong, the system displays the wrong information, please re-enter the admin name or password. The administrator successfully logs in to the login page of the student achievement management system by entering the correct login details, enters his own account and password, sends a request to the front end of this page, connects to the database, loads the driver, executes the administrator login program, and then transmits the operation results of the database to the front page to enter the admin

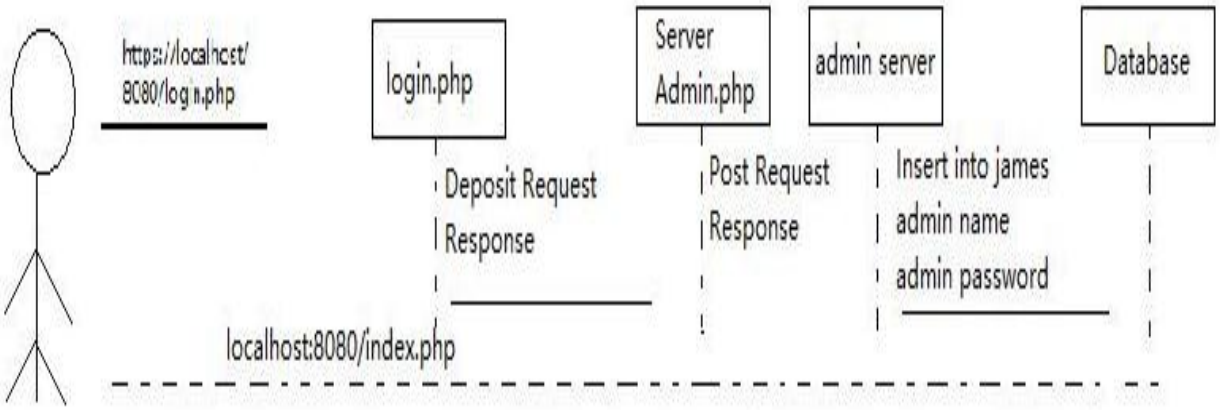

Figure 7: User Login Authentication Diagram

Figure 7: The administrator successfully logs into the login page of the student achievement management system by entering the correct website in the browser. After logging in, the administrator jumps to the admin.php admin page, where the front end sends a request. The system calls the adminiinfo class to connect the database, load the driver, execute the SQL statement of the query administrator, and then transfer the operation results of the database to the front page, Enter the admin.php page.

Sequence diagram of administrator information query:

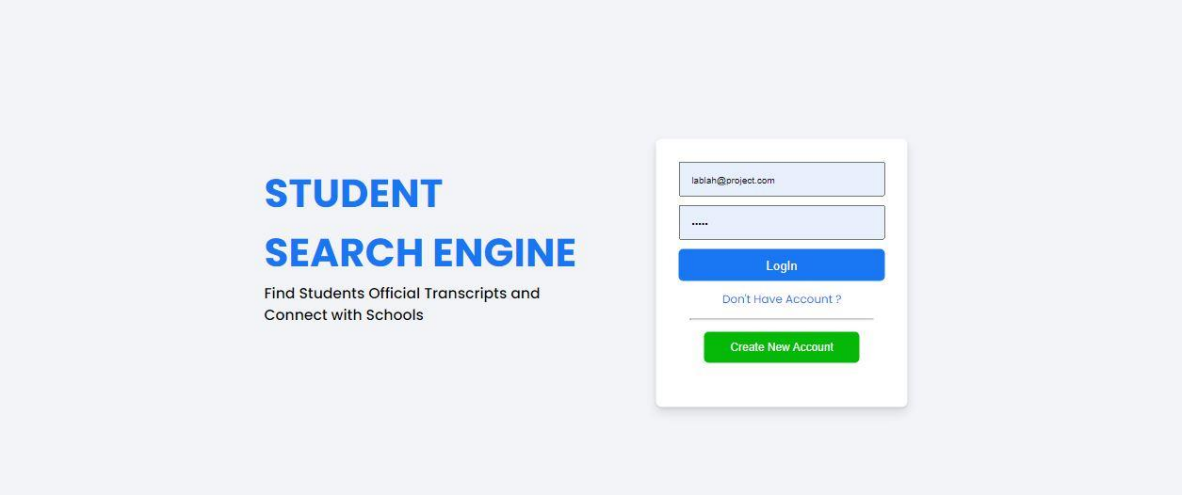

Figure 8: User Login Interface

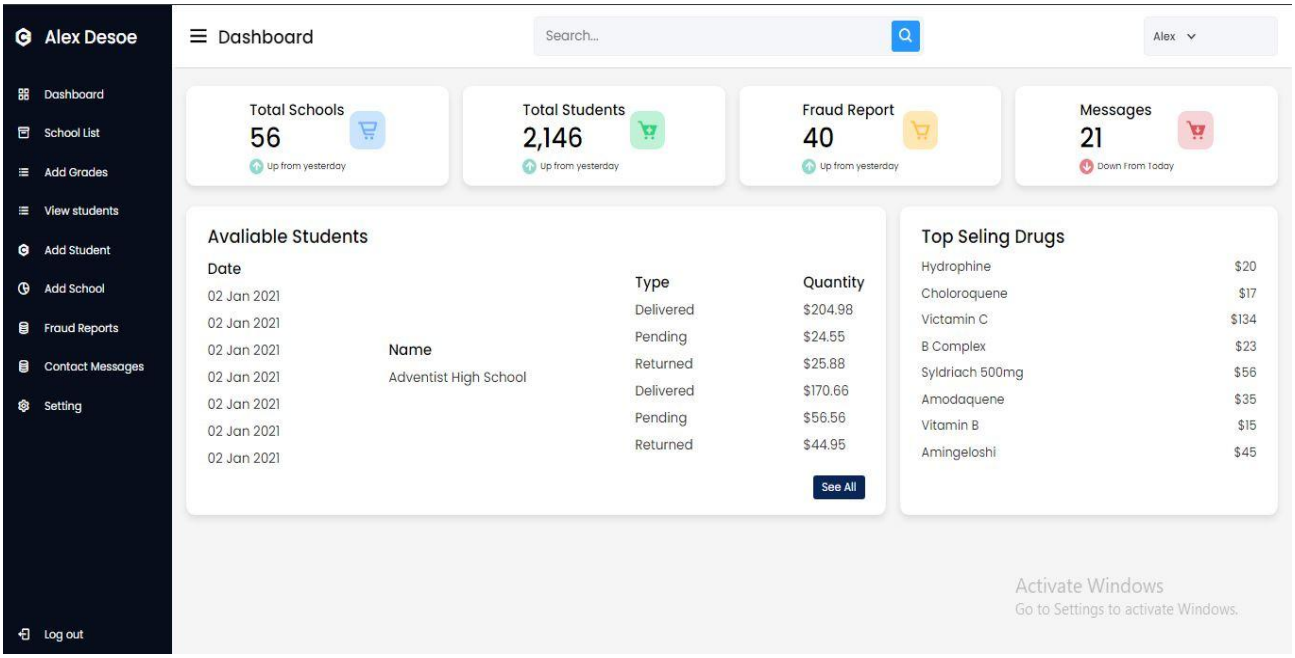

Figure 9: User Dashboard Interface

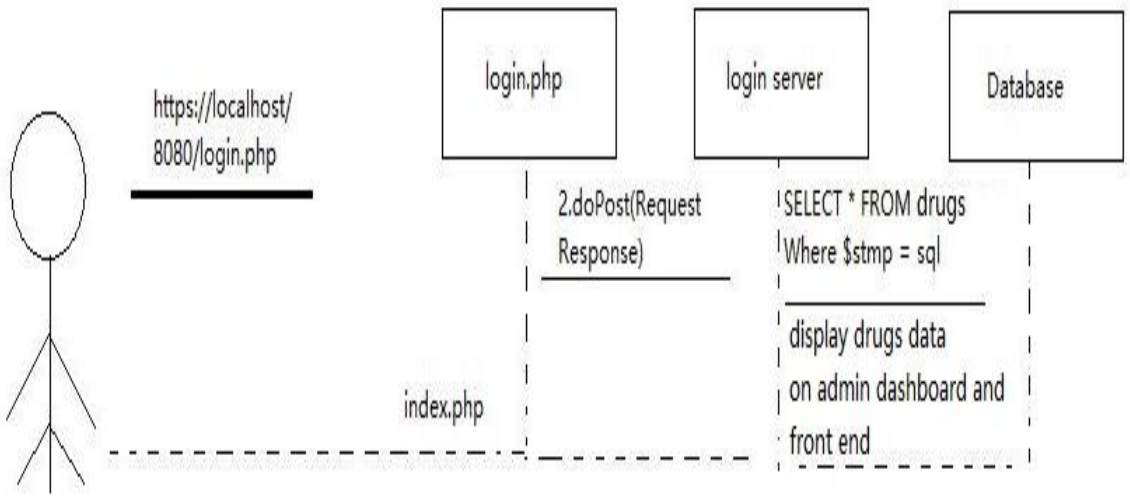

Figure 10: Administrator Information Registration Sequence Diagram

Figure 10: Administrator information registration sequence diagram:

The administrator successfully logs in to the login page of the student achievement management system by entering the correct website in the browser. After logging in, the administrator jumps to the admin.php admin page, where the front end sends a request and executes the SQL statement. Then transfer the database operation results to the foreground page and enter the admin.php page.

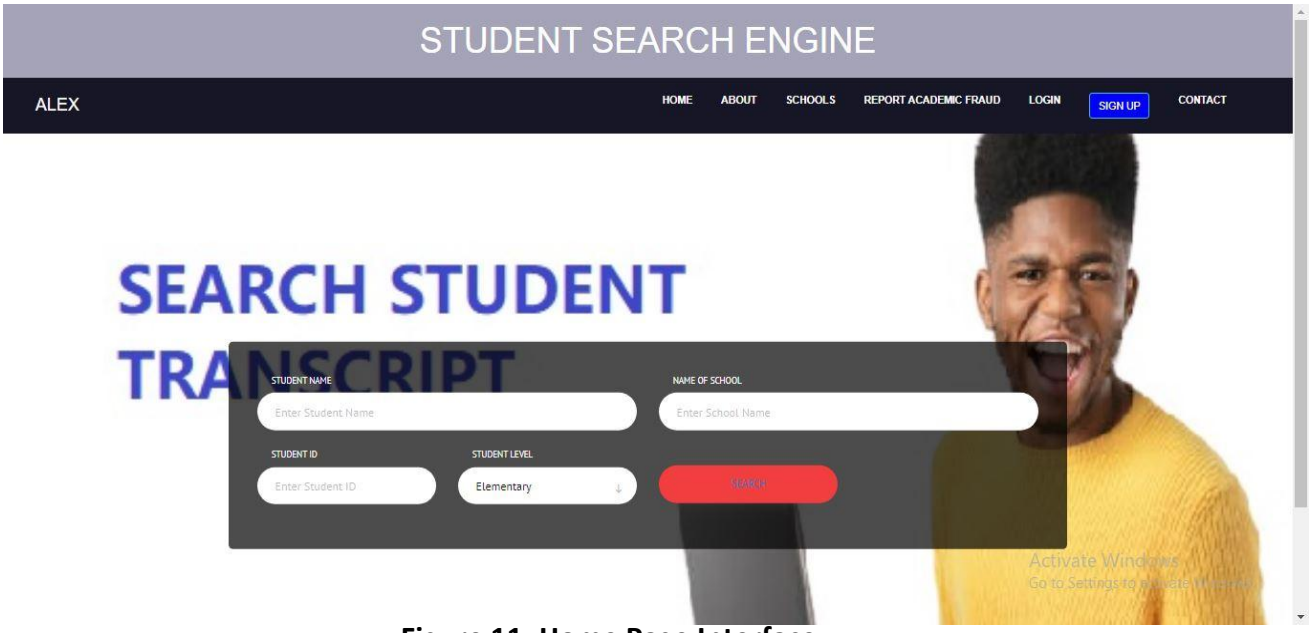

Figure 11: Home Page Interface

5.1.2 User Registration

The system displays the sign up interface. The user enters his account details and password, and the system verifies the user information. If the information is wrong or already exist, the system displays the wrong information or already exist. The user successfully logs in to the login page of the student achievement management system by entering the correct login details after submitting the sign up page details, enters his own account and password, sends a request to the front end of this page, connects to the database, loads the driver, executes the user login program, and then transmits the operation results of the database to the front page.

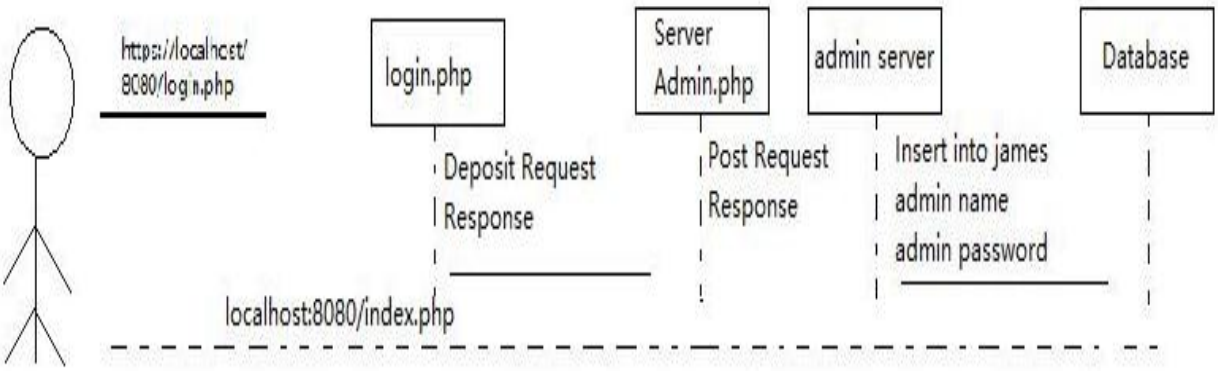

Figure 12: User Sign up and Sign in Diagram

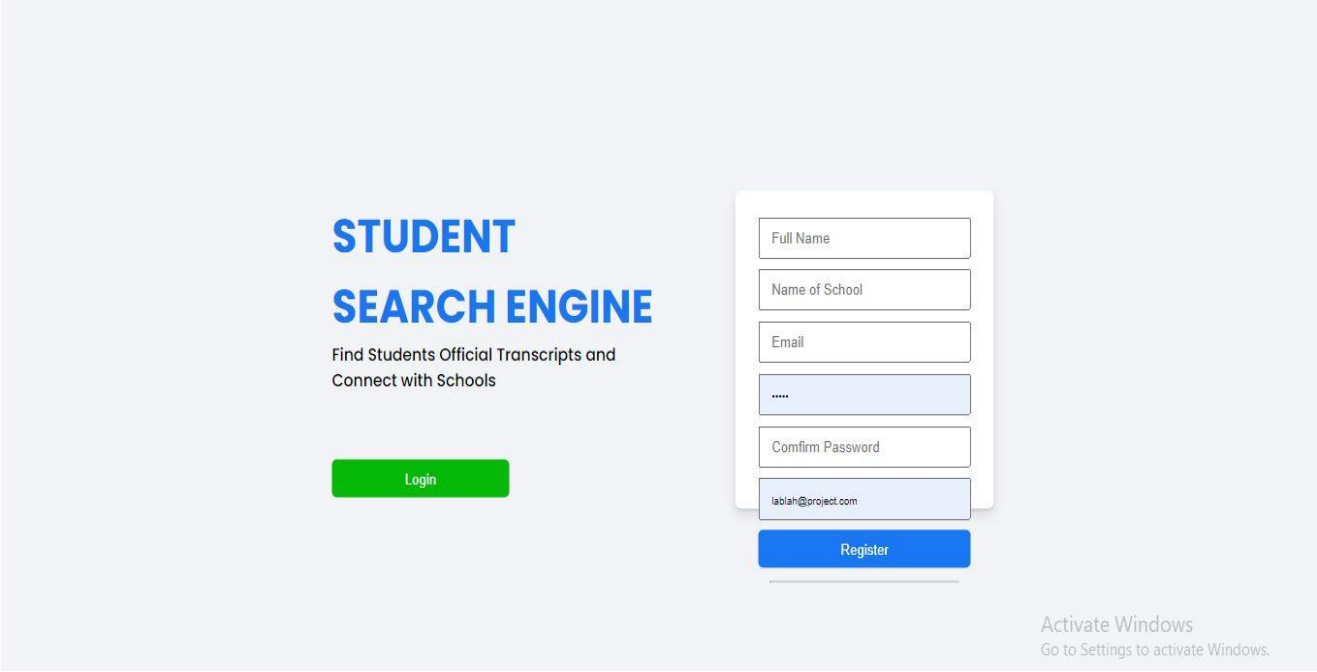

Figure 13: User Sign up Interface

5.1.3 Listing & Deleting of drug Items

The system displays the login interface. The user enters his account and password, and the system verifies the user sign up information. If the information is wrong, the system displays the wrong information, please re-enter the user name or password and user detail information. The user successfully submit the information and logs in to the login page of the student achievement management system by entering the correct login details, enters his own account and password, sends a request to the front end of this page, connects to the database, loads the driver, executes the user login program, and then transmits the operation results of the database to the front page to enter the main page. After the user login is successful, the admin can than view, delete, add and edit student and schools from the system dashboard.

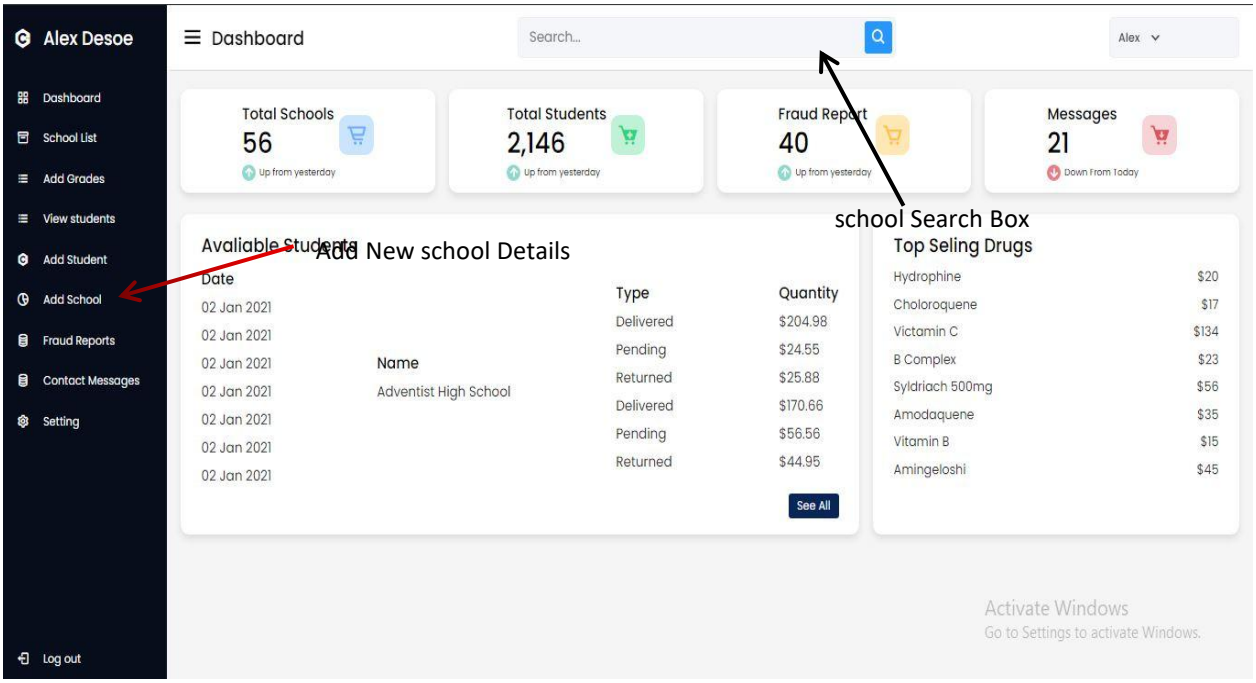

Figure 14: Admin Operation Dashboard

5.2 Search Student Module

The user visit the admin.php page of the project and select any operational module from the left panel of the dashboard and run the module operation. The system send a request to the back end of this page, connects to the database, loads the driver, executes and display the user selection from the database and display or update module information and display to the user.

Chapter 6: Project Testing

6.1 Test Description

The role of the test case is to verify whether the software meets the need of schoo ls and students and fight against academic fraud for the purpose of enhancement of the educational sector of Liberia. The test case diagram is an indispensable part of the software development, its main basic items are: use case name, test project, preconditi ons, expected results, post conditions, operation steps, input prompts, test results. The Student Achievement Management System involves more functional modules, and its sub-functions are also very many, so it will be selectively tested in the testing part of the system.

6.2 Test Case

Administrator login test process:

Enter admin name: alex@project.com, enter password: 1234

The system outputs after verification. The admin password is incorrect. Please re-enter login details;

Re enter the password: 1234. After entering the system, the system will give the system administrator and user interface;

Enter admin name: alex@project.com, password: 1234

After verification, the system outputs: the admin name is wrong, please re-enter login details;

Administrator login test case:

Table 1: Admin login test case

coding	operate	Checkpoint	expected outcome	actual results
Test_1	Don't enter any information Click to Login	1.Confirmation function 2.Confirmation prompt 3. Result display 1.Confirmation function 2.Confirmation prompt 3. Result display	Unable to log in to the system Show warning message	Can not log in Show account password error
Test_2	Enter the user name that exists, the password that does not exist		Unable to log in to the system "Please enter the correct password" is displayed	Can not log in Show account password error
Test_3	Enter a user name that does not exist, a password that exists	1.Confirmation function 2.Confirmation prompt 3. Result display	Unable to log in to the system The system displays "Username does not exist"	Can not log in Show account password error
Test_4	Enter the existing user name, the existing password	1.Confirmation function 2.Confirmation prompt 3. Result display	Successful login, display the login success interface	Successful login, display the login success interface

Table 1: Administrator information management test case:

The administrator enters the user name and password through the existing account to log in to the student achievement management system. After successful login, select the student or school information function module on the main page to view, add, modify and delete student or school information.

Table 2: Test case of student information update module:

Test steps	Operation description	enter	Expected output	Actual output	Pass or not
Test-_1	1. Log in to the system first	1. Account number: 2. Password:	Jump to the main interface of the system	Jump to the main interface of the system	yes
Test-_2	2. Click on student information	Transition to the student home screen	Transition to the student home screen	Transition to the student home screen	yes
Test-_3	3. Click to add student information and submit	Add student details and submit	Transition to the admin home screen	Transition to the admin home screen	no

Table 2: Test case of student information update module:

The administrator enters the user name and password through the existing account to log in to the student achievement management system. After successful login, select the student information and insert new student, view student list and delete student record.

Table 3: School information test case:

step	Operation description	enter	Expected output	Actual output	Pass or not
Test_1	Log in to the background first 2. Click Add school		Navigate to the add school page, add the school details and submit	Navigate to the add school page, add the drug details and submit	Yes
Test_2	1. First log in to the background 2. Click Add school 3. Add school details 4. Click the submit button	1.： admin 2.admin	1. Prompt that the school has been added successfully 2. Navigate to the management dashboard	Manage dashboard pages	No
Test_3	1. First log in to the background 2. Click on school details 3. Click "Delete Drug Information		Confirm delete school information	successfully deleted	no

Table 3: School information test case:

The administrator enters the user name and password through the existing account to log in to the student achievement management system. After successful login, select the school information function module on the main page to view, add and delete school information.

6.2 User Login Module Test

Login of administrator information:

1. **Module description**

Admin must log in before entering the student achievement management system in order to access user rights.

2. **Function**

The user login module can enter two items: admin name and password. When the two items are consistent with those in the database, you can enter the system according to the authority of the entered admin name.

3. **Performance**

Security and confidentiality

The permissions of the admin after login are designed. Login protection is designed. If the admin enters the wrong password, the system will give a prompt of password error. If the admin enters the wrong password password but correct name, the system will flag error, if the admin enter the right password but wrong admin name, the system will flag error. The rest are visual interfaces, and admin can select functions according to the system prompt.

4. **Input**

(1) Admin name: the type is character type and the length is 30 bytes;

(2) Password: the type is character type, with a length of at least 8 bytes and a maximum of 30 bytes;

5. **Output item**

If the admin name and password is correct, you will be prompted that the password is true. If the admin name and password are incorrect, you will be prompted that the admin name or password is incorrect. Please re-enter correct password.

6. **Design Method**

The module is a page that submits the admin name and password through the button. Then connect to the database for verification. To determine whether the admin name and password are true and whether they can enter the system.

7. **Interface**

Click login and enter the system interface if the password is correct. If the password is wrong, you will be prompted that the admin name or password is wrong. Please re-enter correct login details.

8. Test Design

Administrator login function:

Requirement Description: the administrator logs in to the account through this part

Performer: Administrator

Precondition: the administrator information is valid and legal, and can only be operated by the administrator.

Post condition: prompt: login succeeded

Normal process:

1. The administrator enters the correct admin name.
2. The administrator enters the correct password.
3. The system calls the administrator information in the database
4. The system displays that the administrator has logged in successfully

Abnormal Process:

1. If the admin does not exist, login is refused and the use case ends.
2. The admin name is correct and the password is wrong. End of use case.

Medicine information update function:

Requirement Description: the administrator logs in to the student achievement management system to update and delete medicine records.

Performer: Administrator

Precondition: the administrator information is valid and legal, and can only be operated by the administrator.

Post condition: school information updated successfully.

Normal Process:

1. The system administrator logs into the student achievement management system by entering the correct account and password to enter the main interface of the system.
2. The administrator selects the school information management function module

3. The administrator selects the operation to add school information,

4. The administrator provide the correct information of the school that is approved by the doctor.

5. school information added successfully

6. The administrator selects the operation to delete the school information

7. school information deleted successfully

8. The administrator selects the operation to modify the student information

9. student information modified successfully

10. The administrator selects the query operation for student information

11. The student information is successfully displayed on the page

12. When the operation is completed, return to the admin dashboard.

Abnormal process:

1. The administrator information does not exist and cannot log in to the system. The use case ends.

2. The network is abnormal, unable to log in to the system, and the use case ends.

3. The user provided wrong information and failed to add student information.

Business rules: administrators can only select one operation type at a time

Function of adding and deleting student information

Requirement Description: the administrator can add and delete student information through this module.

Performer: administrator.

Precondition: the admin information is valid and legal, and only the administrator has the authority to query and update the information in the system.

Post condition: the student information is added or deleted successfully.

Normal Process:

1. The administrator logs into the system with and the computer displays the main interface of the system.

2. The administrator enters the system and view the user request.

Conclusion

In this project, I have developed an academic search engine for schools to fight against fraud. The application takes most of the activities and records from students and their student ID and use it to fight against fraud by providing detail of the student records and their transcript. It also gives record about the student and allow the end user to verify the student details. The system uses the database to fetch data of the student and submit it to the end user by means of the student ID.The school authorities also help provide the student information into the system and promote the student behaviour. In the end, both the school and the students and the end user are able to access data on the student via the student ID.The solution provided in this project enable the education system of Liberia to be more great and promote transparency in the educational system across Liberia.

The design of this course design has enable me to fully understand programming concepts and help me build and ready myself for more and greater challenges. This project have helped me gain confidence and I am grateful to find myself learning everyday. For the textbook management system, its program is relatively simple, mainly to solve the problems in program design, and program design is a very flexible thing. It reflects your logical thinking and innovation ability to solve problems, and it is the soul of a design. Therefore, most of the time is spent on the program in the whole design process. Through this course design, I also found my own shortcomings and I have been able to work on these shortcoming for the greater good.
This has also stimulated my interest in studying hard in the future. I think it will have a positive impact on my future study.
Therefore, this course design is of great help to me. The process of learning, cooperation and efforts with other students is also very pleasant. In addition, we should also thank the teacher for his good intentions.

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