

**PROJECT PROPOSAL
FOR AN E- LIBRARY MANAGEMENT SYSTEM**

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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 developing an Electronic Library Management System for MSU 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 anywhere but it required an internet connection. 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)

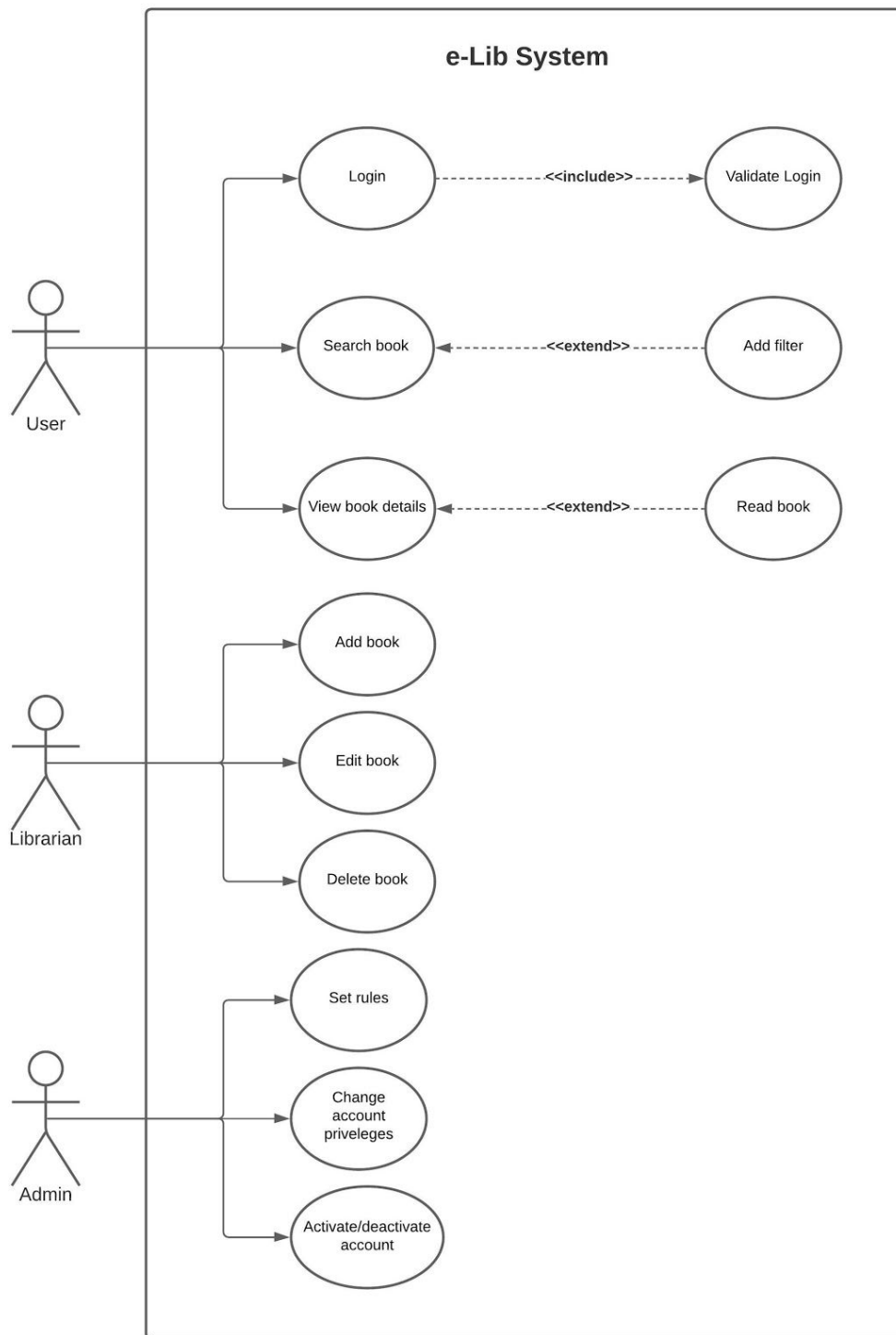
4. SOLUTION TO THE PROBLEM

The solution to the problem of the traditional library management is to develop and implement an electronic library management system. Before developing 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



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

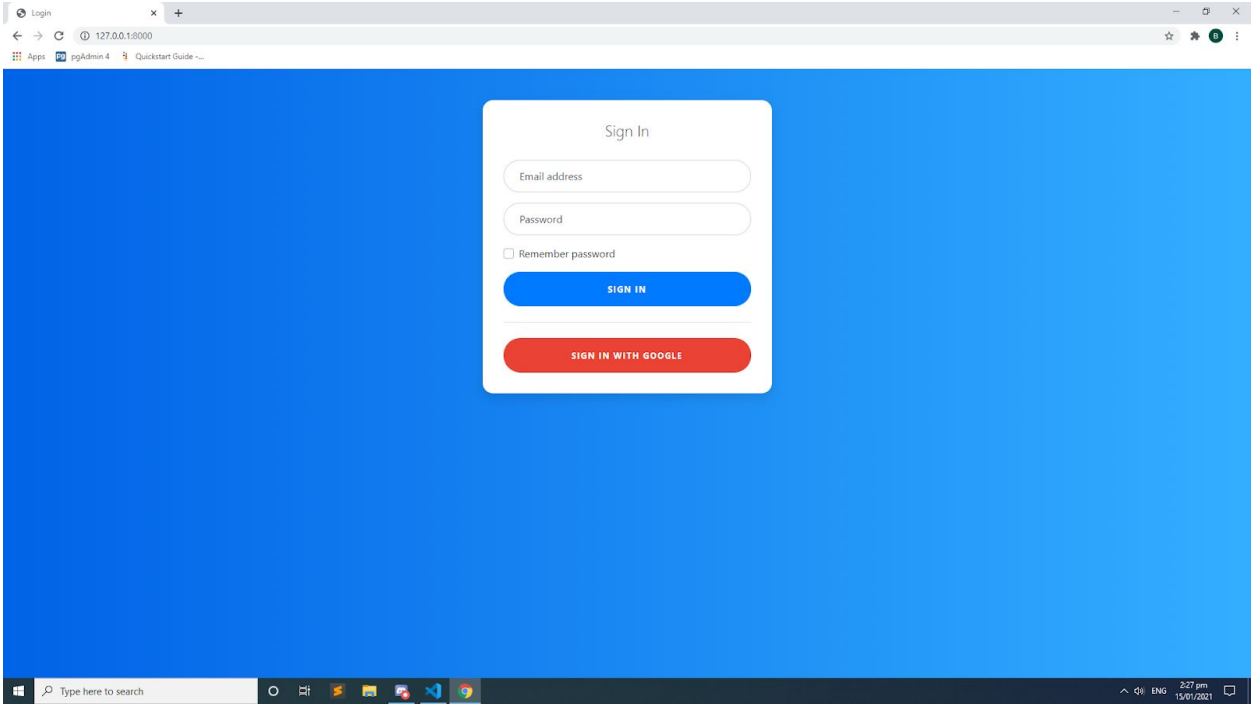
Field name	Data type	Description
id	integer	tagr id
tags	character varying	Name of the tag

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

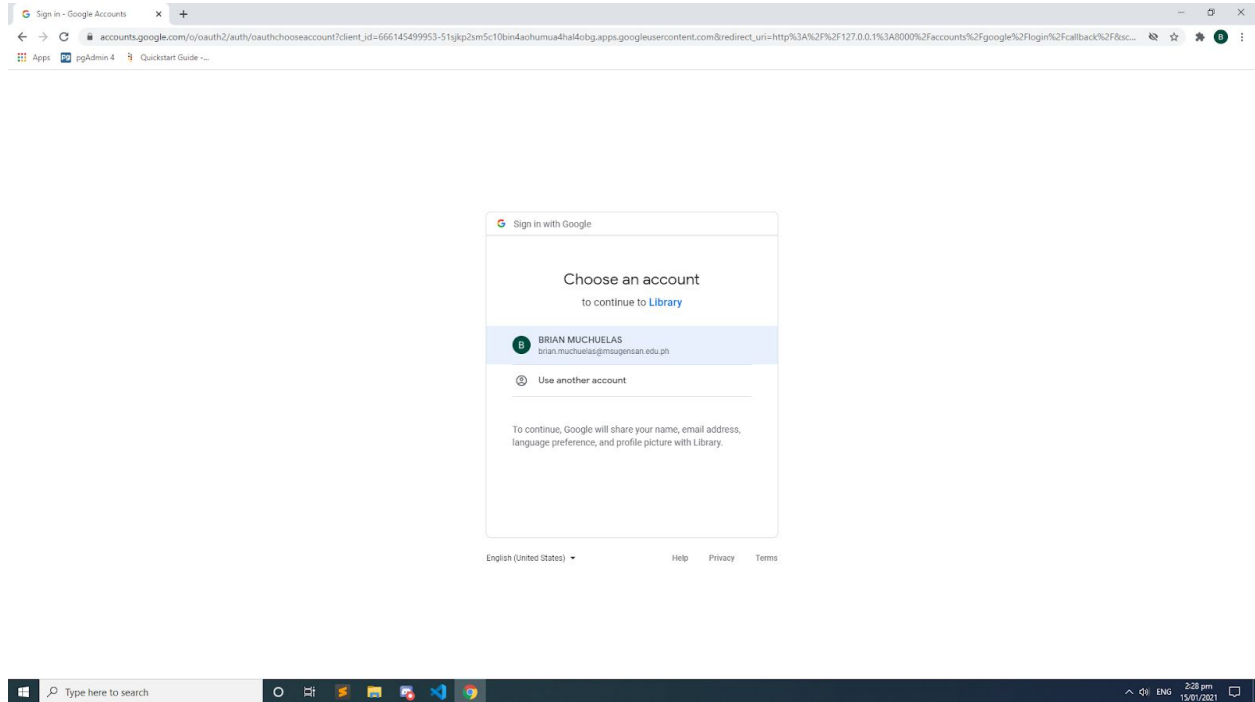
C) Their activities – The activities of the main users of the proposed system are listed in a table below.

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

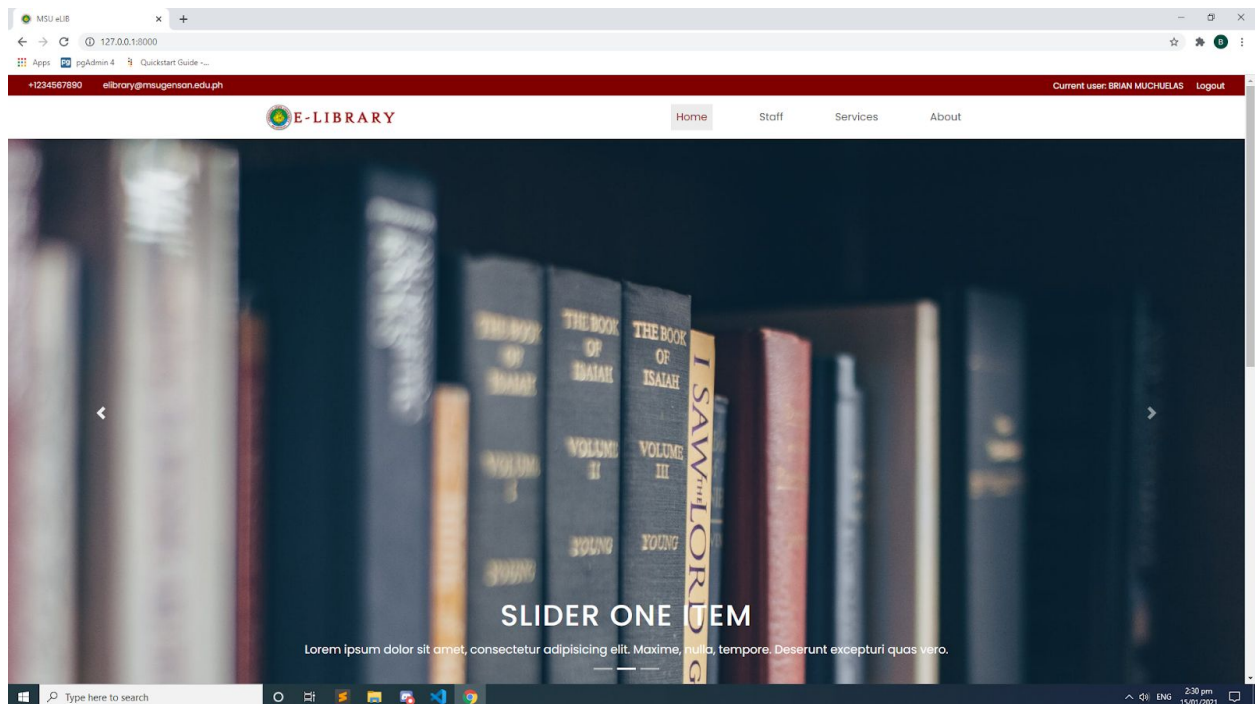
Login Page



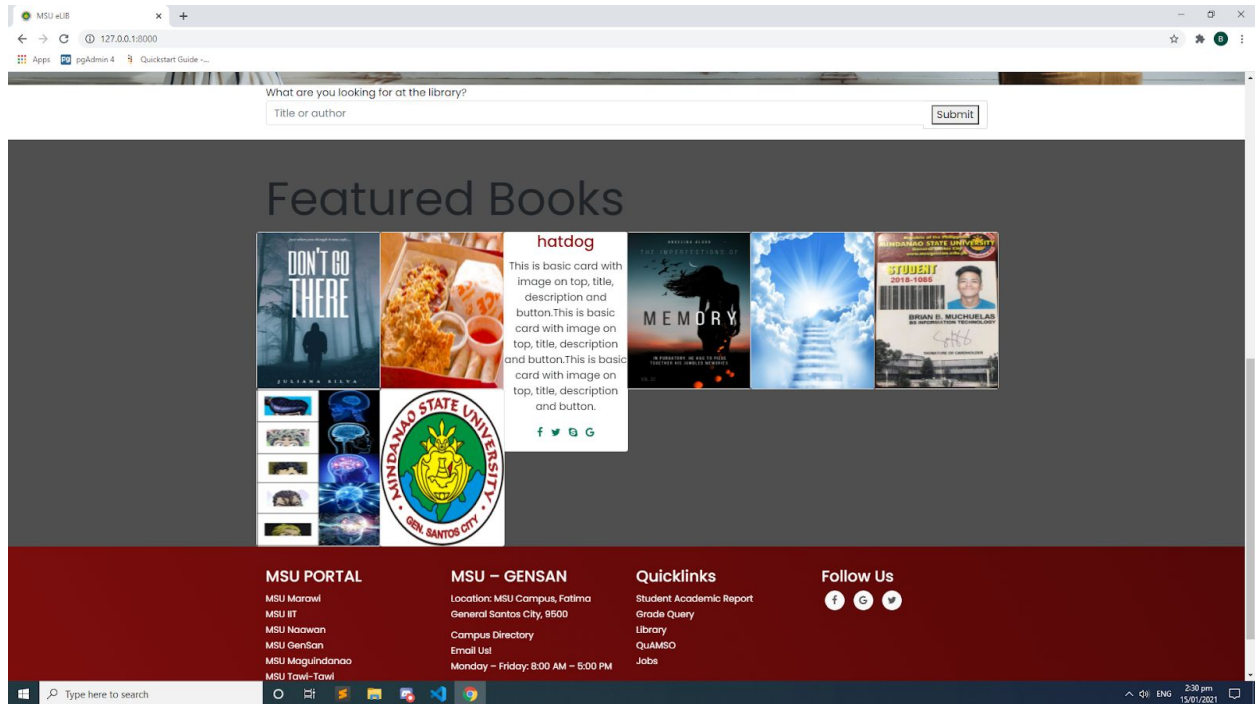
Login through Gmail



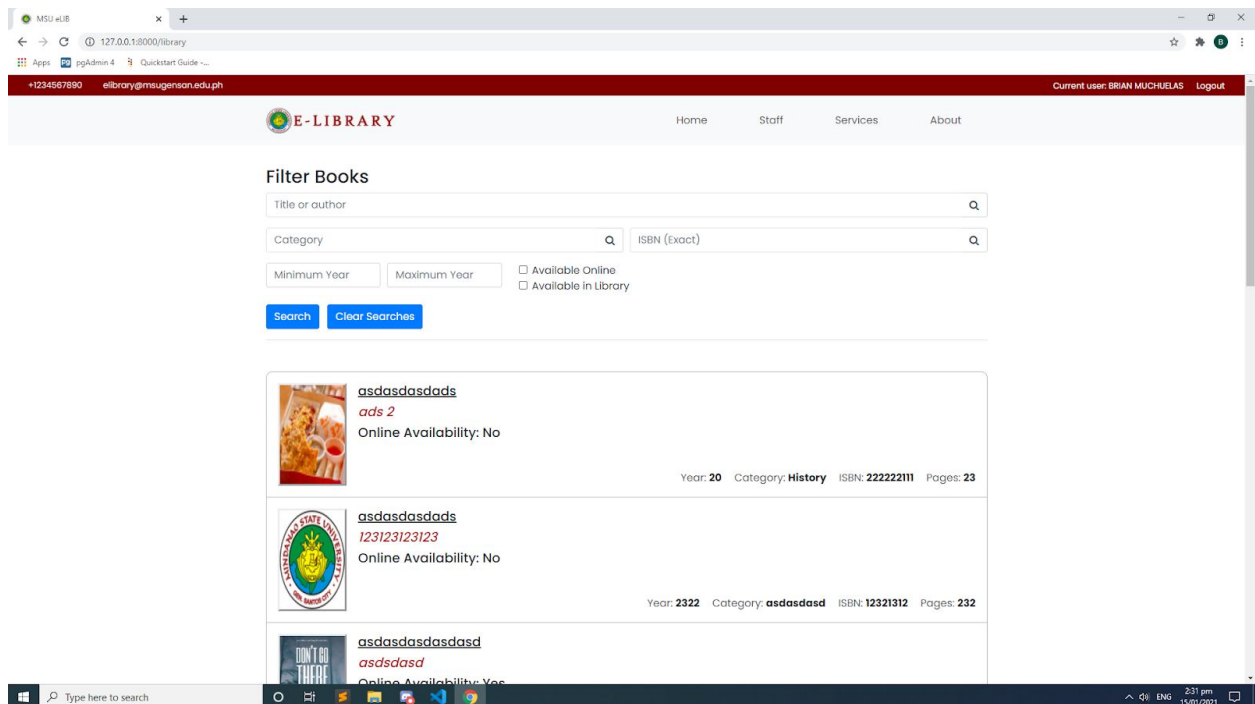
User Dashboard

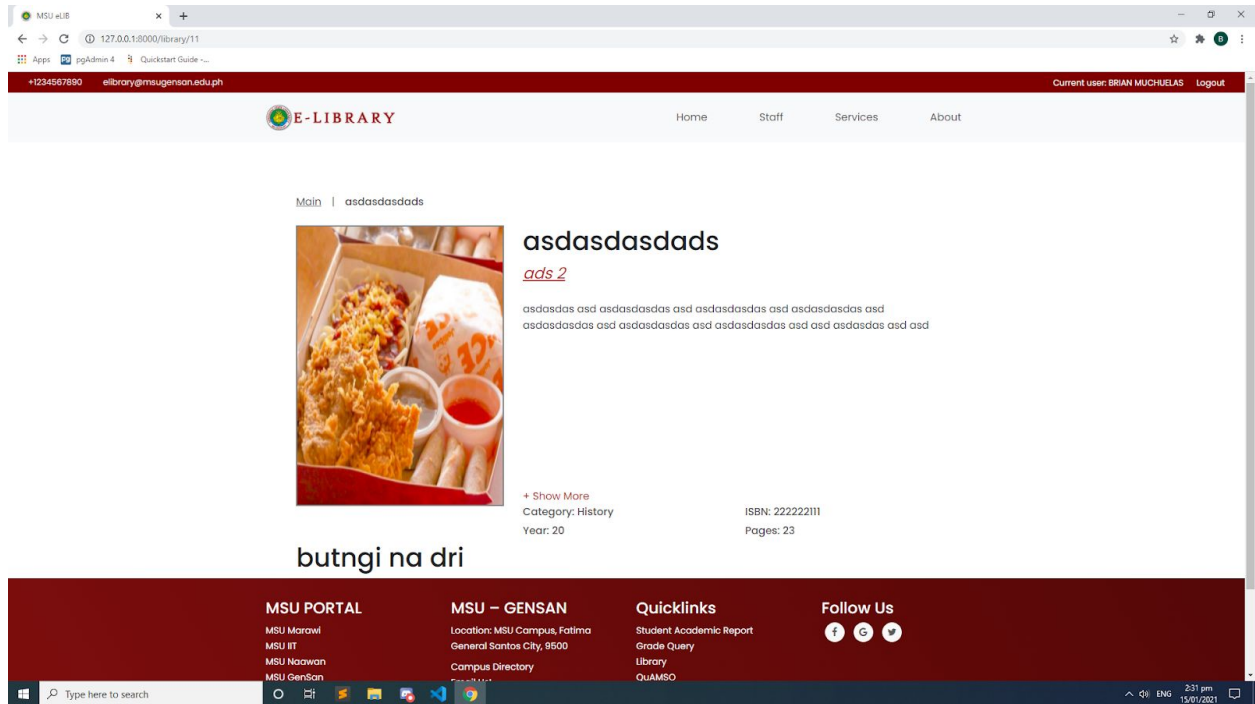
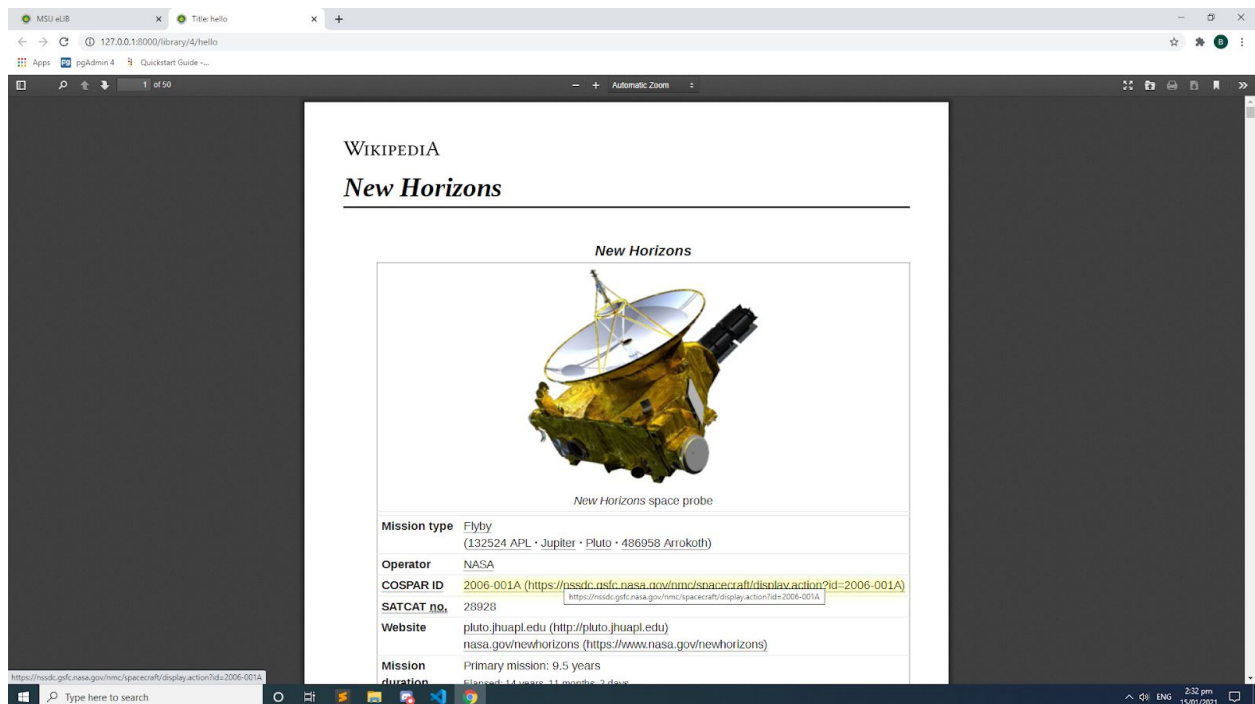


User Dashboard with Featured Books and Search Function

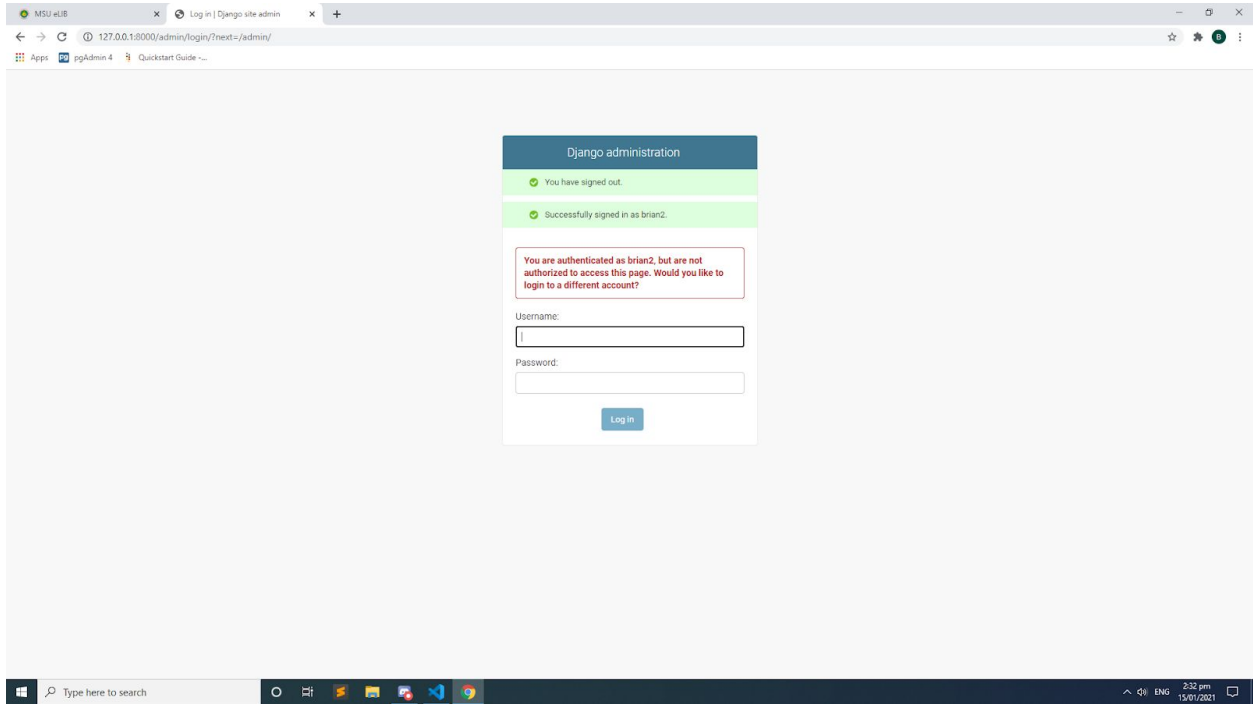


List of Books with Search and Filter Functionality

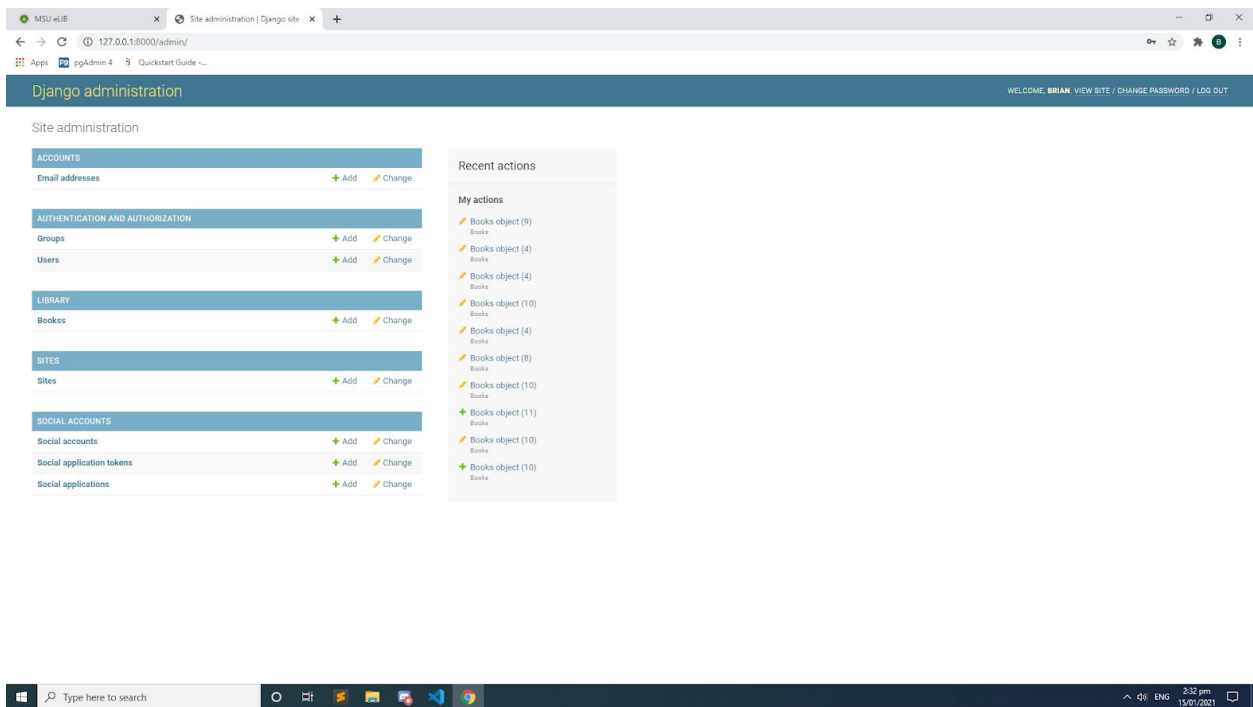


[View Book Detail](#)[View Book Content/Book Render](#)

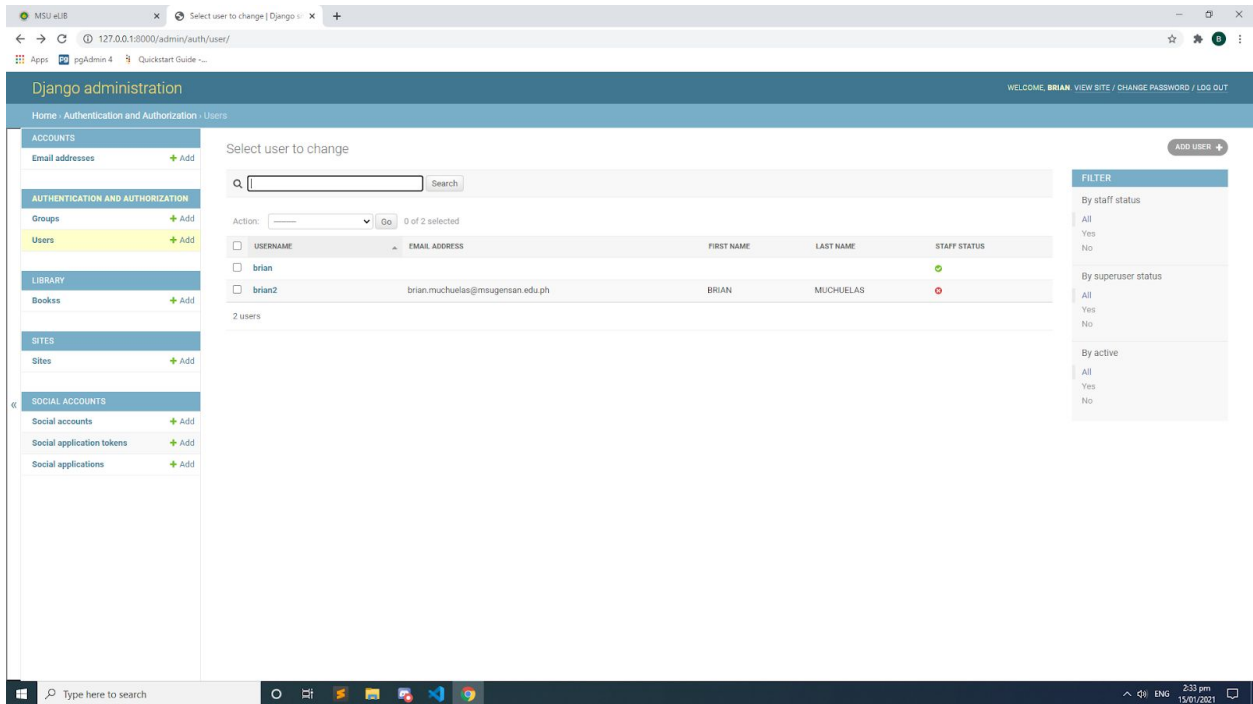
Admin Page Login



Admin Dashboard



User Control (Admin)



5. SUMMARY

The Library management system needs to be computerized to reduce human errors and to increase the efficiency. The proposed Library management system in this proposal will be a computerized management system developed 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 of the developed system

7. REFERENCES