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Library Management System

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DECLARATION OF AUTHORSHIP

This is to certify that the work presented in this report is the outcome of the analysis and experiments carried out by Ahmad Lawal (**200032404**), Mariama Issihaka (**200032402** under the supervision of Lutfun Nahar Lota, Asst. Professor, Department of Computer Science and Engineering, Islamic University of Technology (IUT), Dhaka, Bangladesh. It is also declared that neither of this report nor any part of this report has been submitted anywhere else for any degree or diploma. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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CHAPTER 1: INTRODUCTION

A library serves as a gateway to information, ideas, and the realm of creative expression. A library experience can contribute to understanding the world, discover the pleasure of a children's story, and provide advice on how to install and secure a water pipe or listen to the testimony of a wise elderly person.

The origin of the library's financial resources gives it the status of a public institution in its own right. Dedicated to the needs of a community that defines its profile, the library performs a democratic function as a public and safe meeting point. Libraries are suitable for all stages of an individual's life as:

- ❖ Places of discoveries;
- ❖ Means of continuous training;
- ❖ Sources of general, political and social information;
- ❖ Reservoirs of ideas;
- ❖ Opportunities to acquire new skills;
- ❖ Socio-cultural centers;
- ❖ Centers for resources and local studies;
- ❖ Places of sharing and fulfillment.

Libraries come in a variety of forms. They deploy their services either in large buildings designed for their specific functions, or in a room of their parent institution or in small temporary structures. Mobile libraries operate through motorized vehicles, boats, trains, trams and even donkeys and camels. Many of them have hybrid structures. They present their collections and services in physical and virtual spaces.

The term library is frequently applied to the public library alone, in spite of the fact that there are various sorts that address the issues of assorted client gatherings. They are available in all nations of the world, including the most un-created.

Most nations have a public library frequently answerable for organizing the organization of its different libraries, while practicing its customary mission of procuring, safeguarding and making records accessible. Nations with a government political design frequently have territorial libraries which assume a comparative part at the nearby level.

INTRODUCTION

The study of the existing is the first phase of the unified process. Its ultimate goal is to clarify the scope of our investigation. Throughout this phase, we will outline the preliminary expression of needs and we will present a modeling by use cases of preliminary functionalities of our application.

The main activities that will take place during this phase will essentially be requirements capture and analysis.

1.1 REQUIREMENTS ANALYSIS

1.1.1 DESCRIPTION OF THE CONTEXT

The main objective of this activity is to develop a system model to be built. In this activity, we will try to make a study of the existing and criticize it.

1.1.2 BACKGROUND

Given the incredibly rich variety and the continually developing number of works inside the library, more effective administration utilizing IT instruments will make it conceivable to all the more likely deal with the enormous volumes of works made accessible to the top of the library. The target of this undertaking is to set up a self-loader the executives application for every one of the works in their extraordinary larger part and exhaustively with their strengths, which will work with crafted by the curator from one perspective, and then again, which will deliberately lessen the term of narrative examination for students, and different educators and scientists.

The fundamental assignments of the library are to make due:

- ❖ Works,
- ❖ Members,
- ❖ And loans.

The management of works (books) consists of adding, consulting, deleting or modifying a document. The library houses various categories of books. We can cite, among other things, books, dictionaries, journals, end-of-study dissertations, end-of-year project reports, or mini projects, master's theses, photocopied books, internship reports...

The works of the library are classified by fields and/or by sectors. There are a multitude of fields or sectors (finance, law, IT, marketing, management, economics, mathematics, physics, accounting, English, French, software engineering, quality, leadership...).

The treasures of the library are obtained by purchase or by donation following a request from the various players in university life.

The addition of a work is done according to the ISBD standard (International Standard bibliographic description), and which designates a set of international standards of descriptions of cataloging defined by IFLA (International Federation of Library Associations and Institutions).

An ISBD record is divided into 8 areas, even if all of them are not necessary for the sake of effectiveness and efficiency of an application:

- ➢ Zone 1: Title and statement of responsibility (authors, translators);
- ➢ Zone 2: Edition (1st, 2nd, new edition);
- ➢ Zone 3: Special zone for maps and electronic documents;
- ➢ Zone 4: Bibliographic address (place of publication, publisher, date);
- ➢ Zone 5: Collation (physico description: pagination, format, illustration);
- ➢ Area 6: Collection;
- ➢ Area 7: Notes:
- ➢ Zone 8: International standardized number (ISBN, ISSN) and possibly price.

A book is referenced by a call number. The call number is the alphanumeric notation used to classify and find documents on the shelves. In our case, the dimension consists of three fields:

- ✓ The first field contains the digits corresponding to the discipline code.
- ✓ The second field corresponds to the letters corresponding to the first 4 letters of the discipline.
- ✓ Then the last field consists of numbers corresponding to the location of the book on the library shelf.

As soon as a document is acquired, the librarian creates a small card on which she notes the information of the book. Then, the librarian will place this card in a drawer located in the library's reading room to facilitate research by members.

To carry out a search, the member must then consult these files in order to see the available documents. When a document is borrowed, the librarian removes the file concerning this document from the drawer until it is returned by the borrower.

Member management allows you to create, consult, delete or modify information relating to a member. A member can be either a registered student, or a teacher, or a staff member; students from another faculty can also consult the library provided that they have their student card and authorization to access the library provided by their faculty.

A member can consult a document on site (ie in the reading room) or borrow it. To make a loan, the member must bring his access card to the library. The access card contains the following information: Surname, First name, number and grade of the member. The borrower chooses a document then presents himself to the librarian with his access card. The latter enters

the number of the borrower, the name of the document, the name of the member, his rank, and the date of the loan and the possible date of return of the document in his computer. The member's card retained by the librarian will be returned to him on the day of the return of the borrowed document. The duration of the loan is 60 days' renewable. After this time, the member will be penalized.

The penalty for the member may be the ban on borrowing for a certain time, a period which will depend on the duration of the overrun of the date of return of the work and which may range from three weeks to an indefinite period.

The management of loans consists of recording the exits and returns of documents, the management of penalties makes it possible to sanction a member or to lift the sanction which weighs on him.

The librarian does all this work with the MICROSOFT EXCEL tool.

1.2 STATEMENT OF THE PROBLEM

The library the executive's technique, depicted above, is old nowadays. We note that there is no data set to store the data concerning the works and the individuals, in light of the fact that the Microsoft Succeed device can't assume the part of a data set administration framework.

There is no update framework for the return dates of credits that are now due, which is a significant impediment in light of the fact that the exit and return dates are important data. Book returns are not recorded accurately in light of the fact that the administrator is just adding or erasing lines in her table. This subsequently doesn't make it conceivable to recognize lost reports.

There is likewise no point of interaction permitting the distinguishing proof of the bookkeeper. So the framework isn't secure by any means and anybody can get to the library data.

This framework likewise doesn't permit individuals to look for a report in view of a watchword. According to a settings perspective, everything is done haphazardly.

There is no connection point that would permit the curator to make changes to library settings.

The new application will permit individuals and the curator to carry out three kinds of analysis:

 Search by book title:

The client enters the element of a work then taps on the "SEARCH" button. The record whose title matches the title entered by the client is shown.

This search finds just a single outcome on the grounds that the call number is well defined for each work.

Search as indicated by a gathering of words:

The client should pick the right hunt measures and should enter the fitting pursuit term.

The hunt term should be placed in the free text box and afterward click on "SEARCH".

In the event that there are no outcomes, the product returns the message: "No record relates to your hunt".

In the event that there is an outcome, the product is situated on the outcome page which demonstrates the quantity of reactions and showcases the rundown of works found.

1.2 FUNCTIONAL REQUIREMENTS

These are framework highlights. These are necessities indicating an info/yield conduct of the Framework.

The framework should permit:

1. To the custodian
2. To recognize themselves
3. To add books
4. To counsel the book
5. To really look at the accessibility of duplicates;
6. To add individuals;
7. To consult a loan
8. To consult the list of penalties;
9. Define the duration of the loans;
10. Consult popular works (the most requested);
11. Consult the least borrowed book;

1.3 NON-FUNCTIONAL REQUIREMENTS

These are the necessities that describe the framework. These are execution prerequisites, equipment type or configuration type. These necessities might connect with execution requirements (programming language, DBMS type, working framework, and so on.)

As a component of this work, the application should be extensible, in other words, there might be plausible of adding or changing new functionalities.

The application ought to have the option to:

Organizing;

Be viable with any working framework.

It ought to likewise be noticed that the application should be exceptionally secure in light of the fact that the data should not be available to everybody.

1.4 IDENTIFICATION OF ACTORS

For this application, we have recognized a tiny number of entertainers and a couple of purpose cases that address the issues of these entertainers.

❖ The primary entertainers are:

Admin

Its job is to deal with the works contained in the library and individuals who access the library.

Individuals who can be:

- A student;
- A staff member;
- A teacher

    Loan management

- The different use cases are:
- The identification of the librarian;
- Membership management;
- Credit the board;

The administration of works;

The examination of work by the individuals;

Penalty management.

❖ Enlistment;

The custodian should record the directions of the books acquired, the date of return of the book and the quantity of the borrower.

❖ Participation the board:

The framework should permit the bookkeeper to add, change, erase or counsel a part to really take a look at the quantity of credits as well as the due dates of their advances.

❖ The administration of works:

The application should likewise permit the bookkeeper to deal with the reservation of books. She should likewise refresh the data set when there are new works.

❖ The quest for a book:

Individuals can get to the library from any college terminal to counsel the rundown of existing books, and afterward go to the custodian to get.

❖ Credit the board:

The custodian must, with this application, have the option to do the different tasks for dealing with the accompanying borrowings: add, return, counsel, as demonstrated by the outline in the figure which follows and which is reasonable for use.

❖ Punishment the executives:

The framework should likewise permit the bookkeeper to enroll punishments for a part, to erase it or to really take a look at the arrangements of punished individuals too as the term as should be visible with the fig underneath.

1.6 CONCLUSION

In this part, we made a catch to recognize the requirements of the various clients of the framework as well as an examination, a plan and finished with the utilization cases that we will refine with the accompanying sections.

CHAPTER 2: DESIGN

2.1 INTRODUCTION

The activity in this Chapter is a logical description of how the system will work. It consists in shaping the System and giving it a form and an architecture. It is a major input for the last two, namely implementation and testing.

During this activity two tasks are necessary for the realization of the priority use cases analyzed in the previous chapter:

- ➢ The Design Class Diagram
- ➢ The deployment diagram

2.2 STRUCTURES MANAGEMENT USE CASE

Throughout this chapter, we will elaborate the design class and use case sequence diagrams. The following diagram will show us the classes that appear in the use case "structure management".

2.3 BORROWING MANAGEMENT USE CASE

This figure shows here the case of use of the management of the loans which, as we can note it, concerns the relations between the librarian and the students, relations much more convivial and which release the various actions or operations that the ones and the others are called upon to perform.

We will develop design diagrams of the different classes in order to better understand the different use cases which are among others:

- ❖ Save loan
- ❖ Save return loan
- ❖ Consult Borrowing

The class diagram is used to express how objects and classes will be defined, as well as the relationships that exist between the different classes.

Implementation

2.4 CONCLUSION:

Clearly, as we have just seen, this chapter was devoted to the design of diagrams, use cases which allowed us to identify the general architecture of our application represented here by this deployment diagram which informs us about the Human-Machine relationship of our application which will be detailed in the next chapter.

CHAPTER 3 IMPLEMENTATION

3.1 ANALYSIS OF THE CURRENT SYSTEM

The college had PCs which were chiefly utilized at top administration level to help computerized library framework. The understudies, administrators and senior custodians were available to the PCs accordingly keep an eye on their work. The library was isolated into two areas; the administrator's office, the shelves for the workforce of PC, Instruction and Sociologies. The segment contained PCs that the understudies could look for data on the web, the other area was where the book bank was found, shelves for Business and Regulation reading material and a favorable climate which was extensive for perusing.

The most common way of giving books to understudies followed a short system, by which the understudies was approached to deliver the library card and after the understudies got their preferred course reading if accessible, yet the understudy was given a condition, to peruse the book in that area of the library. In the wake of wrapping up perusing, the understudy returned the reading material and the library card was delivered,

The curators and book financiers kept their records physically, that they depended on the data present in a book, and all things considered the data could be lost without any problem.

Subsequently, the accentuation of the new framework lay on guaranteeing the consistency and implementation of information.

3.2 PROPOSED FRAMEWORK

The intention of the new system is to address the limitations inherent in the previous system. The following objectives are pursued by the new system:

1. Enhance the existing techniques for gathering, storing, and updating data.
2. Increase joint effort by setting up a data set to empower the units inside the extension to share data on information put away.
3. Improve on information catch and announcing. This works on the nature of occasional reports by integrating exact data.
4. Quick and effective recovery of information.

3.3 ADVENTAGE OF THE PROPOSED FRAMEWORK

Guarantee expanded usefulness of the data set. Each datum will be placed in one data set rather than there being various documents, paper, books and registers dissipated everywhere. This will create accessible space that can be apportioned for elective purposes.

Assist in ensuring data consistency, thereby enhancing precise record-keeping and data acquisition. There will be a significant decrease in errors resulting from manual computations.

The use of passwords improves the safety efforts given by the framework.

The applicable unit alone ought to include data that expects importance to remember. This diminishes duplication of information.

The effective sharing of data decreases time wastage altogether. The information is put away general to where it is most often utilized and in this manner can be alluded to whenever.

The execution of the improvement application and data set ensures a strong way to deal with keeping up with records. The proposed framework will help increment productively and adequacy of the division's administrations to the establishment and the clients.

3.4 ACHIEVABILITY OF THE DATA SET FRAMEWORK

Practicality study is otherwise called primer examination assessed the framework in specialized, functional and conservative.

3.4.1 SPECIALIZED POSSIBILITY

As indicated by Riagga, (2003), isolates the specialized region into two segments: equipment, programming and work force to create (or buy), introduce and work the framework. To conclude specialized practicality, the examiner essentially decides whether the starter configuration can be created and carried out utilizing existing innovation.

In the perspective on the review that was done, the venture is in fact plausible in light of the fact that the review is in a situation to foster the framework.

3.4.2 FUNCTIONAL POSSIBILITY

Functional practicality in Riaga's, (2003), view is the assurance of the new framework will actually want to play out the assigned capabilities inside the current authoritative climate with its ongoing faculty and existing strategies. The framework is placed being used whenever it has been created and executed. Considering this venture, functional possibility is cutting-edge since all the staff and the top administration completely acknowledge the new framework to be created. The first climate that envelops of the faculty and the staff individual from the college who thought of the current methods assumed a major part in functional possibility to help think of the data set framework.

3.4.3 PREREQUISITES DETAIL

This zeroed in on surveying what was gathered corresponding to the current framework. Regions that was researched included; framework necessity, and utilitarian prerequisite.

3.5 FRAMEWORK PREREQUISITE

These carried the selection of substances to be utilized in the data set to store and keep up with data and incorporated the accompanying.

  i. The staff element, which incorporated the staff ID, their Biometric (names, photo) and the mark among others.
  ii. The understudies' element, which incorporated the names and the course finished.

iii. The request's element had the call numbers for books that were between connected, area and the division.

iv. Registration's element, this incorporated looking for the specific books that were Senior Administrator's substance, which incorporated the Custodian's name and the place of the different book banks.

3.5.1 HARDWARE REQUIREMENT

To ensure optimal performance on Windows, please make sure you have the following components: a minimum of 40GB disk space, a printer, a keyboard, a mouse, and a monitor. Additionally, having sufficient RAM is crucial.

Processor Pentium 4 with no less than 2.5GHz to empower quicker calculation and permitted further examination of new parts into the application and run it.

The undertaking engineer took part in the distinguishing proof and examination of the end-clients' prerequisites. Clients depicted individuals who utilized the framework and this was primarily the Library staff; understudies, and other approved people.

Necessities was the planned clients' expectation's of the framework, what prerequisite could be met to actually perform. It included catching of data, keeping up with and refreshing the data set and further control and handling of information.

3.5.2 PROGRAMMING PREREQUISITE

This elaborate an assortment of projects, schedules, and sub-schedules that worked with the programming and activity of a PC yet in addition incorporate documentation and functional methodology. The specialist utilized an Organized Question language (SQL) to foster the framework. This was joined by the accompanying prerequisites: Working framework for instance, Windows XP with a higher rendition, Content proofreader (Notebook and

Macromedia Dream falter) programming MS Office 2003 and PhP was utilized to foster the application and run it.

3.5.3 PRACTICAL PREREQUISITE

These depicted which works the data set performed on finishing. It outlined the various purposes for which the model was created.

The librarians' corresponding details were updated in the database, reflecting the changes in data.

The information base decreased information overt repetitiveness by saving a section once and permits various review of a similar passage at the same time.

A client had the option to get to every one of the information in the framework, update and make changes in like manner.

CHAPTER 4

4.1 FRAMEWORK PLAN

This segment covers the general plan of the data set framework, including its calculated, intelligent, and actual perspectives. It incorporates both the underlying plan stage and the resulting definite plan stage. It as well as included charts which works with the comprehension client might interpret the information base framework.

4.1.1   APPLIED PLAN

This involves a thorough calculated information model that catches the general design of hierarchical information, while staying confined from a particular data set administration framework or execution concerns. A calculated information model incorporates the pertinent elements, relationship and characteristics as well as endlessly decides and limitations that characterize how information are utilized. The applied information model might be communicated in one of the few structures: - the most well-known are itemized element relationship charts or article situated models.

4.1.2 DATA FLOW DIAGRAM (DFD)

A system's data flow diagram (DFD) serves as a visual representation showcasing the movement of data and the corresponding tasks or operations conducted within the system. It shows the outside specialists who (the sources or objective of information), the cycles that changes (follow up on) the information and the information are gathered and held. The information store names in DFDs line up with the names allotted to the information substances in the E-R charts.
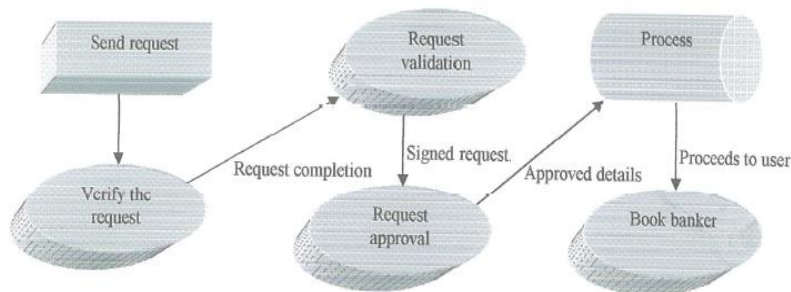
Figure 1: Dataflow diagram for book processing

The figure above makes sense of the cycle that the client goes through before the book is given to the client. Mentioning for the book from the curator, the book is checked in the framework in the favored class then, at that point, confirmed, the book financier enters the subtleties of the clients and afterward gives the book.

4.1.2 SETTING MODEL GRAPH

A setting information stream chart characterizes the extension and the limit for the framework and since the extent of any framework is consistently dependent on future developments, the setting outline is likewise dependent upon steady change. As displayed in the outline underneath, outer specialists are drawn around the edge. Information stream characterizes collaborations of the framework with the limits and the outside information stores.

The primary motivation behind the mechanized data set was to serve and oversee client subtleties productively and actually.

The database system involves the design of its conceptual, logical, and physical aspects.
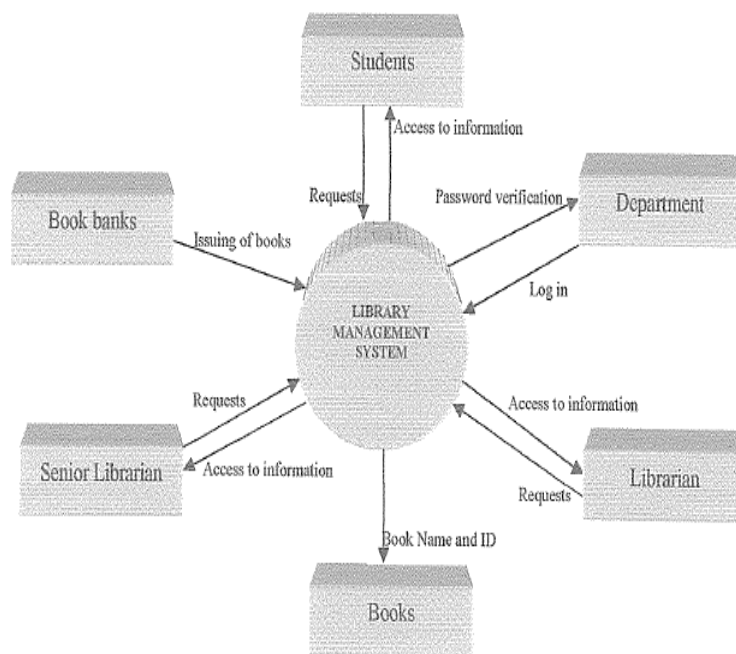
Figure 2: Context level diagram for the new Library Management System

The above figure makes sense of how the Library the Executives Framework functions collaborating with the understudies, bookkeeper and senior custodian benefit from the framework.

4.1.3 LOGICAL DESIGN

This was the most common way of planning of the reasonable information model to the designs that were well defined for target DBMS. The intelligent plan process was worried about changing the calculated information model to a coherent information model.

Substance Relationship Graph of the data set

The critical components of the Substance Relationship Model (E-R Model) are substances, characteristics, and connections. The E-R graph portrays the data prerequisites at the offices.

SUBSTANCES

A substance is something that can be distinguished in the clients' workplace, something that clients need to follow, Kroenke, (2000).

For this situation, books, understudies, divisions, administrator, senior library and book banks are the elements.

ASCRIBES

Substances have credits, additionally called properties that portray the element's attributes.

Instances of qualities are as per the following. Understudies: Stud Name, Email, Gender, Year.

Books: Title, Author Name, edition, availability.

Admin: Name, Email, Contacts and Status.

RELATIONSHIPS

According to Kroenke (2000), entities are connected through an association known as a relationship. An E-R model comprises of both relationship classes and relationship occurrences. Substance classes are connected through relationship classes, while element examples are associated through relationship occurrences. As per the library the board framework, one custodian registers numerous understudies, one understudy can look for some books, one understudy can have a place with one office, one or numerous understudies can get one or many books from the book banks, and one senior curator heads many book banks.

4.1.5 ENTITY RELATIONSHIP MODEL
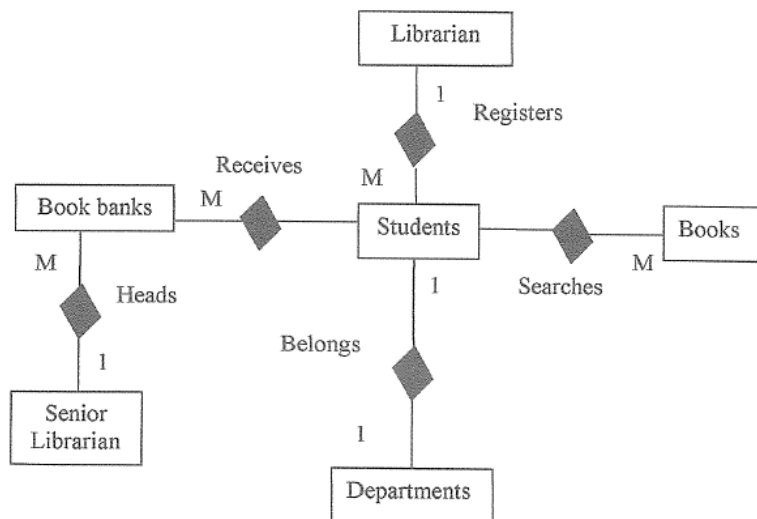
Figure 3: The Entity-Relationship Model

The Substance Relationship (trama center) model was initially proposed by Peter, (19/b) as a method for bringing together the organization and social data set sees. The emergency room model, in straightforward terms, is a reasonable information model that sees this present reality regarding elements and connections. A fundamental part of the model is the Substance

Relationship graph which was utilized to outwardly address information objects. Since Chen composed his paper the model has been expanded and today it is normally utilized for data set plan for the data set fashioner, the utility of the emergency room model is:

4.2 DATABASE TABLES

Admins table

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int(100)			No	None		AUTO_INCREMENT	Change	Drop	More
☐	2	fname	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	3	lname	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	4	username	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	5	password	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	6	email	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	7	contact	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	8	picture	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	9	status	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More

☐ Check all   With selected: 🗔 Browse   ✎ Change   ⊖ Drop   🔑 Primary   Ū Unique   Index   T Fulltext

The "admin" table stores all registered admins in the database. These admins are either with a validated status or not. When the status is validated then the admin can connect but if the admin is not validated by another admin already valid in this case, even if he is registered, he is not able to connect to the library.

Books table

🗔 Browse 📑 Structure 🗔 SQL 🔍 Search ⊹ Insert 📤 Export 📥 Import 🔧 Operations

📑 Table structure   🔗 Relation view

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action		
☐	1	id 🔑	int(100)			No	None			Change	Drop	More
☐	2	name	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	3	authors	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	4	edition	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	5	status	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More
☐	6	quantity	int(100)		UNSIGNED	No	None			Change	Drop	More
☐	7	department	varchar(100)	utf8mb4_general_ci		No	None			Change	Drop	More

☐ Check all   With selected: 🗔 Browse   ✎ Change   ⊖ Drop   🔑 Primary   Ū Unique   Index   T Fulltext

🖨 Print   📑 Propose table structure ⓘ   ⊡ Move columns   🔧 Normalize

In the "Book" table, all the books belonging to the library are recorded.

20

Comments

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id 🔑	int(50)			No	None		AUTO_INCREMENT	🖉 Change ⊖ Drop ▼ More
2	email	varchar(100)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▼ More
3	comment	varchar(500)	utf8mb4_general_ci		No	None			🖉 Change ⊖ Drop ▼ More

↑⌐ ☐ Check all   With selected: ▤ Browse 🖉 Change ⊖ Drop 🔑 Primary 🆄 Unique 🗐 Index 🅣 Fulltext

🖨 Print   📇 Propose table structure ⓘ   🗓 Move columns   🖌 Normalize
🔢 Add 1 ↕ column(s) [after comment ⌄] [Go]

In the "comment" table, all the comments written by a student or admin are recorded.

Fines

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	email	varchar(100)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▼ More
2	id	int(100)			No	None			🖉 Change ⊖ Drop ▼ More
3	returned	varchar(100)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▼ More
4	days	int(50)			No	None			🖉 Change ⊖ Drop ▼ More
5	fine	double			No	None			🖉 Change ⊖ Drop ▼ More
6	status	varchar(100)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▼ More

↑⌐ ☐ Check all   With selected: ▤ Browse 🖉 Change ⊖ Drop 🔑 Primary 🆄 Unique 🗐 Index 🅣 Fulltext

🖨 Print   📇 Propose table structure ⓘ   🗓 Move columns   🖌 Normalize
🔢 Add 1 ↕ column(s) [after status ⌄] [Go]

In the "fines" table we record all the payments that a student must pay when he returns the book beyond the deadline that we have given him.

Issued Books

🖥 Server: sql105.unaux.com » 🗄 Database: unaux_33821330_library » ▦ Table: issue_book

▤ Browse ▮ Structure ▯ SQL ⚲ Search 🔢 Insert 📤 Export 📥 Import 🖌 Operations

▮ Table structure   🔗 Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	email	varchar(100)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▼ More
2	id	int(100)			No	None			🖉 Change ⊖ Drop ▼ More
3	approve	varchar(100)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▼ More
4	issue	varchar(100)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▼ More
5	return	varchar(100)	latin1_swedish_ci		No	None			🖉 Change ⊖ Drop ▼ More

↑⌐ ☐ Check all   With selected: ▤ Browse 🖉 Change ⊖ Drop 🔑 Primary 🆄 Unique 🗐 Index 🅣 Fulltext

🖨 Print   📇 Propose table structure ⓘ   🗓 Move columns   🖌 Normalize
🔢 Add 1 ↕ column(s) [after return ⌄] [Go]

21

In the "issue_book" table, we record all the information concerning any book that has been borrowed from the library: the email of the person who took the book, the book id, information if the loan was valid or not, the date of borrowing and the date on which the student must return the book.

Students

In the "student" table is stored all the students registered in the library.

Timer

In the "timer" table, we store the countdown, so that the student returns the book he took. And if the timer has reached 0 in this case, the days that will exceed, we will start counting an indemnity of $0.25 per day until the day he returns the book.

4.2 FORMS AND PAGES

Various structures were intended to catch understudies, staff and ID number subtleties and empower altering, for refreshing and getting to data required. A few structures were created for the motivations behind correspondence to everything on the principal structure; the structure menu. The structures are redone with various sorts of buttons to empower route through various parts that make up the entire framework.

Home Page of The system
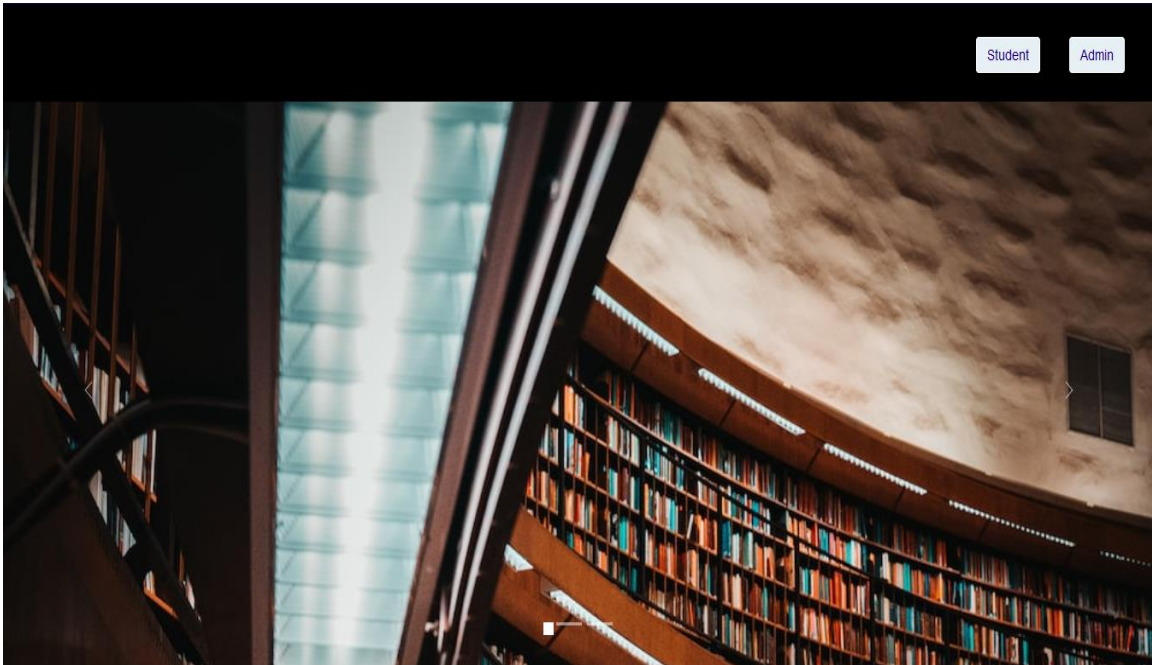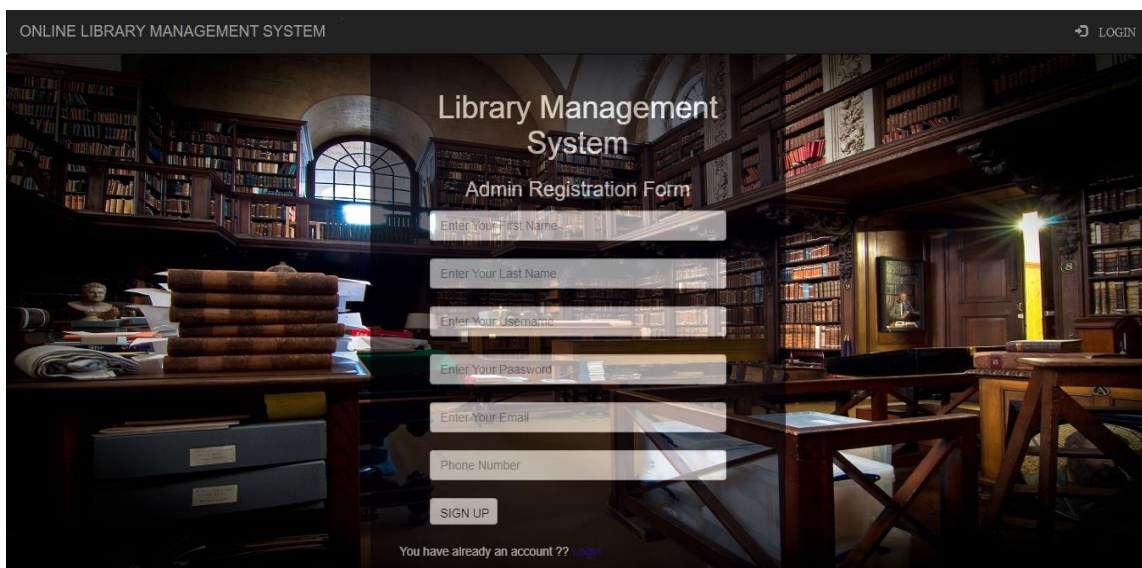
In the general Home page, we have a slideshow and the possibility to choose to log in as an admin or as a student.

➤ **Admin part**

Admin Registration page

For the admin part, we have the possibility to do a SIGNUP.

Admin Login page
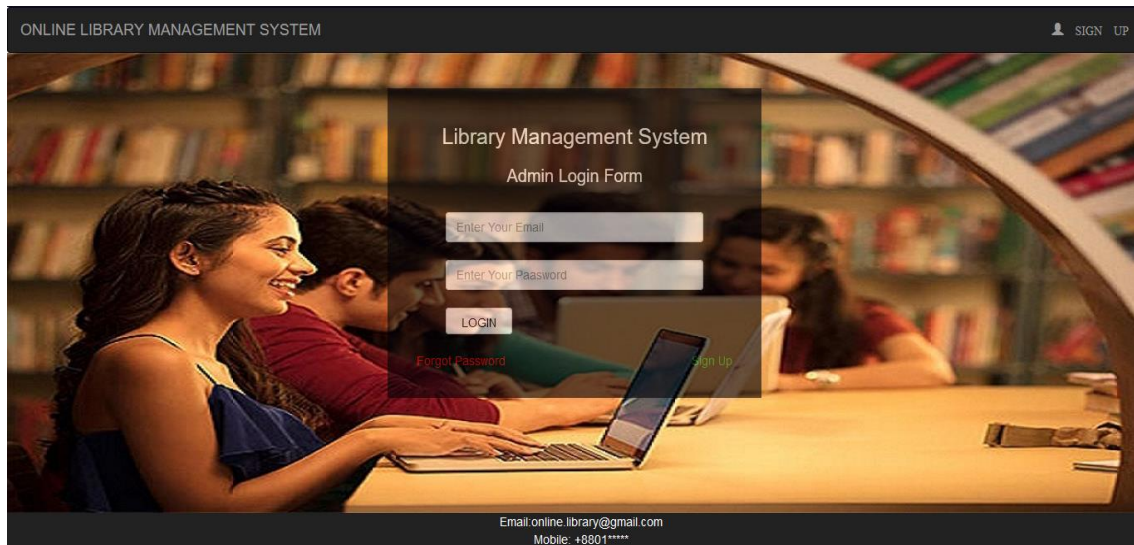
Figure3

An admin can also login using this LOGIN page or change the password using email and username.

Admin home page
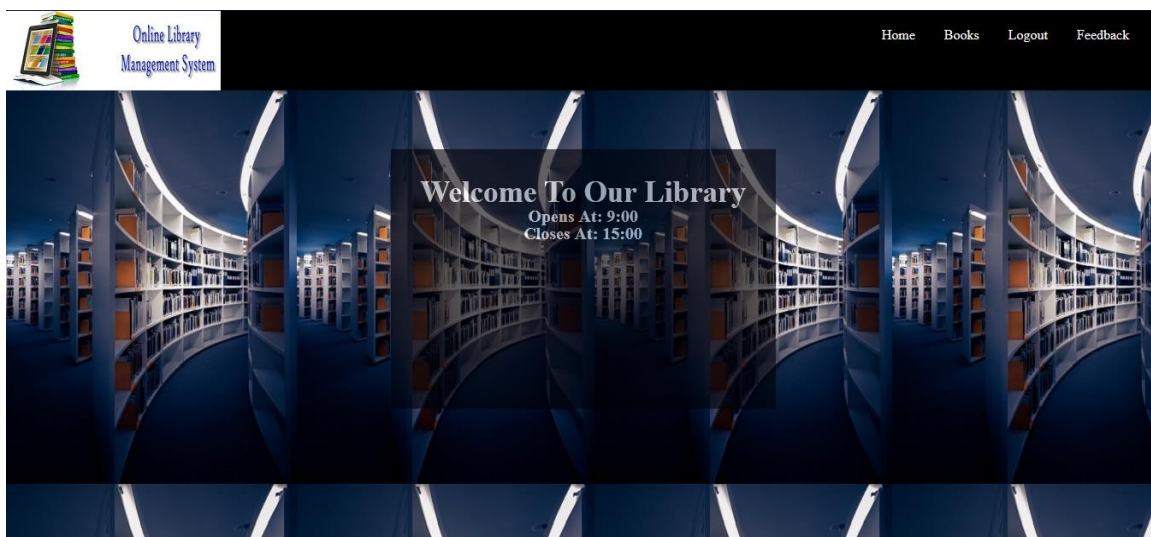
Figure4

Admin Profile Page
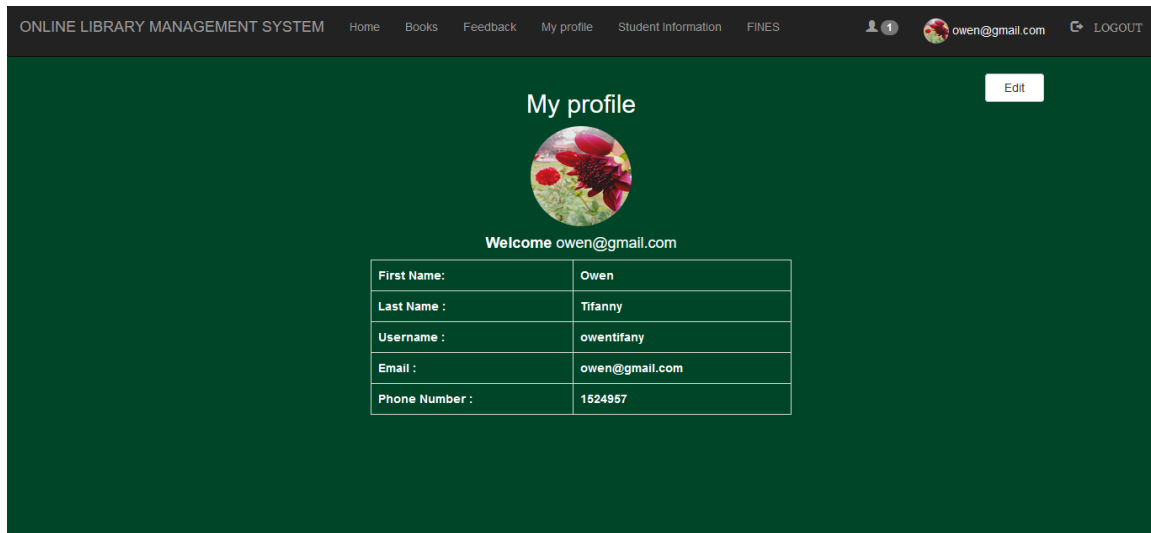
Figure5

The profile page of the admin, displays all his personal information and his profile photo.

Feedback
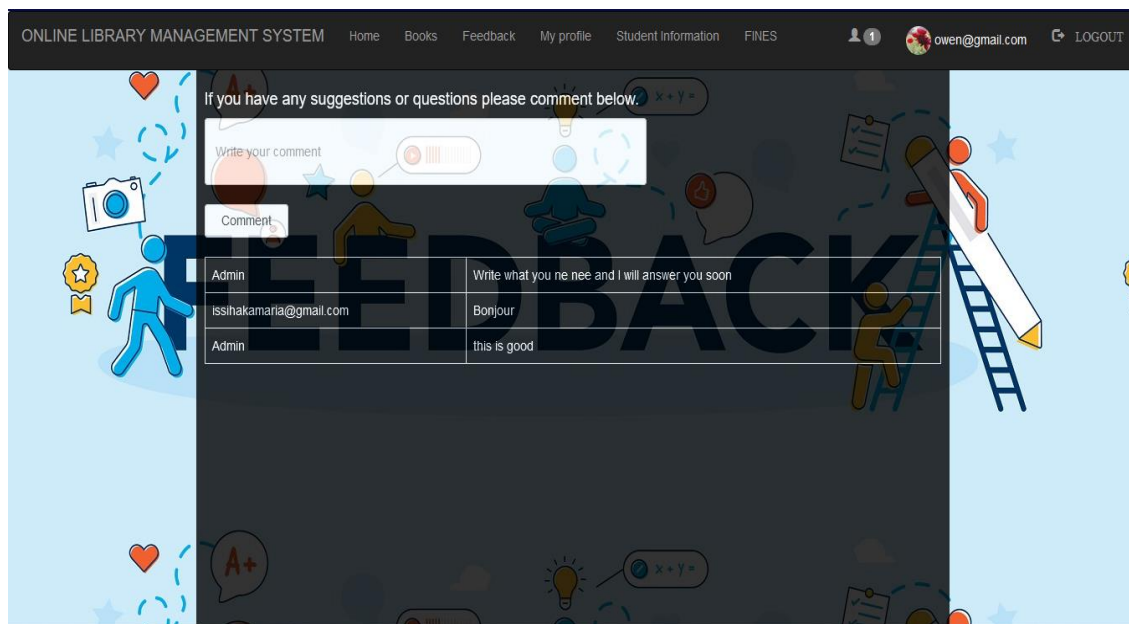
Figure6

Anything admins or students write will show up on this page for everyone to view.

Student's information

The student page, you can see all the students registered in the library and as an admin, you can delete a student.

Fines

The "fines" page shows all the students and the money the bookstore owes them, and you can see if it's paid or not.

Admin Requests

Figure9

In this page you can see all the admins who have registered but who have not been approved to be able to access the library.

Side Navigation

Figure10

With the Sidenav you can either see the profile, add a book, see all the books, see the borrowing requests for the books, see the books that have been approved and are still on time and finally the books whose date back to expire and the books that have been returned to the library.

Add Book

In the "Add Book" page you have the possibility to add a new book.

Book Requests

Here in the "Book Request" page, we can see all the book loan requests, and therefore the admin can choose to validate the request.

Issued Books

Figure13

Here you can see all the books that have been taken out of the library and therefore the date to return them has not yet passed.

Returned and Expired

Figure14

In this page, you can see all the books whose return date has already expired and also all the books that are returned to the library. You can either choose to see only books whose date has expired or only books that have been returned to the library.
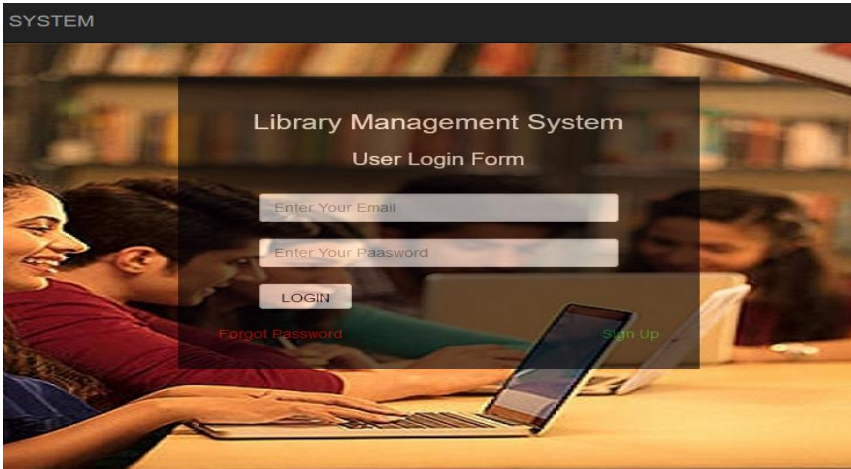
➢ **Student Part**

Sign Up form

Figure15

For the student part, we have the possibility of doing a SIGNUP.

Login
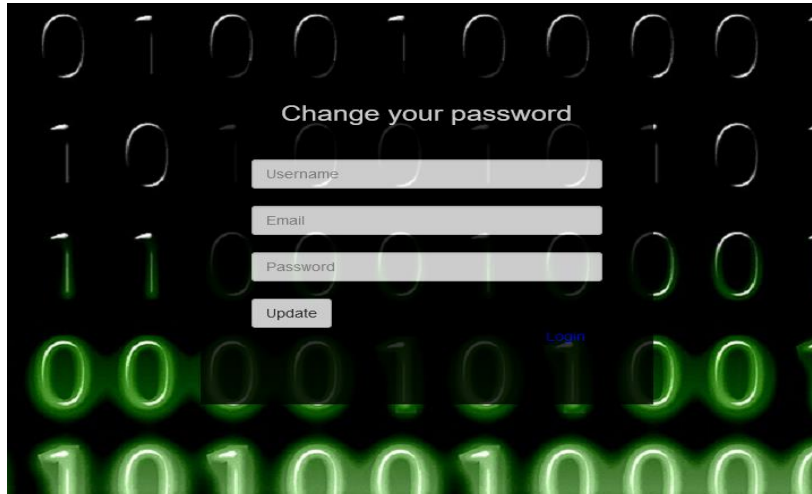
Figure16

A student can also login using this LOGIN page or change the password using email and username.

Forgot Password
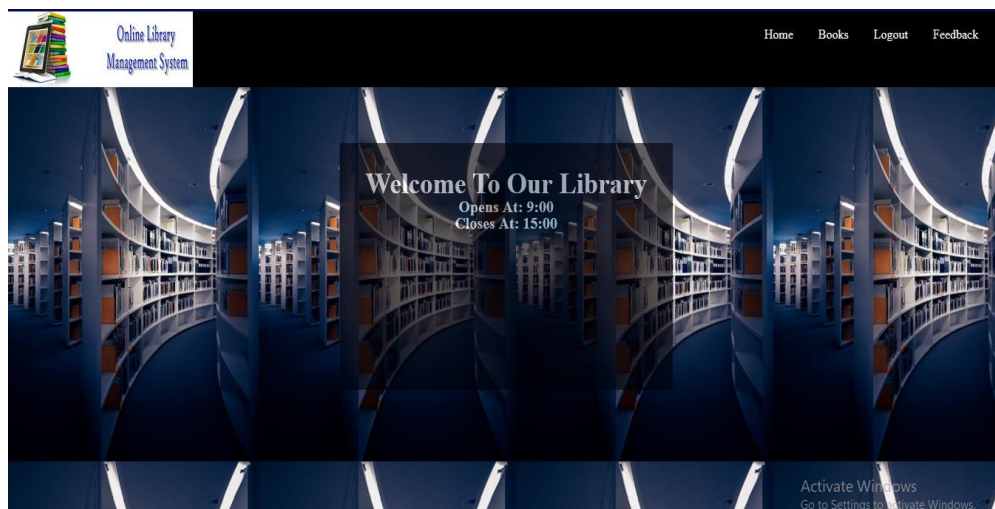

Figure17
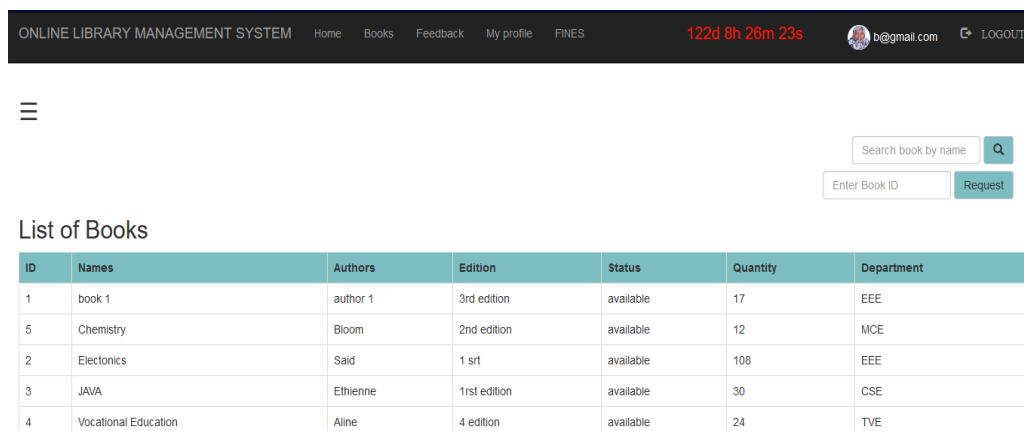
This page is the page for password update.

Home

Figure18

Books

List of Books

ID	Names	Authors	Edition	Status	Quantity	Department
1	book 1	author 1	3rd edition	available	17	EEE
5	Chemistry	Bloom	2nd edition	available	12	MCE
2	Electonics	Said	1 srt	available	108	EEE
3	JAVA	Ethienne	1rst edition	available	30	CSE
4	Vocational Education	Aline	4 edition	available	24	TVE

In this page, you can see all the books of the library. This way, you can do a search to be able to apply for a loan.
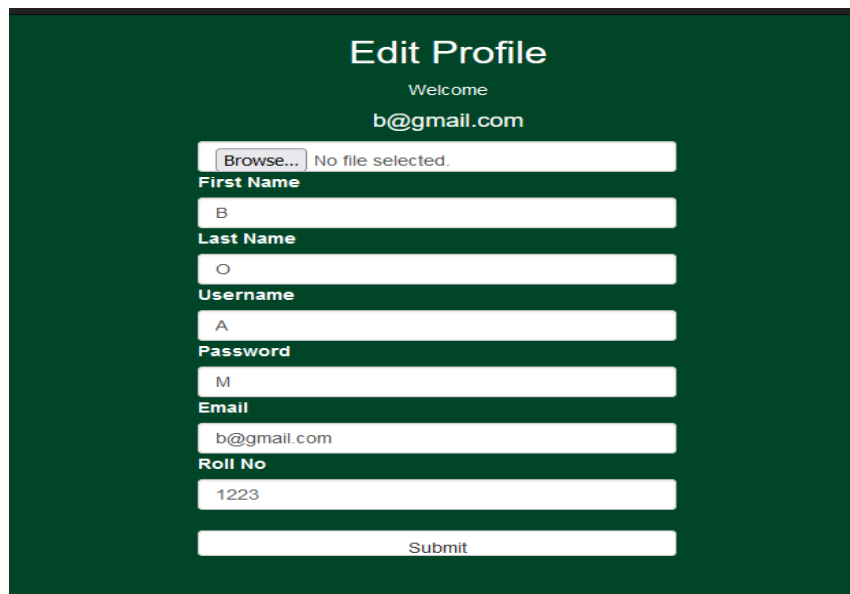
My profile

Figure20

The student's profile page, displays all his personal information, his profile photo and the possibility of modifying his profile.

Edit Profile

Figure21

This is the edit student personal information page.

Book Requested
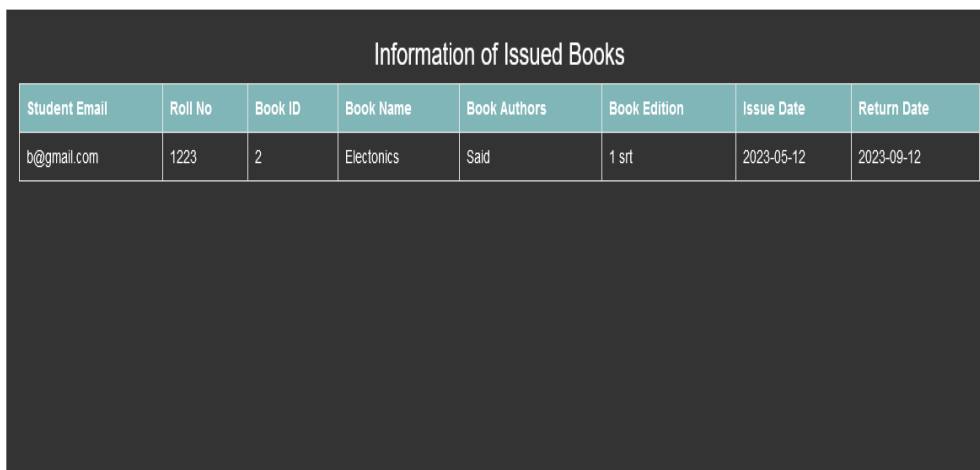
All the books that the student has requested to borrow and which have not yet been validated will be displayed on this page.

Issued Book
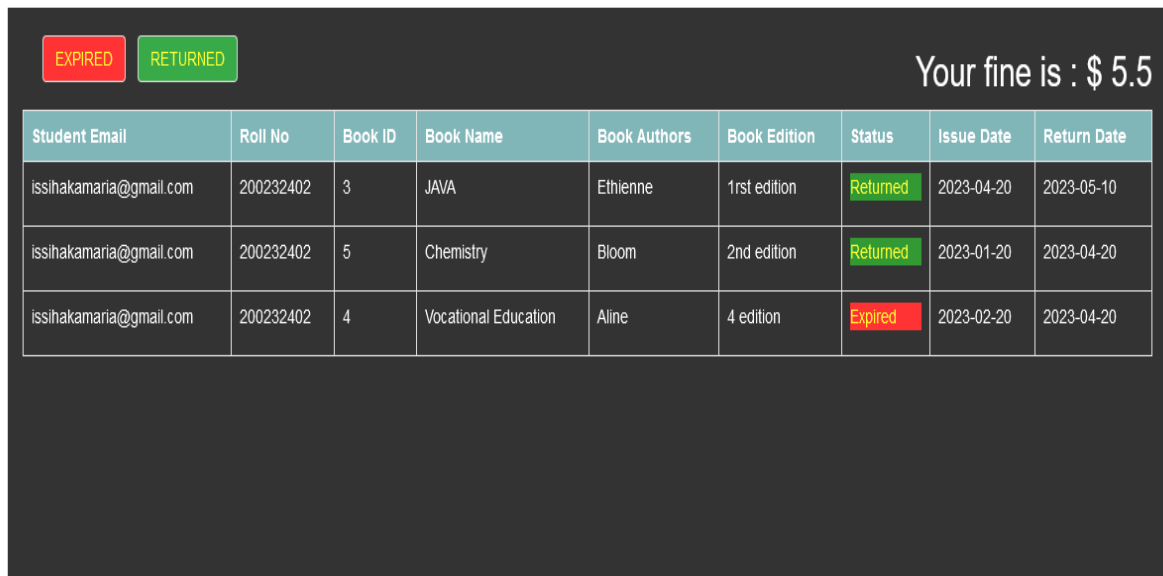
Here all the books that the student has been allowed to take will show as the date of returning the book.

Expired and Returned

Figure24

In the page, "Expired and Returned" will display all the books that the student has already returned and all the books that have expired. In this case, the penalty amount for the days that are exceeded will also be displayed on this page.

CHAPTER 5: DISCUSSION, RECOMMENDATIONS

5.1 INTRODUCTION

This part gives the rundown of the significant discoveries of the review ends and what the analyst suggests. The proposals depend on the scientist's investigation and understanding of the discoveries.

5.2 CONVERSATION

The target of the new framework was to catch precise data to be utilized in the convenient and effective way and precisely with the goal that administration can involve the framework for their different administration issues and empower the creation of right choices while basing on the exact data.

The specialist has laid out that the plan of a cordial graphical UI is effortlessly finished by utilization of an electronic framework. This is accomplished by the utilization of programming system to foster a UI. This was finished by utilizing HTML, CSS and PHP

The utilization of an executed mechanized framework secures the pace of embedding data into the library the board framework. The specialist has laid out that the hour of recovering and gathering data has been abbreviated and there are less grievance and mistakes.

The venture has been associated with following difficulties:

   i.   The library has a major populace and gathering data took a ton of time.
  ii.   Limited finance in wording planning and printing.
 iii.   Limited admittance to PC and programming necessities
  iv.   Time limitations particularly the time engaged with fostering the suggested framework.

5.3 RECOMMENDATIONS

The capability performed by the current framework incorporate; assortment, recording, putting away and fundamental information handling. The specialist expected to catch the capabilities performed by the current', framework into a mechanized framework which was finished through examining the cycles by the current interaction. Utilizing the new framework might be challenging for clients and the framework might need a support office to help clients in utilizing the new application.

Proposals incorporate the improvement of the assistance office with in the created to help new and guileless clients to utilize the application. The assistance office might be a product program created to make sense of what different parts of the framework do and how they work.

Information and data for the current framework is typically put away on printed versions. The new framework put away information and data on PC hard plates from where the application is run. Future upgrades remember the capacity and reinforcement of information for various areas to empower reinforcement of data. This should be possible through fostering a reinforcement brief office framework to empower back up of information and data set security framework for framework insurance.

Execution of the new framework was finished by the analyst on the libraries PCs in order to empower the accomplishment of the scientist's goals. The new framework was an independent and was just' utilized by the library. Future examination may the connection of all offices offering comparative types of assistance through the Internet. These empowered understudies to find books in different libraries around the nation rapidly.

The information interface created empower catch and handling of information utilizing electronic point of interaction. The information is to be caught utilizing a console on the machine that houses the application. Future enhancements might remember the empowering of information for line through the web or mark of library terminal. This should be possible by scaling the application to be open on the web. Approved clients needed to utilize passwords to get to information base. This empowered admittance of data from far off areas and the sending of understudy's bills through the web.

The new proposed framework ought to be tried by the library the executives to guarantee that it moves along as expected gathering the prerequisites of the different clients. Subterranean insect infection ought to be set up to guarantee the proceeded with stream and wellbeing of data.

5.4 CONCLUSION

The manual framework utilized in the library was wasteful, information section and recovery was monotonous, there was blending and removal of records, refreshing and revising of records took a ton of time consequently there was a need to foster a modernized framework to take care of the above issues. With the improvement of the data framework, the issues were addressed as the framework had the option to meet the prerequisites indicated by the clients. The finish of this task is critical to the new IUT primary library.

5.5 LIMITATION OF STUDY

   I.   Some of the respondents don't return their surveys in time and that prompted postponement of data
  II.   Some of the respondents were ignorant.
 III.   The outcomes were not unconstrained.
  IV.   The specialist didn't know whether, what is noticed was a delegate typical everyday practice of the respondents.
   V.   The presence of the enumerators impacted the reaction; delicate inquiries were not addressed precisely.
  VI.   The cost of printing the surveys was costly and a portion of the polls was abused by the respondents.

5.6 FUTURE EXPLORATION

Execution examination involving automated frameworks in the present associations.

What carried out data advancements have meant for consumer loyalty.

Today, in contemporary associations, the connection between's coordinated data frameworks and hierarchical execution is clear.

How to access our project online?

Link : http://online-library.unaux.com/

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APPENDEX

```html
<!DOCTYPE html>

<html>

<head>

<meta name="viewport" content="width=device-width, initial-scale=1">

<style>

body {

  font-family: "Lato", sans-serif;

  transition: background-color .5s;

}


.sidenav {

  height: 100%;

  width: 0;

  position: fixed;

  z-index: 1;

  top: 0;

  left: 0;

  background-color: #111;

  overflow-x: hidden;

  transition: 0.5s;

  padding-top: 60px;

}


.sidenav a {

  padding: 8px 8px 8px 32px;

  text-decoration: none;

  font-size: 25px;

  color: #818181;

  display: block;

  transition: 0.3s;

}


.sidenav a:hover {
```

```css
   color: #f1f1f1;
}

.sidenav .closebtn {
  position: absolute;
  top: 0;
  right: 25px;
  font-size: 36px;
  margin-left: 50px;
}

#main {
  transition: margin-left .5s;
  padding: 16px;
}

@media screen and (max-height: 450px) {
  .sidenav {padding-top: 15px;}
  .sidenav a {font-size: 18px;}
}
</style>
</head>
<body>

<div id="mySidenav" class="sidenav">
  <a href="javascript:void(0)" class="closebtn" onclick="closeNav()">&times;</a>
  <a href="#">About</a>
  <a href="#">Services</a>
  <a href="#">Clients</a>
  <a href="#">Contact</a>
</div>

<div id="main">
  <h2>Sidenav Push Example</h2>
```

<p>Click on the element below to open the side navigation menu, and push this content to the right. Notice that we add a black see-through background-color to body when the sidenav is opened.</p>

☰ open

</div>

<script>

function openNav() {

  document.getElementById("mySidenav").style.width = "250px";

  document.getElementById("main").style.marginLeft = "250px";

  document.body.style.backgroundColor = "rgba(0,0,0,0.4)";

}

function closeNav() {

  document.getElementById("mySidenav").style.width = "0";

  document.getElementById("main").style.marginLeft= "0";

  document.body.style.backgroundColor = "white";

}

</script>

</body>

</html>