

**PROJECT PROPOSAL
FOR AN E- LIBRARY MANAGEMENT SYSTEM
IN MINDANAO STATE UNIVERSITY -
GENERAL SANTOS CITY**

BY

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1. INTRODUCTION

Information Technology has revolutionized the life of human beings and has made lives easier by the various kinds of applications. In the light of the rapid changes with the use of Information Technology, there are many tools, technologies and systems that have been produced and invented. This project is concerned with implementing an Electronic Library Management System for Mindanao State University - General Santos City Library in order to make library management more efficient and easy to handle. The Library management system enables a fully automated library service. It has the ability to display the details of the books available in various departments, search for the book on the repository including filters and view a pdf copy of the book on the web. The goal of this project is to provide simplicity as well as security and efficiency to the management of MSU Library and also reduce managing personnel in the library.

2. STATEMENT OF THE PROBLEM

This study will be implemented to help the student to access the MSU library without having face to face and can be accessed using devices such as smartphones or personal laptops and computers connected to the internet. The MSU library faces this following problems:

- The library has a limited space for new books.
- A lot of students misplaced or lost their library cards.
- Many books are damaged when returned to the library.
- Some books are not returned by the students.
- The librarian cannot sort the books properly.

3. LITERATURE REVIEW

Libraries dole out a critical role in the education industry. It is considered as the brain of any education institute, be it small or large schools, colleges or universities. With the development of digital content, it becomes more important to manage the catalogue of educational information with a scalable and reliable Library Management System that

will support the general requirement of the library. A trustworthy web-based library management system provides a complete resolution for students, librarians, and faculty members. The Library Management system helps in maintaining data of books issued to learners and books available in the library. This helps librarians to spot any particular book at any given time in the library. (Singh, 2019)

A library management system is a software that is used to maintain the record of the library. It contains work like the number of available books in the library, the number of books are issued or returning or renewing a book or late fine charge record, etc. Library Management Systems is software that helps to maintain a database that is useful to enter new books & record books borrowed by the members, with the respective submission dates. Moreover, it also reduces the manual record burden of the librarian. Some of the importance of library management systems are: decrease the headache and doubtfulness of storing the data securely and searching the records of any individual afterward, the staff can facilitate themselves with some extra authorizations and privileges and it is possible for one person to take care of the whole system, without chances of mistakes. (Bhojane, 2019)

A web-based system is more convenient than traditional desktop applications. Users can easily access the cloud or web-based application from anywhere at any time. It is also cost-effective to manage burdensome library operations. Moreover, you can easily get an option to customize the software as per your institute's needs. Since a web-based library system offers enough security measures, you do not need to worry about data breaching. Library management systems facilitate the administrators to keep an eye on the library department's all functions. Also, it enables librarians and users to save time on daunting tasks and enhances efficiency. By using this sort of library management system, the school management would be able to follow the work outline and fineness of different librarian's capabilities. Additionally, they get an opportunity to know how well-maintained the record of issued books and collection is. The librarian and the administration department can access various reports to implement new improvements. (MyEdu, 2019)

4. SOLUTION TO THE PROBLEM

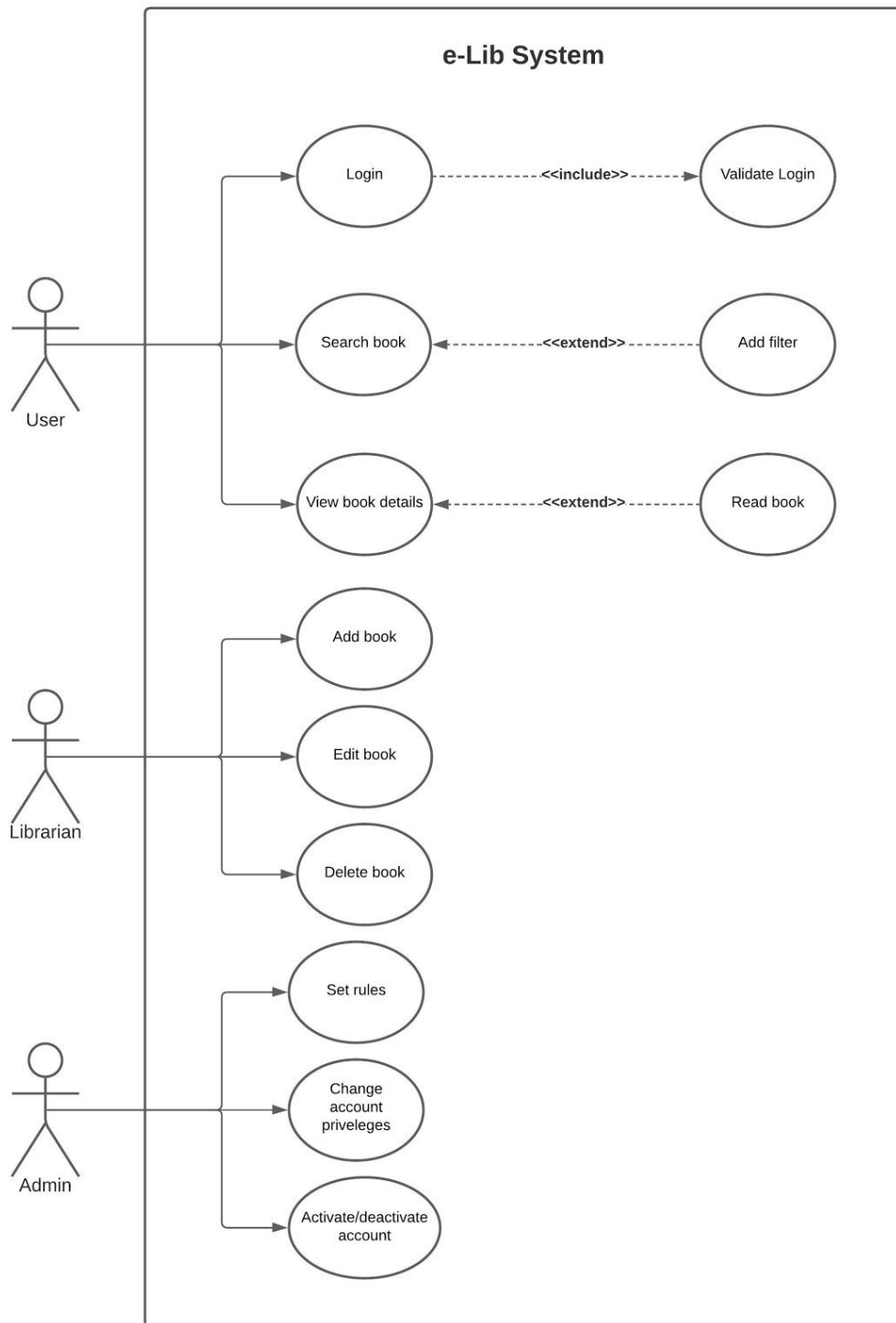
The solution to the problem of traditional library management is to implement an electronic library management system. Before implementing the proposed system, there is need to identify;

- a) The design of the proposed system
- b) The main users of the library management system
- c) The activities of the main users

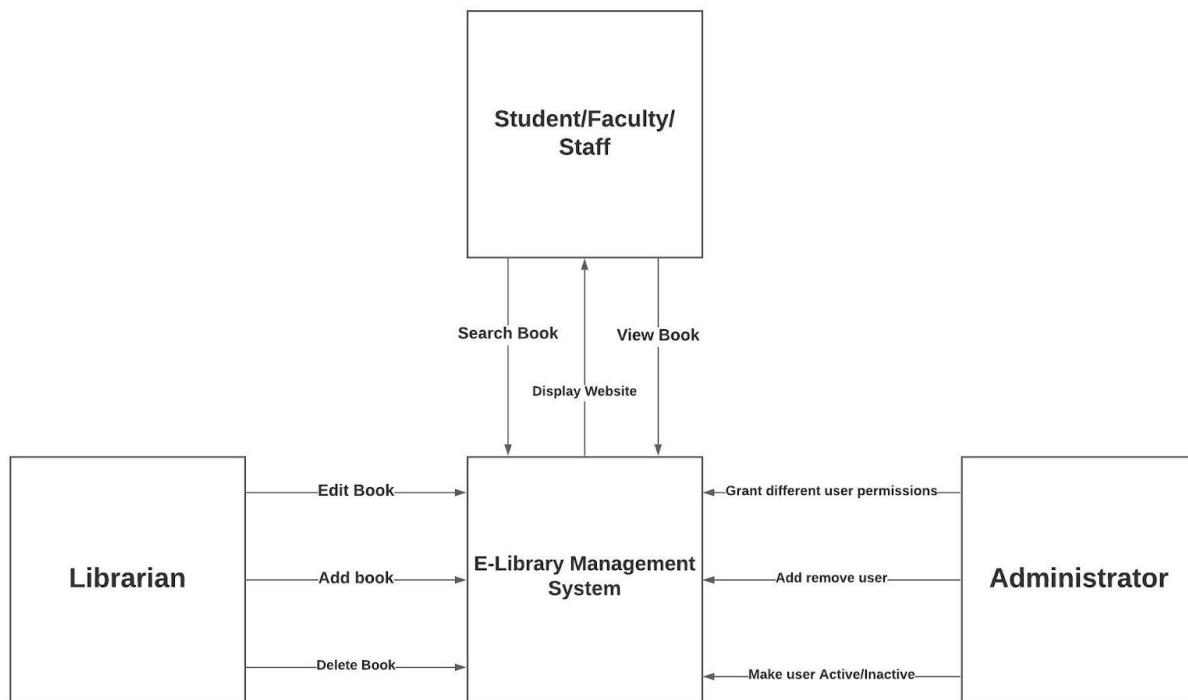
A.) The design - The proposed system will be designed using html, css and javascript as the front end and postgresql as the back end (the database used to store the user details & book details). The system will also have Django as its web framework.

A.1 Diagrams

Use Case Diagram



Context diagram



A.2 Tables

To help the system smoothly carry out its intended purpose to meet the library management needs, the following tables will be used to store data:

1. Book table - the table contains book details that will be inputted when the librarian adds a book. The table has the following fields: (id, bookName, bookDescription, yearPublished, bookFile, bookImage, isbn, pages, featured, bookAuthor[fk], bookCategory[fk], bookTags[fk])
2. Author table - the table contains author details that will be inputted when the librarian adds an author. The table has the following fields: (id, authorName)
3. Category table - the table contains category details that will be inputted when the librarian adds an author. The table has the following fields: (id, categoryName)
4. Tag table - the table contains tag details that will be inputted when the librarian adds an author. The table has the following fields: (id, tags)

A.3 File data fields

Book Table

Field name	Data type	Description
id	integer	Book id
bookName	character varying	Name of the book
bookDescription	character varying	Short description of book
yearPublished	integer	Date of publish
bookFile	character varying	Book file url
bookImage	character varying	Book cover image
isbn	integer	Book isbn
pages	integer	Book number of pages
featured	boolean	Displayed on featured function in homepage
bookAuthor	integer	Foreign key for author table
bookCategory	integer	Foreign key for category table
bookTags	integer	Foreign key for tag table

Author Table

Field name	Data type	Description
id	integer	author id
bookAuthor	character varying	Name of the author

Category Table

Field name	Data type	Description
id	integer	category id
bookCategory	character varying	Name of the category

Tag Table

Field name	Data type	Description
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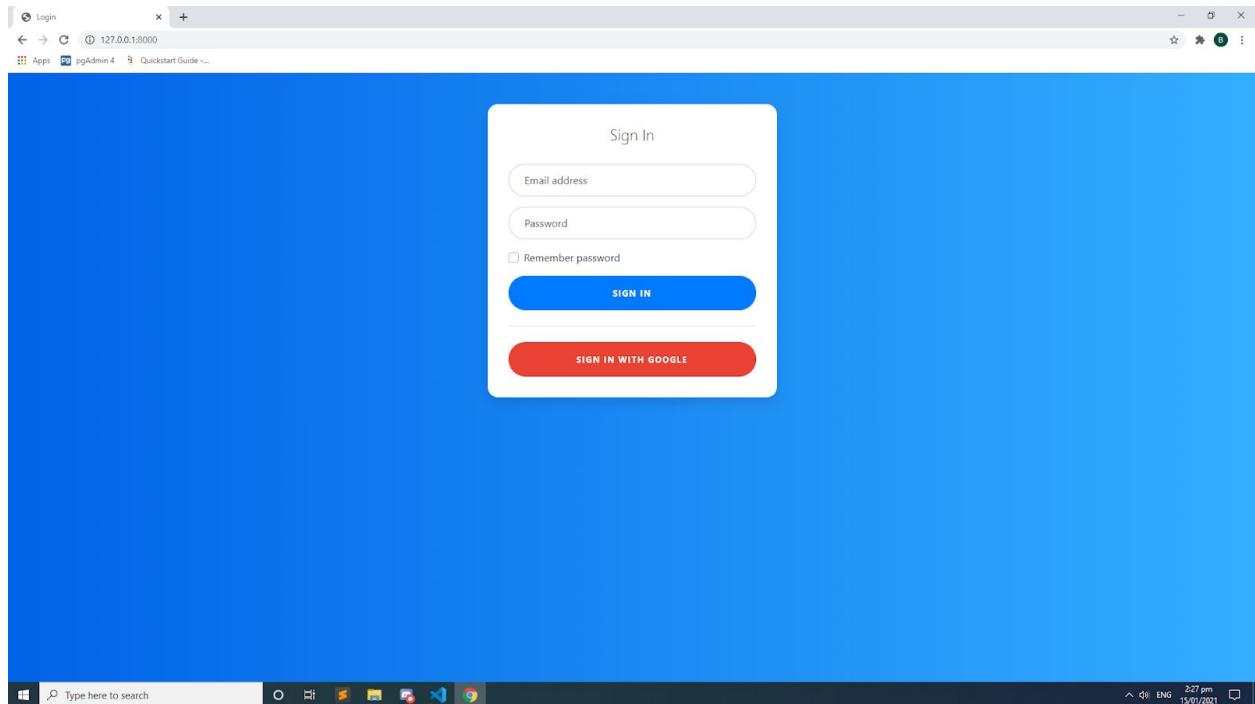
id	integer	tagr id
tags	character varying	Name of the tag

B) The main users – The main users of the proposed system are the students, faculties and staff, the administrator and the librarian.

C) Their activities – The activities of the main users of the proposed system are listed in a table below.

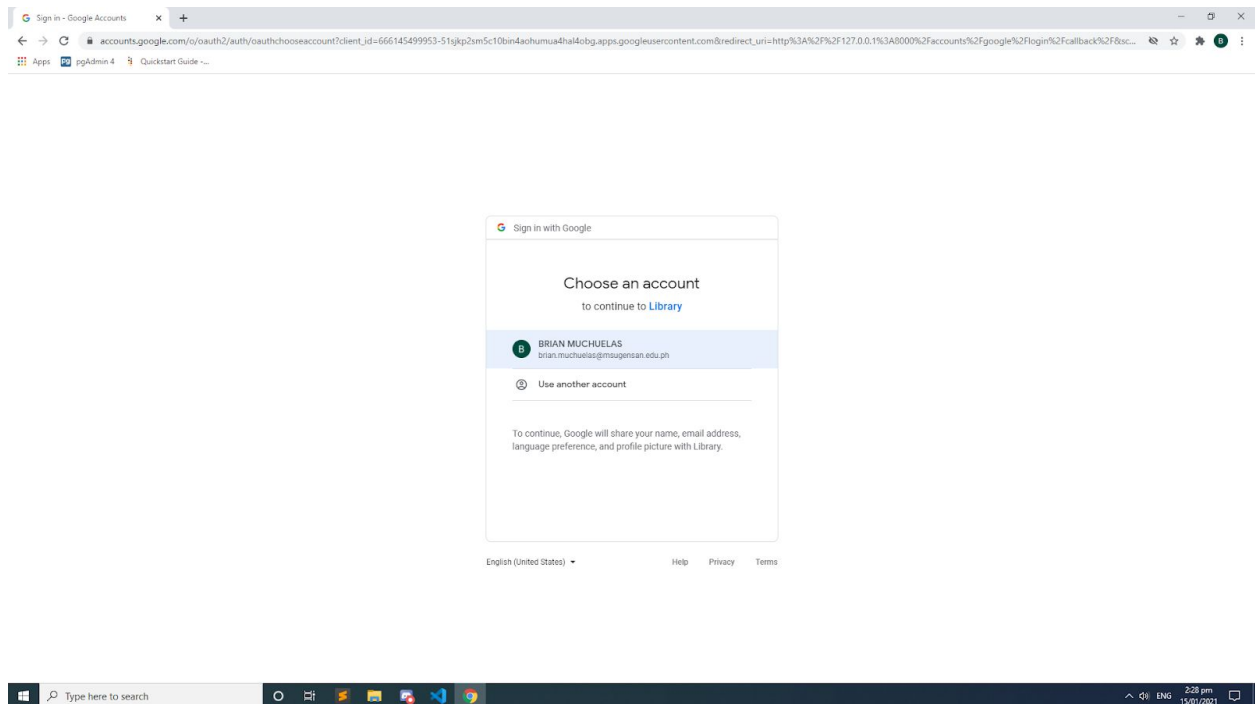
Activities of the Students/ Faculties/Staff	Activities of the Administrator	Activities of the librarian
Search for a book	Add functions and features	Add Books
Filter to refine search results	Maintain and update the software and database	Edit/Update Books
View book details and available book content	Grant User permission	Delete Books

Login Page



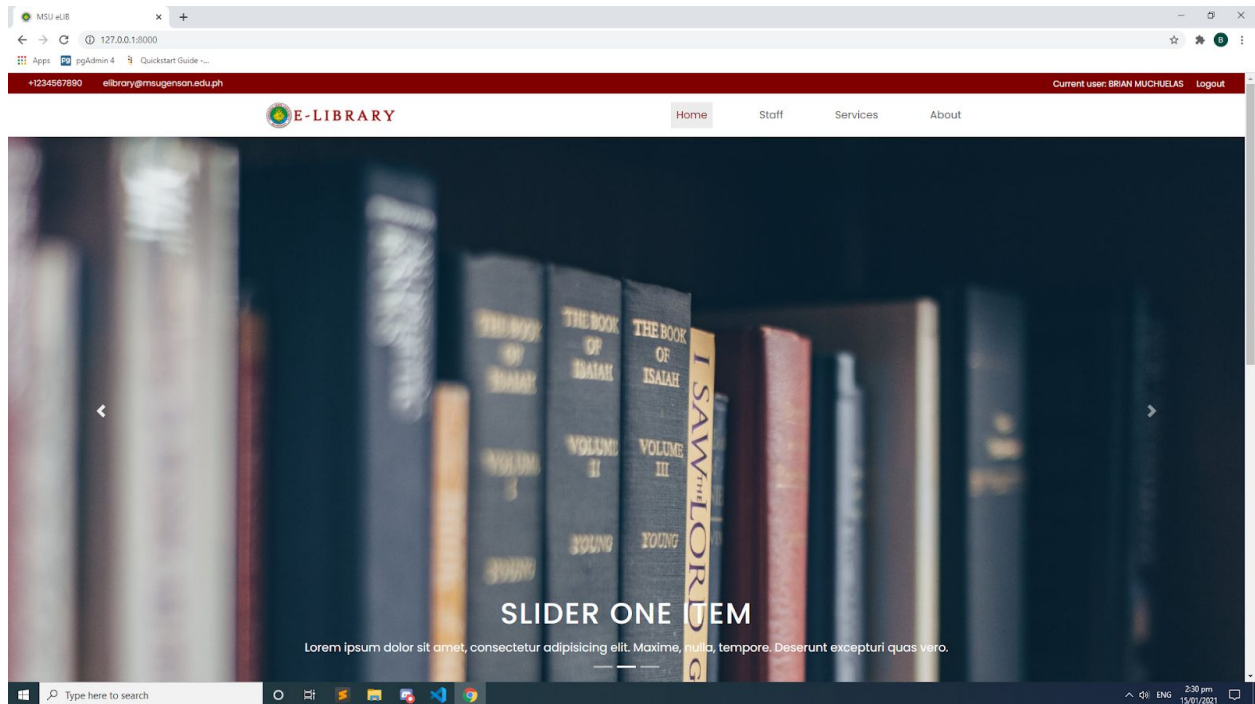
The screenshot shows a web browser window with the title "Login". The address bar displays "127.0.0.1:8000". The page features a large blue background. In the center, there is a white rectangular form titled "Sign In". Inside the form, there are two input fields: "Email address" and "Password". Below these fields is a checkbox labeled "Remember password". At the bottom of the form, there are two buttons: a blue "SIGN IN" button and a red "SIGN IN WITH GOOGLE" button. The browser's taskbar at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right indicates the time as 2:27 pm on 15/01/2021.

Login through Gmail

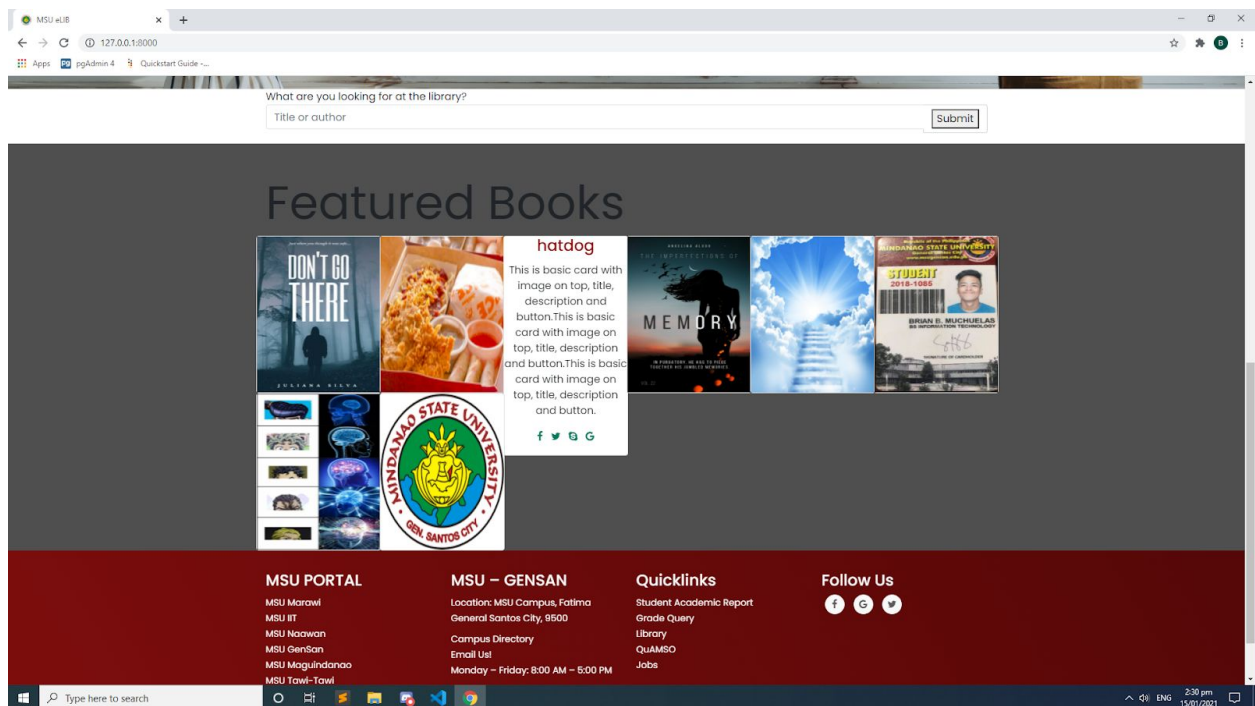


The screenshot shows a web browser window with the title "Sign in - Google Accounts". The address bar displays a long URL starting with "accounts.google.com". The page features a white background with a central form titled "Sign in with Google". Inside the form, there is a heading "Choose an account" followed by the text "to continue to Library". Below this, there is a list of accounts. The first account is highlighted with a blue bar and shows a profile picture, the name "BRIAN MUCHUELAS", and the email address "brian.muchuelas@maugensan.edu.ph". Below the list, there is a link "Use another account". At the bottom of the form, there is a small text block: "To continue, Google will share your name, email address, language preference, and profile picture with Library." The browser's taskbar at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right indicates the time as 2:28 pm on 15/01/2021.

User Dashboard



User Dashboard with Featured Books and Search Function



List of Books with Search and Filter Functionality

MSU eLIB

127.0.0.1:8000/library

+1234567890 eibrary@msugensan.edu.ph

Current user: BRIAN MUCHUELAS Logout

E-LIBRARY

Home Staff Services About

Filter Books


Title or author

Category ISBN (Exact)

Minimum Year Maximum Year


☐ Available Online
☐ Available in Library

Search Clear Searches




asdasdasdads
ads 2
Online Availability: No

Year: 20 Category: History ISBN: 222222111 Pages: 23



asdasdasdads
123123123123
Online Availability: No

Year: 2322 Category: asdasdasd ISBN: 12321312 Pages: 232



asdasdasdads
asdsasd
Online Availability: Yes

View Book Detail

MSU eLIB

127.0.0.1:8000/library/11


+1234567890 eibrary@msugensan.edu.ph

Current user: BRIAN MUCHUELAS Logout

E-LIBRARY

Home Staff Services About

Main | asdasdasdads



asdasdasdads
ads 2

asdasdasd asd asdasdasdasd asd asdasdasdasd asd asdasdasdasd asd
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+ Show More
Category: History
Year: 20

ISBN: 222222111
Pages: 23

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MSU PORTAL

MSU Marawi
MSU IT
MSU Naawan
MSU GenSan

MSU - GENSAN

Location: MSU Campus, Fatima
General Santos City, 8500
Campus Directory

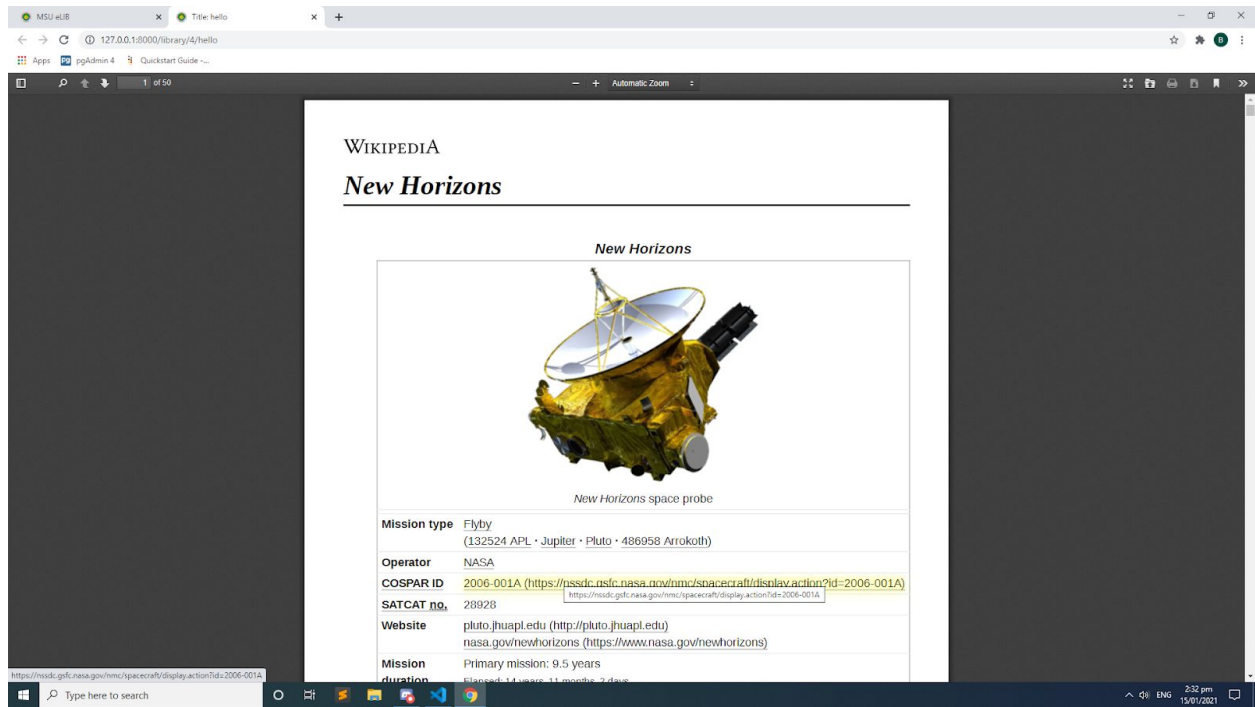
Quicklinks

Student Academic Report
Grade Query
Library
QuAMSO

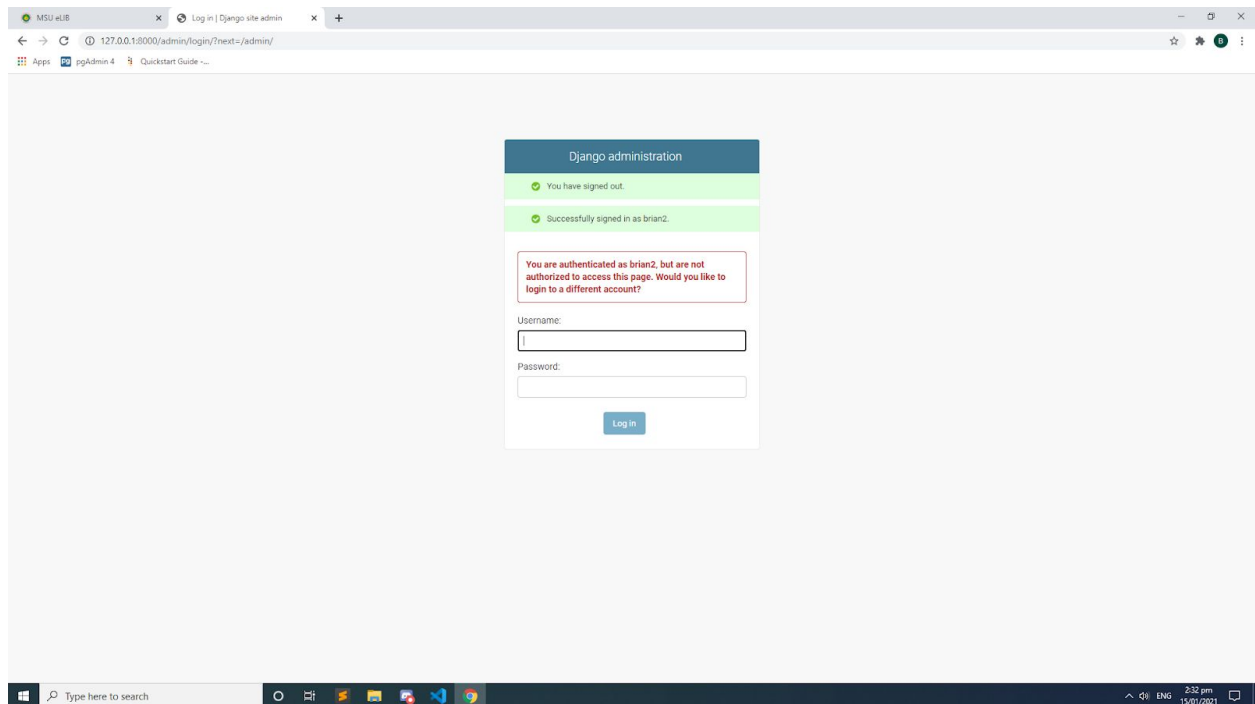
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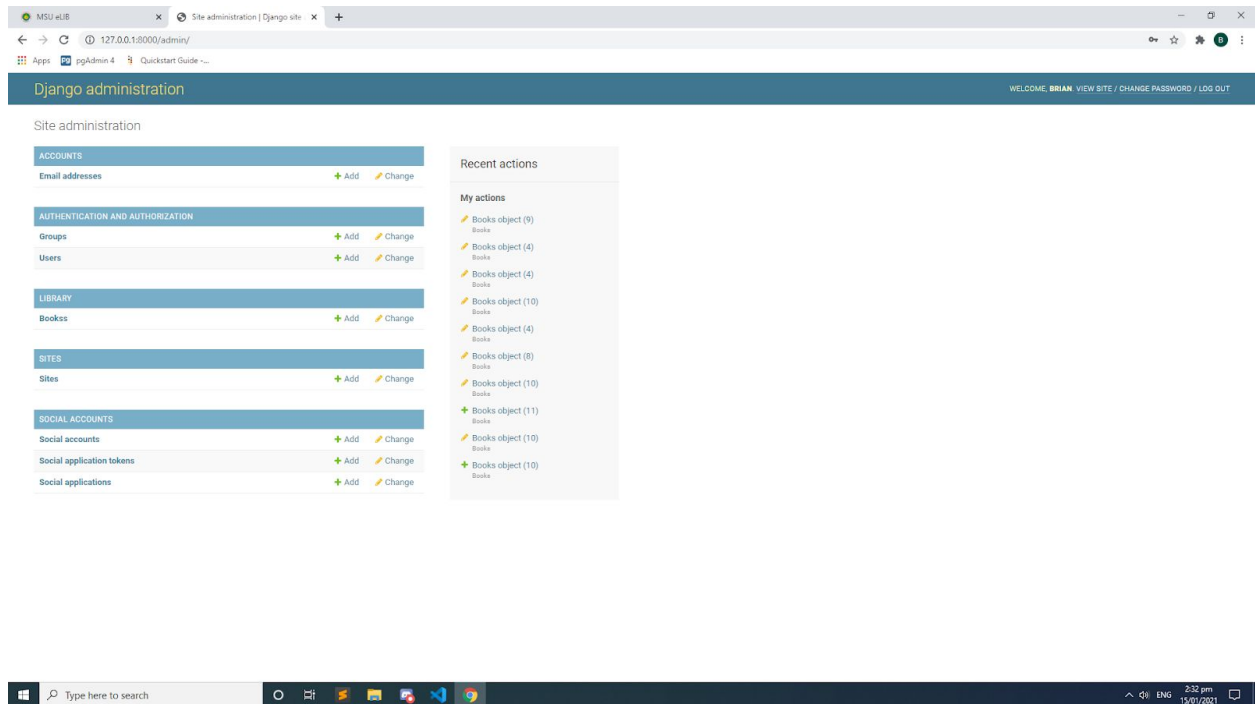
View Book Content/Book Render



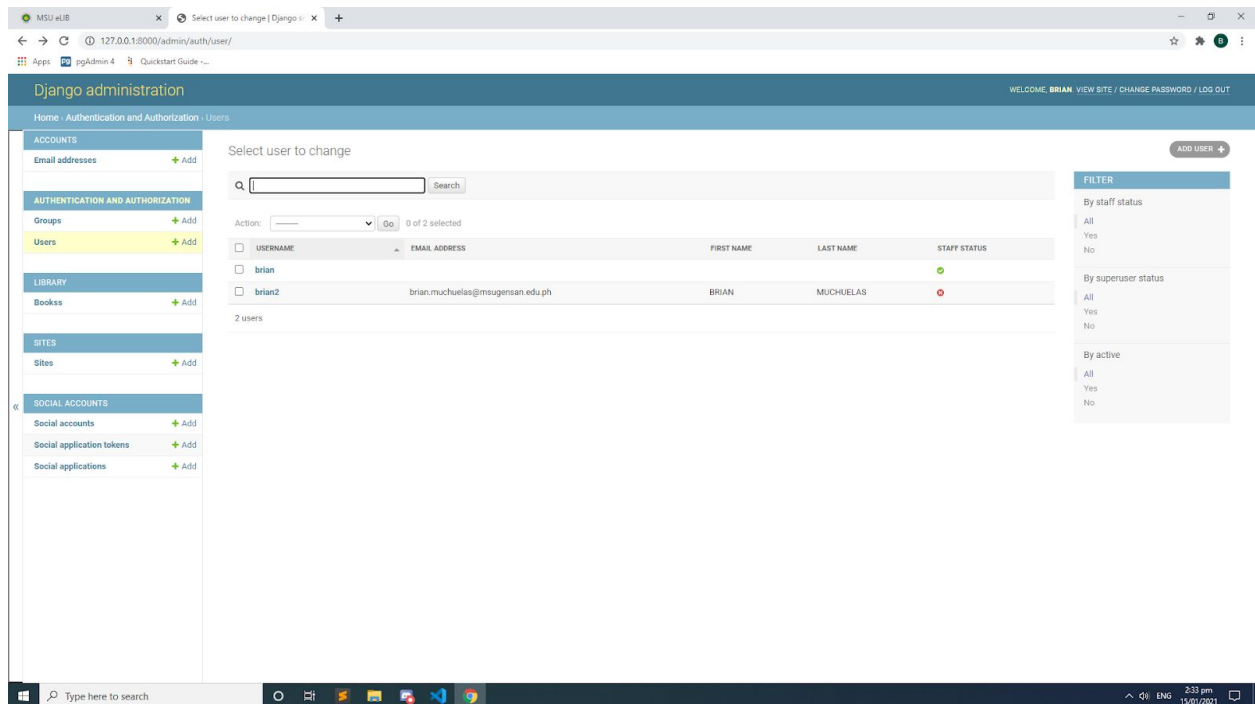
Admin Page Login



Admin Dashboard



User Control (Admin)



5. SUMMARY

The library management system needs to be computerized to reduce human errors and to increase efficiency. The proposed library management system will be an electronic management system implemented to maintain all the daily work of the library. Library management systems are designed to store all the information about books and members. The main focus of this project is to lessen human effort and encourage efficient record keeping.

6. RECOMMENDATION

Based on the results of the findings gathered, we would like to recommend the following:

- The Library considers the proposed Library system for them to increase the number of their students or users.
- The proposed system will be implemented by the library because it is more productive and more capable of recording data in the library.
- Future researchers should continue to improve the proposed system.
- Training must be conducted before the actual operation and implementation of the system.

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