AI Ethics for Business: Understanding the Ethical Implications of AI-Driven Application Development in Emerging Technologies

A Project Documentation
Submitted as Partial Fulfillment of the Requirements for the Course:
Application Development and Emerging Technologies (IT120P)

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Submitted to:

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1.0 INTRODUCTION

As application development progresses in this approach, it is crucial to consider the ethical ramifications of combining AI with new technology. This topic will examine the ethical problems surrounding the use of AI in app development and other upcoming technologies such as blockchain, the Internet of Things (IoT), augmented and virtual reality (AR/VR), and so on. (Perfomatix, 2018). Many risks of AI-driven app development might be mentioned. They include bias, discrimination, and violation of privacy. There is fear that AI algorithms educated on partial data may perpetuate or exacerbate existing inequalities and that IoT devices that collect sensitive data will endanger user privacy. This article may also discuss concerns such as transparency, accountability, and ethical oversight that emerge when attempting to regulate the use of artificial intelligence in cutting-edge innovation. Ensuring developers use AI responsibly and ethically with clearly established legal frameworks may be more accessible. Future technologies and the benefits of applying AI in ethical and responsible application development should be investigated. By supporting developers in creating more efficient and user-friendly applications, AI may increase everyone's productivity and quality of life. The rapid expansion of the field needs responsible and ethical practices. This project will allow you to study the ethical concerns of using artificial intelligence in software and other emerging technologies.

1.1 BACKGROUND OF THE STUDY

Recently, substantial effort and money poured into creating and deploying AI-driven applications in new technologies. Applications based on AI have been made to improve many parts of human life, such as health care, transportation, education, and many others (EPRS, 2020). These applications could make things faster, easier, and more accurate, benefiting society. However, making and using AI-powered apps also raises important ethical questions that need analysis. Researchers, policymakers, and the general public increasingly worry about how AI could change human behavior, decision-making, and privacy. The ethical effects of developing apps with AI are complicated and multifaceted, and they need to be carefully thought through and analyzed.

This study aims to discover what AI-driven application development in new technologies means for ethics. It will look at the possible risks and benefits of AI-driven applications in different fields and the ethical frameworks and principles that should guide the development and use of AI-driven applications. The study will also examine how government rules and industry standards help ensure AI-driven apps are used ethically.

Businesses may benefit from an ethical study of AI-driven application development in new technologies. Through compliance, companies must follow ethical, legal, and regulatory standards. Businesses may comply with all rules by recognizing the ethical implications of AI-driven application development. AI-driven technologies are raising ethical concerns among consumers. By acknowledging these consequences and taking steps to resolve them, organizations may show their ethical practices and build consumer confidence. In order to reduce risks, businesses face reputational, legal, and financial risks from AI-driven technology. Businesses may detect and manage ethical hazards by knowing these technologies. An ethical study of AI-driven application development may help organizations innovate. Businesses may create ethical solutions that satisfy client demands by recognizing and resolving ethical issues responsibly and proactively. As AI-driven technologies grow widespread, firms must recruit and

retain top individuals with the skills and knowledge to build them. Businesses may recruit and retain ethical talent by committing to ethical technology development. (IBE, 2018).

The article from VentureBeat in 2022 examines the significance of ethical issues in artificial intelligence research (AI). As AI grows increasingly pervasive daily, the article argues that we must evaluate its ethical consequences. It addresses some of the possible ethical challenges associated with the development of artificial intelligence, including prejudice and discrimination, privacy concerns, and employment displacement. The author stresses the need for multidisciplinary cooperation and ethical frameworks to guide the development of artificial intelligence. The report also offers initiatives that enterprises may take to guarantee the ethical development of AI, including various recruiting policies, frequent audits of AI systems, and openness in AI decision-making. The paper concludes by emphasizing the significance of ethical issues in AI research and calling for continuing conversation and action to guarantee that AI serves the best interests of society.

1.2 STATEMENT OF THE PROBLEM

There is a risk that AI will impact human behavior, decision-making, and privacy, which has repercussions. The ethical concerns surrounding the creation of AI-driven applications are complex and multifaceted and, as a result, need extensive research and assessment of the potential risks and advantages. In addition, the absence of defined ethical frameworks and norms for creating and using AI-driven applications is difficult for policymakers, industry experts, and academics. (Pazzanese, 2020). Therefore, the problem that this study intends to address is the exploration of the ethical implications of AI-driven application development in emerging technologies, as well as the identification of ethical frameworks and principles to guide the responsible and ethical development and use of these applications.

1.2.1 GENERAL PROBLEM

Corporations and society face ethical challenges with AI-driven technology in emerging industries. Unethical AI applications may increase discrimination, privacy invasion, and socioeconomic inequality. The AI ethics in business website project educates and guides ethical AI development. Companies must understand AI's implications and adopt ethical practices to mitigate risks and build customer trust. Companies need more resources to implement these procedures. The AI ethics in business website addresses this gap by training enterprises in ethical AI development.

1.2.2 SPECIFIC PROBLEMS

The AI ethics in business website tackles the need for practical guidance for organizations creating and implementing ethical AI-driven applications. Companies want to solve AI's ethical issues but need more skills and resources. This may promote discrimination or breach of privacy, compromising the brand and customer trust. AI ethics are unknown to businesses. Technology and efficiency frequently trump ethics, harming consumers and society. Hence, the AI ethics in business website project educates and guides enterprises on ethical AI development. Companies will acquire easy-to-understand information to understand AI's ethical implications and ethically

implement AI-driven solutions. This program helps firms build customer trust and ethical AI-driven technology use.

The study aims to answer the specific problems stated below:

1. How can we ensure that the development and use of these applications align with ethical principles and values while mitigating any negative impacts on individuals and society?
2. How can companies guarantee that AI-driven apps do not promote prejudice or violate privacy?
3. How can firms encourage ethical AI to use?
4. How can companies demonstrate ethical AI development and execution to win consumer trust?
5. How can businesses guarantee that AI-driven apps match their values and mission?

1.2.3 GENERAL OBJECTIVE

To understand the ethical implications of AI-driven application development in emerging technologies, focusing on the AI ethics of Business, as well as to develop guidelines and strategies for ensuring that such development is guided by ethical principles and values, as well as to mitigate the potential negative impacts on society and individuals.

1.2.4 SPECIFIC OBJECTIVES

This project's primary goal is to educate businesses and users on the ethical implications of AI-driven technologies and to provide practical guidance for implementing responsible and ethical practices.

Create a series of blog entries investigating several ethical issues linked with using AI in business, such as bias, privacy, and transparency. Provide a resource library on the website comprising papers, case studies, and recommended procedures for developing responsible and ethical uses of artificial intelligence. Also, we will publish recorded videos of conferences with IT professionals to share insights and viewpoints on the ethical implications of AI in the corporate world. Provide guidelines for firms to follow when designing and deploying AI-powered apps and ensure they are followed. Set up a list of websites that provide free webinars or an online course on the ethical use of artificial intelligence in business, providing practical guidance and tools for implementing ethical practices. The website will contain a forum allowing users to discuss and share their views on AI-driven application development and its ethical implications. Users can post questions, share their opinions, and debate with other users. A resource library will contain relevant resources, including research papers, case studies, and policy documents related to AI-driven application development and its ethical implications.

1.3 SCOPE AND LIMITATION

This project aims to provide interactive learning in corporate AI ethics. The website will address AI-related ethical issues, including prejudice, privacy, and responsibility. The initiative will

provide a repository of literature, case studies, and ethical AI development best practices. Interviewing industry professionals will also examine AI ethics. The initiative will also establish an AI-driven application code of ethics for enterprises. This study is limited to exploring the ethical implications of AI-driven application development in emerging technologies. It does not go into depth on the economic effects of adopting AI or the technical elements of AI research and development. The project will only address some AI ethics: It may be impossible to address all ethical issues AI-driven technology raises. The initiative will research AI ethical laws and regulations but not advise firms.

The initiative will advise on ethical AI development but not on how to deploy specific AI algorithms or applications. The initiative may study AI ethics' financial and commercial effects but will not advise firms. The initiative will guide ethical AI research, although it may only solve some AI-related corporate ethics issues. Each business must evaluate its situation and apply the guidelines. The initiative seeks to teach corporate AI ethics, but it has limits. Businesses should obtain guidance, help comply with rules, and establish ethical practices. Secondary sources, including scholarly publications, reports, and case studies, will be used to compile information for the research, which may need to be revised in accuracy and comprehensiveness.

2.0 THE PROPOSED SYSTEM

A Content Management System like Google Sites or Wix will administer website content. Blog entries, articles, case studies, and other information about AI ethics in business will be able to be added, edited, and published by the website administrator with the help of the content management system. The proposed system will provide users with an interactive and engaging platform to explore the ethical implications of AI-driven application development in emerging technologies. The system will promote learning, discussion, and simulation to help users better understand the topic and its implications. The website may become an indispensable resource for companies seeking to create ethical and responsible AI applications by attaining this proposed system. It may assist organizations in making educated choices about the development and use of AI technology and build consumer trust by showing their commitment to ethical practices.

2.1 SYSTEM OVERVIEW

Here is a system overview for the project:

A. **WEBSITE:** The core platform for the project will be a website that acts as a center for all available materials and services. The website will have the following characteristics:
   - The homepage gives an overview of the project's objectives, services, and resources.
   - This blog investigates ethical concerns associated with AI in business via publications and blog postings.
   - A collection of research articles, case studies, policy documents, and suggested practices for creating ethical and responsible AI applications.
   - A forum where users may exchange their perspectives on AI-driven application development and its ethical ramifications.

- Contact Info: A page that offers consumers the project team's contact information and the chance to participate or get specialized consultancy services.

B. **EDUCATIONAL RESOURCES:** The initiative will produce and distribute a number of instructional tools, including:
   - A collection of sites that provide free webinars or online courses on the ethical usage of artificial intelligence in business.
   - Recorded online conferences and podcasts with expert panelists addressing developing ethical problems relating to AI in the workplace.

C. **GUIDELINES FOR FIRMS:** The initiative will create and publish recommendations for enterprises to follow when creating and deploying AI-powered applications to guarantee that they adhere to ethical standards. Customized advisory services will be made available to aid firms in integrating ethical AI practices into their operations and products.

D. **USER FORUM:** The project will create and maintain an online forum to debate AI-driven application development and its ethical concerns. The administration and moderation of online debates will enable courteous and productive discourse.

E. **LIBRARY OF RESOURCES:** The project will maintain a library of relevant materials, including research papers, case studies, and policy documents about AI-driven application development and its ethical implications. Tailored resource sets will be produced to answer specific business requirements or areas of interest.

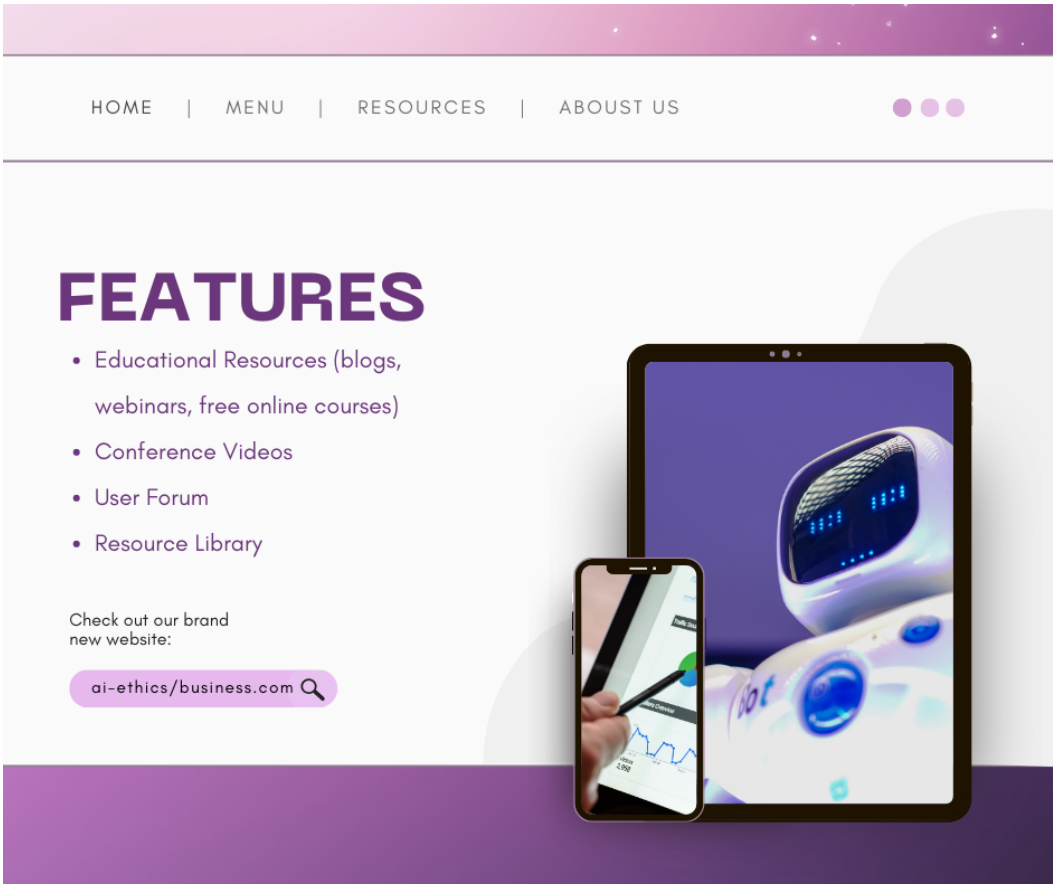
The system will be user-friendly, with intuitive navigation and search capabilities. Implementing data privacy and security measures will secure user information and guarantee compliance with applicable requirements. The website and its contents will be updated and maintained often to guarantee their continued relevance and correctness. The project team will monitor and analyze the system's efficacy and services provided to continually enhance and adapt to the changing ethical AI practices environment.

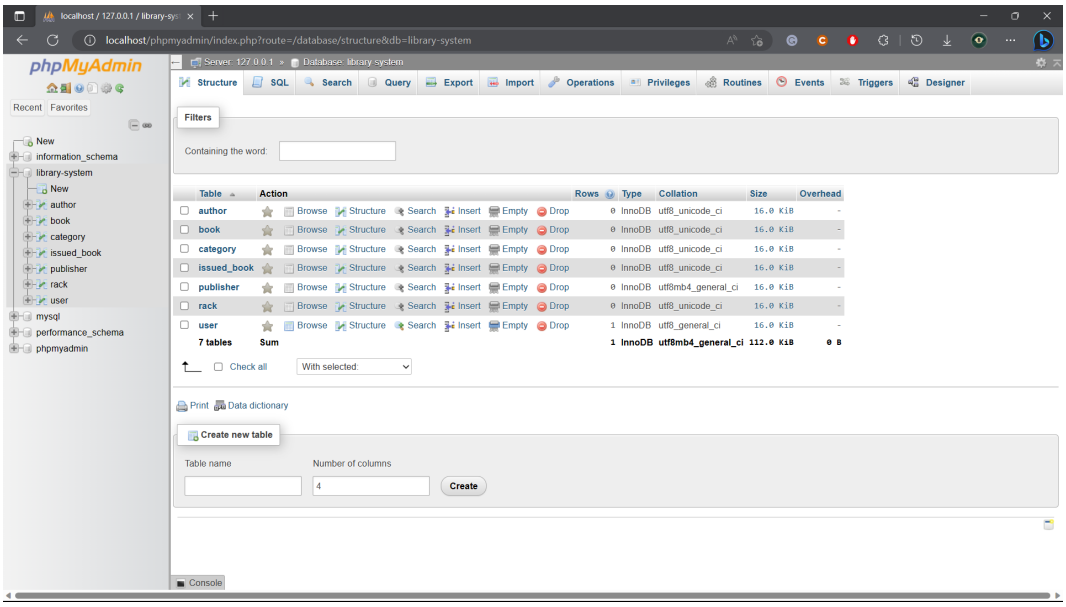
I. PRODUCTS AND SERVICES OFFERED

The products and services could be offered via online classes, articles, webinars, and video conferences. These tools aid businesses and individuals in understanding AI's ethical implications in emerging technologies, promoting responsible and ethical AI research and deployment.

II. FEATURES

By offering these services, the project intends to educate businesses and users about the ethical implications of AI-driven technology and recommend adopting responsible and ethical behaviors. The guidelines, user forum, and resource library will assist companies in developing and deploying AI-powered applications responsibly and ethically. At the same time, the conference videos and blog entries will give insights and perspectives on the ethical implications of AI for businesses.


HOME | MENU | RESOURCES | ABOUST US
FEATURES
• Educational Resources (blogs, webinars, free online courses)
• Conference Videos
• User Forum
• Resource Library
Check out our brand new website:
ai-ethics/business.com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user
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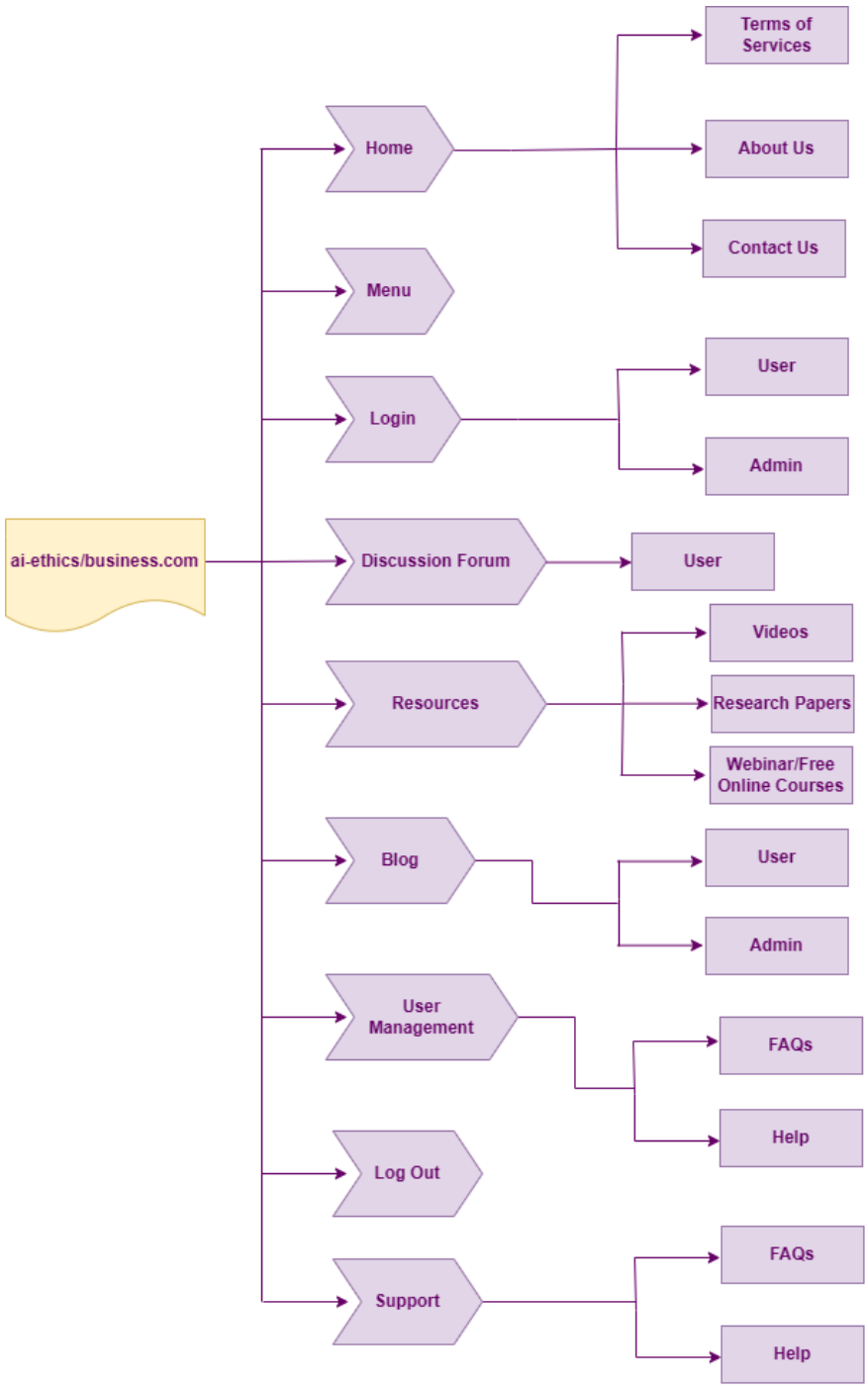
III. SITEMAP


ai-ethics/business.com
Home
Terms of Services
About Us
Contact Us
Menu
Login
User
Admin
Discussion Forum
User
Resources
Videos
Research Papers
Webinar/Free Online Courses
Blog
User
Admin
User Management
FAQs
Help
Log Out
Support
FAQs
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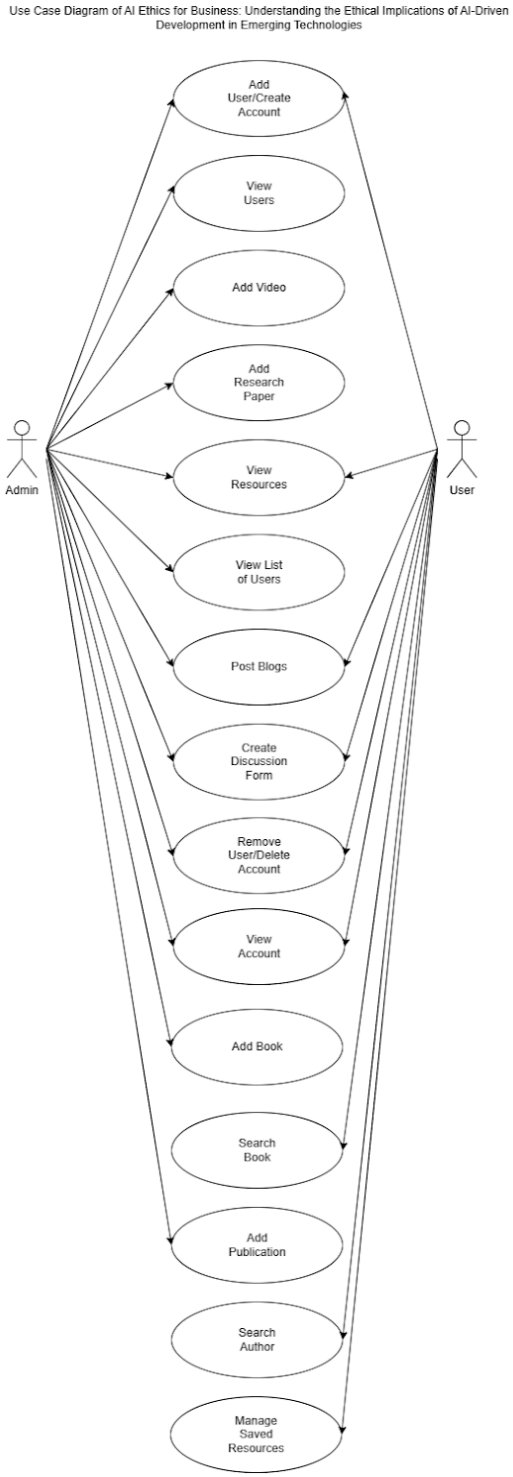
2.2 USE CASE DIAGRAM



2.3 SCREEN LAYOUT

The screen layout for "AI Ethics for Business: Understanding the Ethical Implications of AI-Driven Application Development in Emerging Technologies" could be designed with the following elements:

- **TITLE:** The title of the course should be prominently displayed at the top of the screen to clearly convey the subject matter.
- **NAVIGATION MENU:** A navigation menu should be placed at the top or side of the screen to help learners easily access different sections of the course.
- **INTRODUCTION:** An introductory section that provides an overview of the course, its objectives, and the topics covered should be displayed prominently on the screen.
- **CONTENT SECTIONS:** The course should be divided into several content sections that cover different aspects of AI ethics in business. Each section should be visually distinct

and include relevant media, such as images, videos, or interactive elements, to enhance engagement and learning.

- **RESEARCH PAPERS:** The course could include case studies to illustrate how AI ethics are applied in real-world business scenarios. These could be presented in a separate section or integrated into the content sections.
- **ADDITIONAL RESOURCES:** Finally, the course could include a section with links to additional resources such as articles, books, or other courses for learners who want to continue exploring the subject matter.

2.4 REPORT/FORMS

AI-rchive: Digital Library System Management Sprint Planning

Sprint 1: System and UI Design	**Deadline: March 25, 2023**
Prototyping (Using Figma)	All members
ERD	All members
Acceptance Criteria	All members
Project Setup	All members
Sprint 2: UI Coding Iteration	**Deadline: April 01, 2023**
Login, Registration, Change Password UI	Alexandra Angeles & Francis Santos
Homepage UI	Bianca Oregas
Resource Library UI	Von Gatchalian
User Forum UI	Nathan Calinisan
Sprint 3: Coding Implementation Phase 1	**Deadline: April 14, 2023**
Login, Registration, Change Password Functionality	Alexandra Angeles & Francis Santos
Homepage Read and Create	Bianca Oregas
Resource Library Read and Create	Von Gatchalian
User Forum Read and Create	Nathan Calinisan
Sprint 4: Coding Implementation Phase 2	**Deadline: April 21, 2023**
User Management Functionality	Alexandra Angeles & Francis Santos
Homepage Edit	Bianca Oregas
Resource Library Edit	Von Gatchalian
User Forum Edit	Nathan Calinisan
Sprint 5: Acceptance Testing, Integration, and Project Presentation	**Deadline: April 28, 2023**
Acceptance Criteria Compliance	All members

Group Project Presentation	All members

WEEKLY SCRUM REPORTS		
WEEK 7 - SCRUM MEETING		
TASKS DONE FOR THE PREVIOUS WEEK (WEEK 8 DELIVERABLES)	**BLOCKERS** (ANY DIFFICULTIES OR TASK THAT HINDERS PROGRESS)	**LISTS OF TASKS TO BE DONE IN THE NEXT SPRINT** (WEEK 10 DELIVERABLES)
ANGELES, Alexandra A.		
Acceptance Criteria	Complexity of the System	Login, Registration, Change Password UI
CALINISAN, Nathaniel M.		
Project Setup	Technology Limitations	User Forum UI
GATCHALIAN, Von Gottfried N.		
Project Setup	Lack of resources and expertise in database design	Resource Library UI
OREGAS, Bianca Eileen C.		
Prototype (Figma)	The elements and other features of the Figma software is difficult to navigate and explore.	Homepage UI
SANTOS, Francis Andrei E.		
ERD	Sudden changes from the acceptance criteria and prototype affected the ERD creation process that led to additional entities and relationships that was not initially considered.	Login, Registration, Change Password UI
WEEK 8 - SCRUM MEETING		
ANGELES, Alexandra A.		
I drafted an HTML and CSS code for the login webpage, although I haven't been able	The blockers that hindered my progress was my creativity block because I had a lot on	In the next sprint, I am hoping to get a head start on User Management and

to fully incorporate all the elements needed for the UI design. This will help my fellow member, Francis Santos, to have a jumpstart on the registration webpage and other functionality required.	my plate such as doing my part on another research project and other activities. Another thing that I can include is the lack of time.	Functionality and finally be able to design the login webpage and other things needed.
CALINISAN, Nathaniel M.		
I created a slight draft of the user forum in accordance to its respective model found in FIGMA. It contains initial coding for the objects found in the webpage. I created this to serve as a foundation for the next objects in the webpage.	The difficulties that I experienced that hindered me in this task is the lack of resources. The resources may include time.	In the next sprint, I aim to accomplish the coding of the user forum webpage with all its objects properly placed in accordance with its reference model in FIGMA. If there is excess time, i would also like to start on the functionalities and integration.
GATCHALIAN, Von Gottfried N.		
Created the Resource Library, and its contents in accordance with the model made in FIGMA. The webpage features a search bar and a list that includes books and research papers.	One of the major hindrances to the overall progress of the project was the lack of time needed to accomplish the project.	In the next sprint, the goal is to make the Resource Library like the one made in FIGMA. Another goal is to make the webpage functional allowing users to search through the catalogues.
OREGAS, Bianca Eileen C.		
I created a draft for the dashboard webpage using HTML and CSS language. While using the FIGMA prototype, I tried to recreate the assigned webpage. You can see that I had already finished creating the sidebar; hence, it differs from the prototype. The progress of the website is so far so good.	For the blockers, I had difficulty remembering specific codes for elements. Also, I had a hard time doing the sidebar since it was my first time creating a sidebar for a website. It hindered my progress, and because of that, I couldn't finish the task that should have been done for sprint 3. Moreover, since there were elements in the prototype that were a little hard to recreate, I resorted to	For the next sprint, I still need to finish my part; therefore, I will continue working on the assigned task for me and hopefully can complete it on time and make it functional.

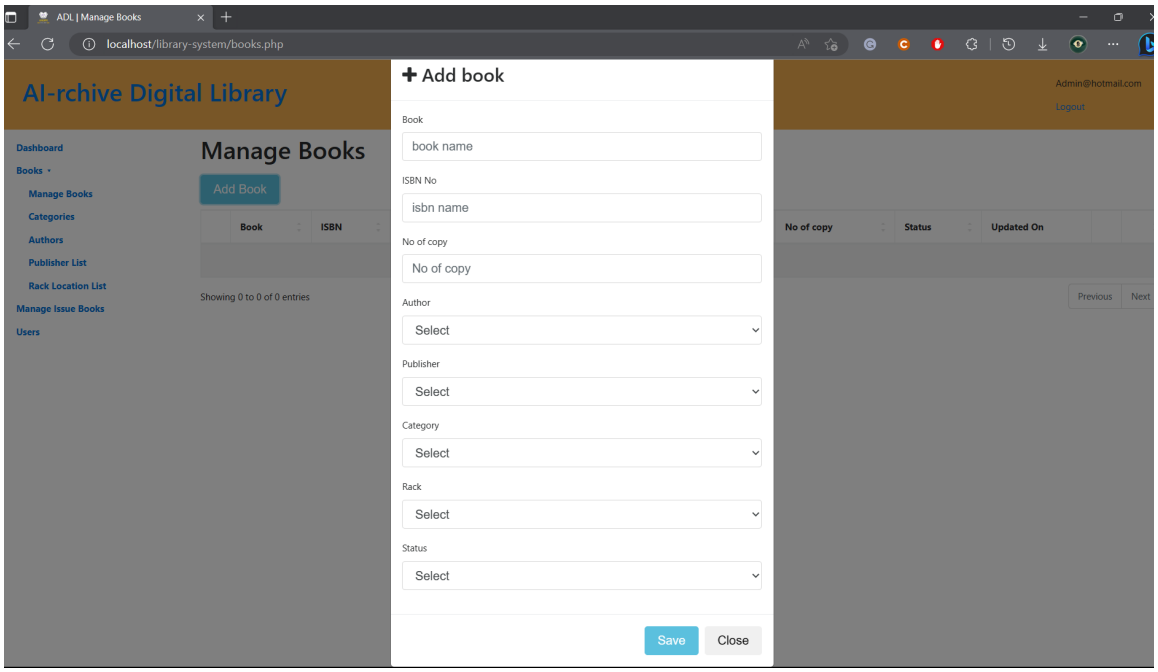
	some alternatives, which is why it is not 100% like what we did.	
SANTOS, Francis Andrei E.		
With the help of Alexandra Angeles partially finishing her code, I was able to create an HTML and CSS code for the register part of the project. There are still a lot of parts lacking in the code, especially when it comes to the design. This will help boost the project and help other members incorporate the project smoothly.	The blockers that hindered my progress were lack of time, lack of sleep, and the workload. This is because I was not at home during the holy week break but now, I am gaining my footing again.	In the next sprint, my goal is to accomplish my own task and assist my members on their parts for us to create a better output and finish ahead of time and have extra time for revisions.
WEEK 9 - SCRUM MEETING		
ANGELES, Alexandra A.		
I made some strides in developing the login page during Week 8. Hence, it is unfinished and requires completion to be so. While I still need to complete the code implementation of my prepared work, I have provided functionality to several components, significantly improving my performance in past sprints.	My inability to be creative was one of the obstacles that stood in the way of my growth. It was because I had a lot on the agenda at the time, such as contributing to another research project and participating in other activities. The absence of sufficient time is another factor that I can take into account.	My goal for the upcoming sprint is to complete the code and functionality for the login webpage so that it can be used. Furthermore, one of my objectives is for my fellow team members and me to complete the following sprint and the website on time.
CALINISAN, Nathaniel M.		
I followed the Figma prototype's style when designing the user forum's website. There are a few new features and minor improvements, but overall, it's still in the early stages of development. The current draft will act as the basis for	The lack of resources was the root of my challenges, which ultimately made it more difficult for me to complete my assignment. Time is an example of one of the resources.	During the following sprint, I aim to finish coding the user forum webpage so that all of its components are positioned appropriately and in line with the reference design for that webpage in FIGMA. If there is extra time, I would like to begin working

this website because it is currently in progress.		on the functionality and incorporation. If feasible, I want to complete the entire website, so I may start participating in my part in the subsequent sprint if there is enough time.
GATCHALIAN, Von Gottfried N.		
The prototype for Figma has helped me greatly as I put together the webpage for the library and the resources. The search field, the keywords bar, and the recently added (items) and books containers were some of the earliest features I implemented. Even though I still need to complete the rest of the webpage read, create, and functionality, I've made tremendous strides.	The insufficient amount of time available to complete the project was one of the primary factors that slowed down the overall progression of the project.	The mission for the following sprint is to create a resource library comparable to the one built in FIGMA. Another objective is to make the webpage functional so that people may search through the catalogs and to complete the overall aesthetic and functionality of the webpage in question to be utilized as a component of the entire website.
OREGAS, Bianca Eileen C.		
I completed roughly 50% of my allocated website using HTML and CSS in Sprint 3. Based on the Figma prototype design, I made the initial group of containers and the sidebar menu. We're down to the last few boxes and pieces. Consequently, the functionality needs to be implemented after that. The website is currently 50% complete, a significant advancement increases from the prior sprints.	When it came to the blockers, I had a hard time recalling the unique codes for the various elements. Because this was the first website for which I had ever created a sidebar, I struggled mightily with putting one together. My progress could have improved; thus, I could not complete the assignment that was supposed to be completed for sprint 3. In addition, some aspects of the prototype were challenging to duplicate, so I resorted to some alternatives. It is why it is not an exact replica of what we achieved;	As the team leader, it is my responsibility to complete my work first. My primary objective is to finalize the homepage or dashboard webpage in terms of its appearance and functioning. Then, for the subsequent sprint, which will also be the final sprint, I plan to assign my members to wrap up all of their work ahead of time so that we will have time for changes and a test run of the website to get ready for the formal presentation.

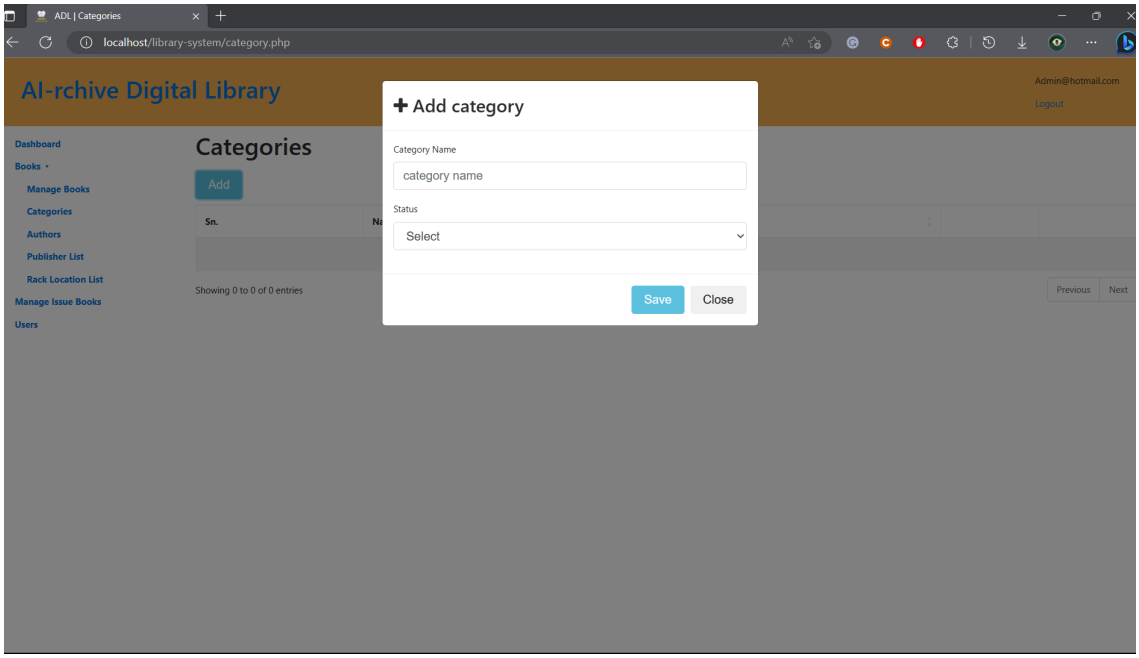
	instead, it is comparable but different.	
SANTOS, Francis Andrei E.		
Alex and I collaborate closely on the login and registration web pages. I helped Alexandra Angeles finalize her programming for the project's register page by writing HTML and CSS. Many aesthetic and practical essential elements remain unimplemented in the code. Therefore, it still needs to be finished for this current sprint. Hopefully, this progress will advance the project and facilitate its smooth incorporation by other participants.	My lack of time, sleep, and the amount of work I had to do were the blockages that prevented me from making progress. It is because I was away from home during the break for Holy Week, but at this point, I am starting to get back on track.	My objective for the upcoming sprint is to complete the assignment assigned to me and help the other members of my team so that we may produce a higher-quality product, finish ahead of schedule, and have more time for revisions. Therefore, complete the overall webpages since it is one of the most essential webpages for the entire website.

2.5 MODULES

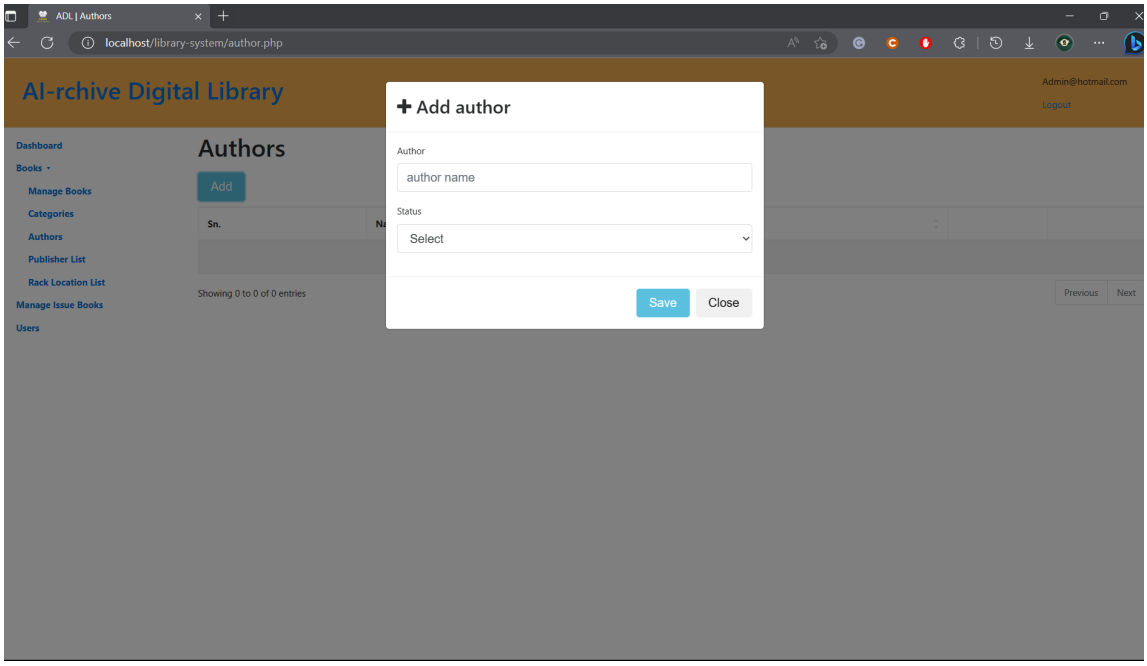
MANAGE BOOKS FORM



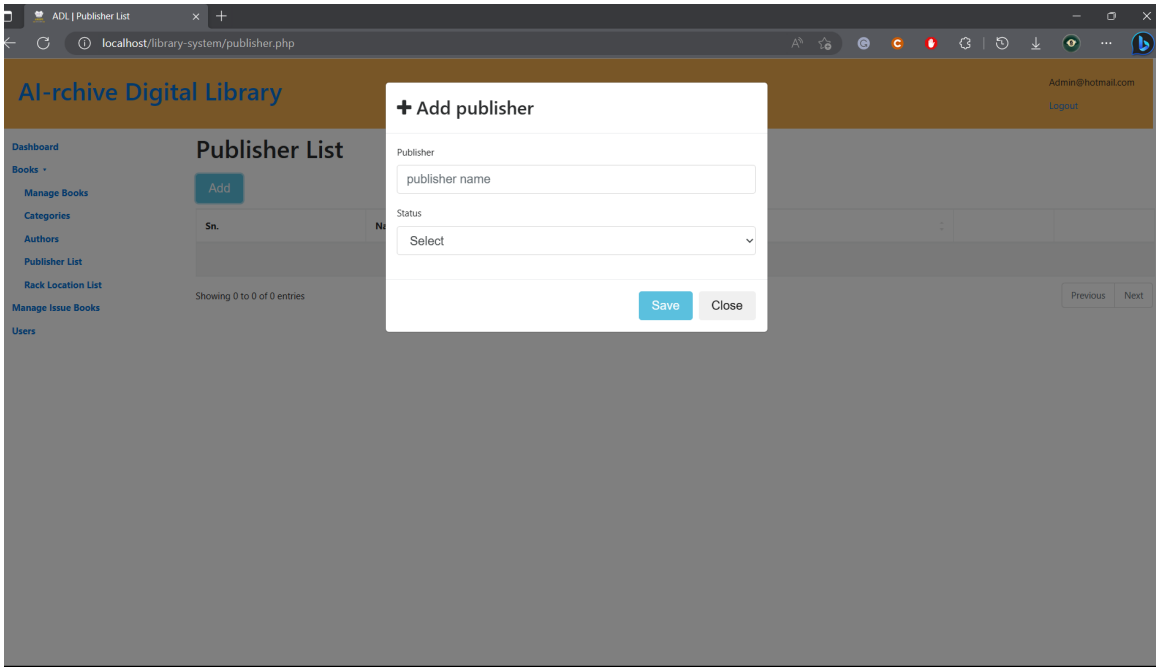
CATEGORIES FORM



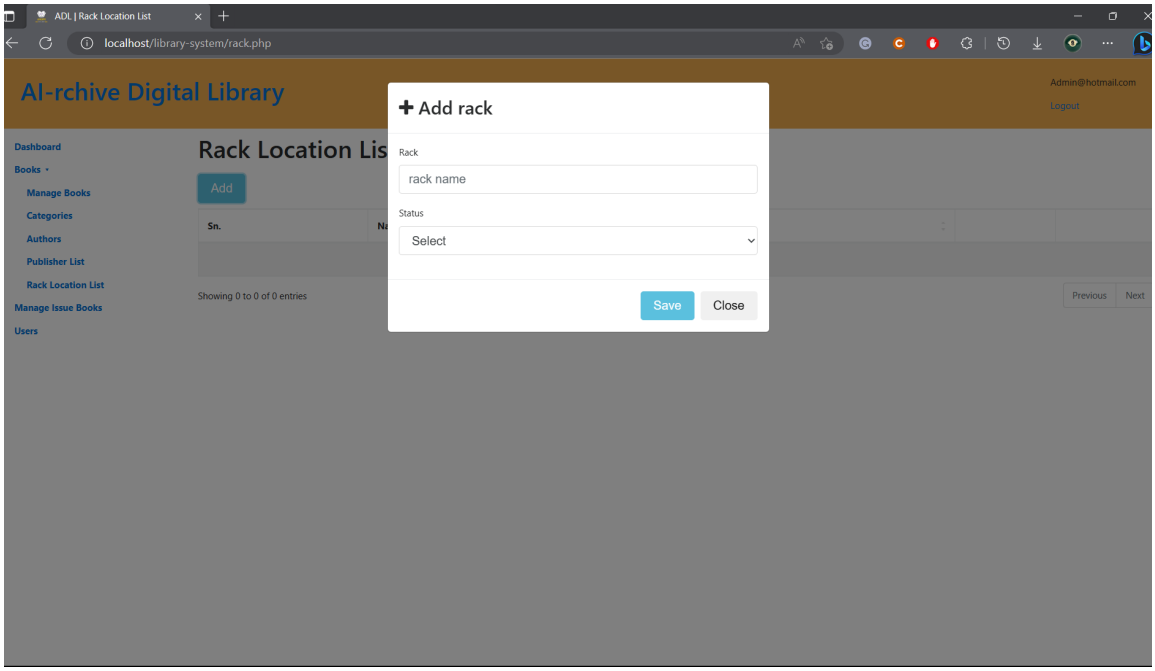
AUTHORS FORM



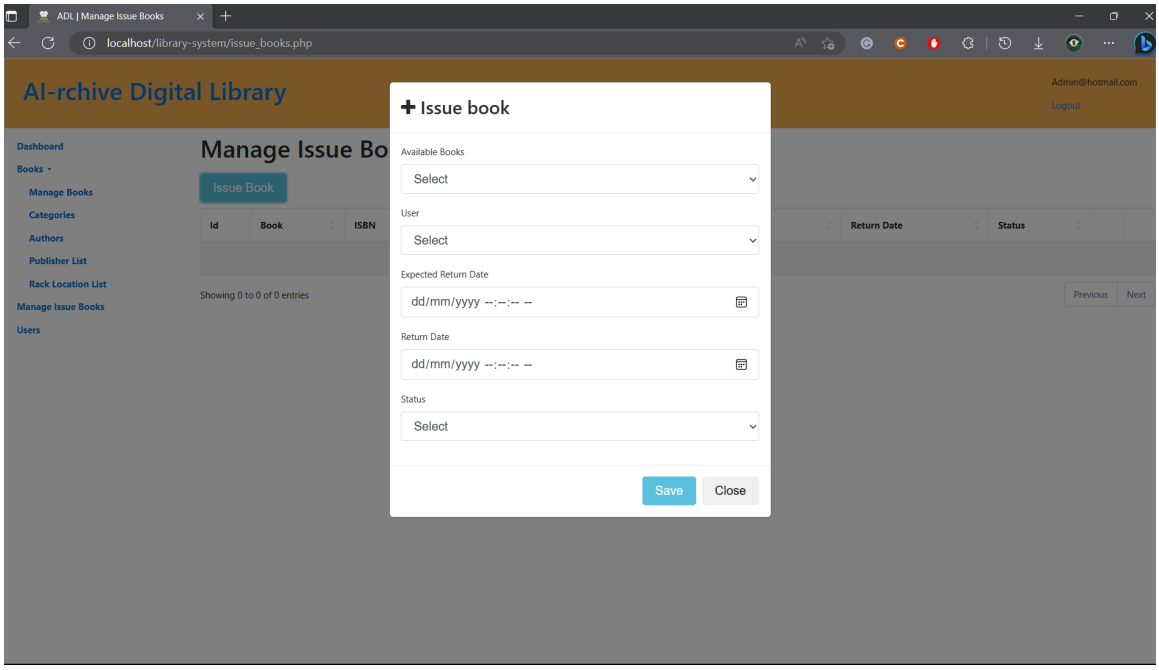
PUBLISHER LIST FORM



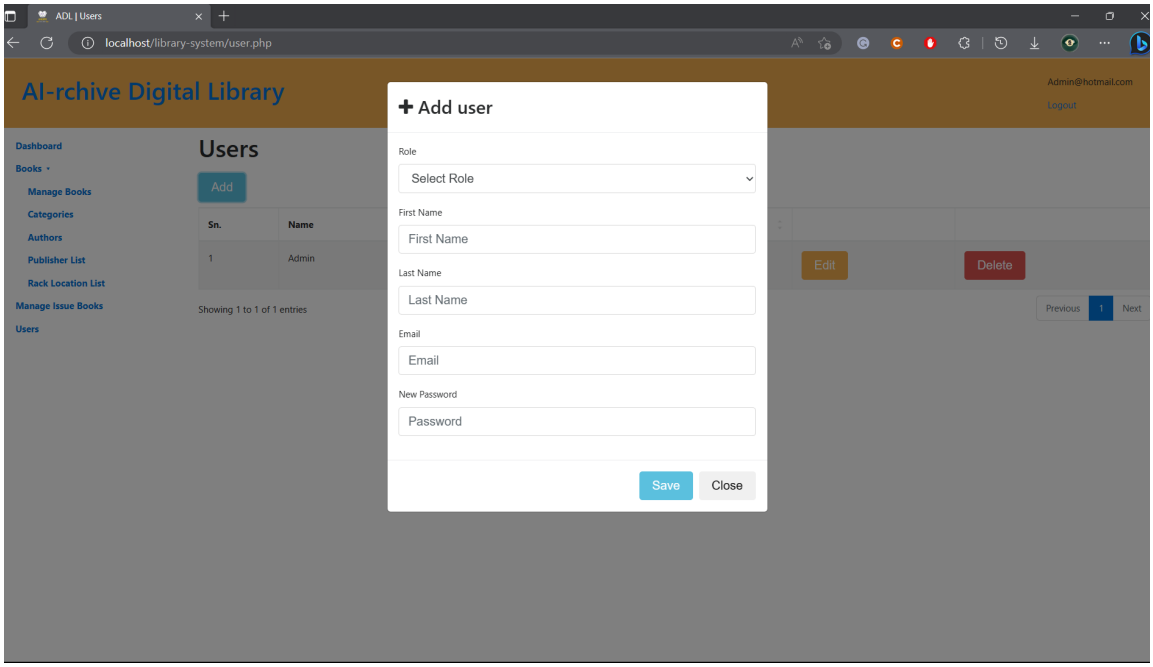
RACK LOCATION LIST FORM



MANAGE ISSUE BOOKS FORM

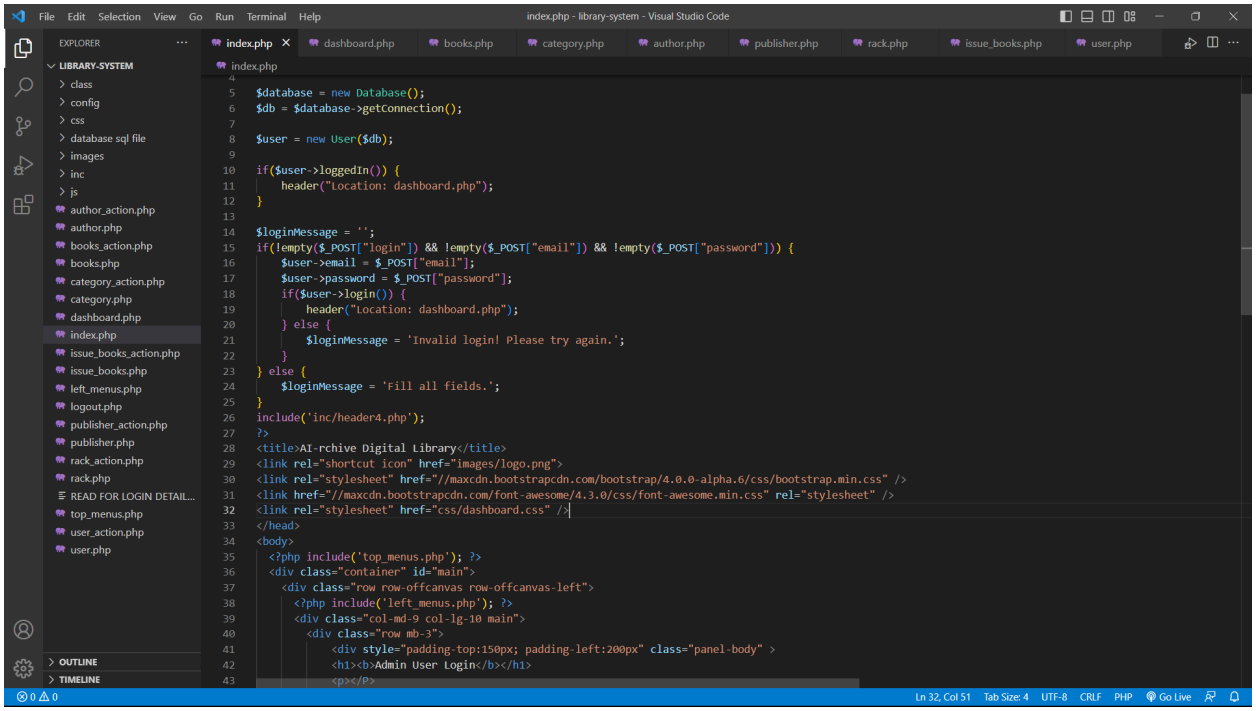


USERS FORM

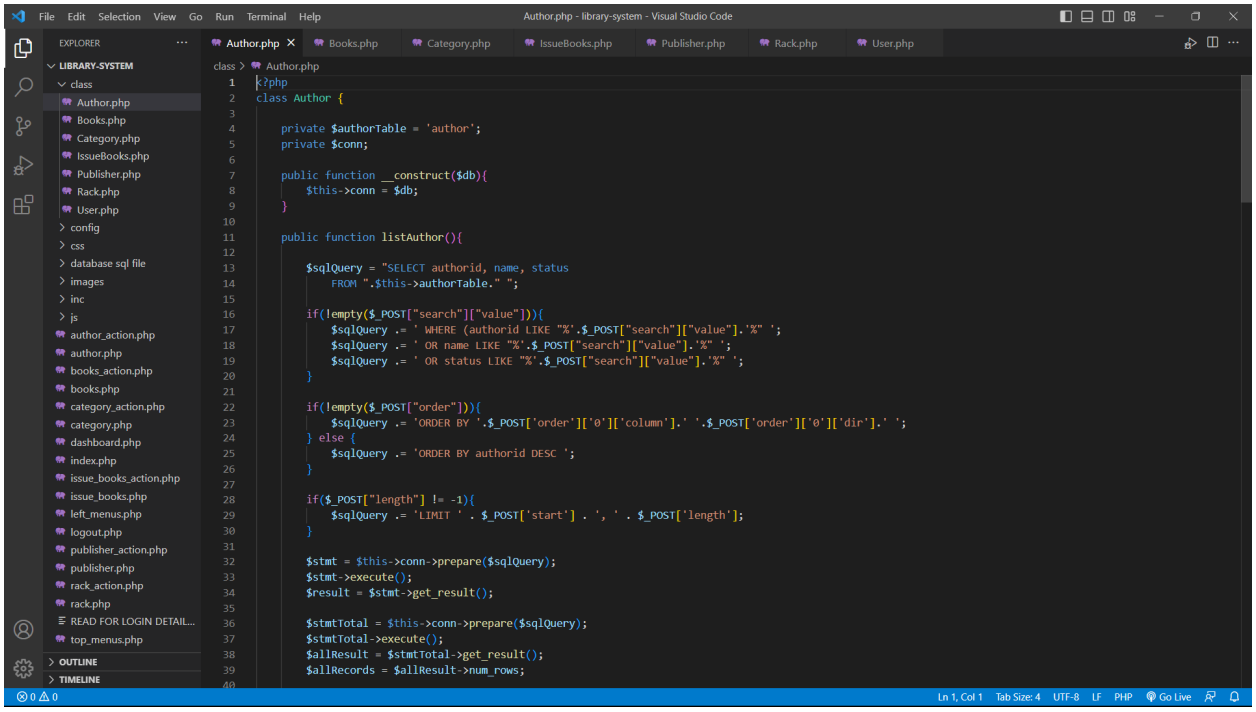


3.0 SYSTEM CODING

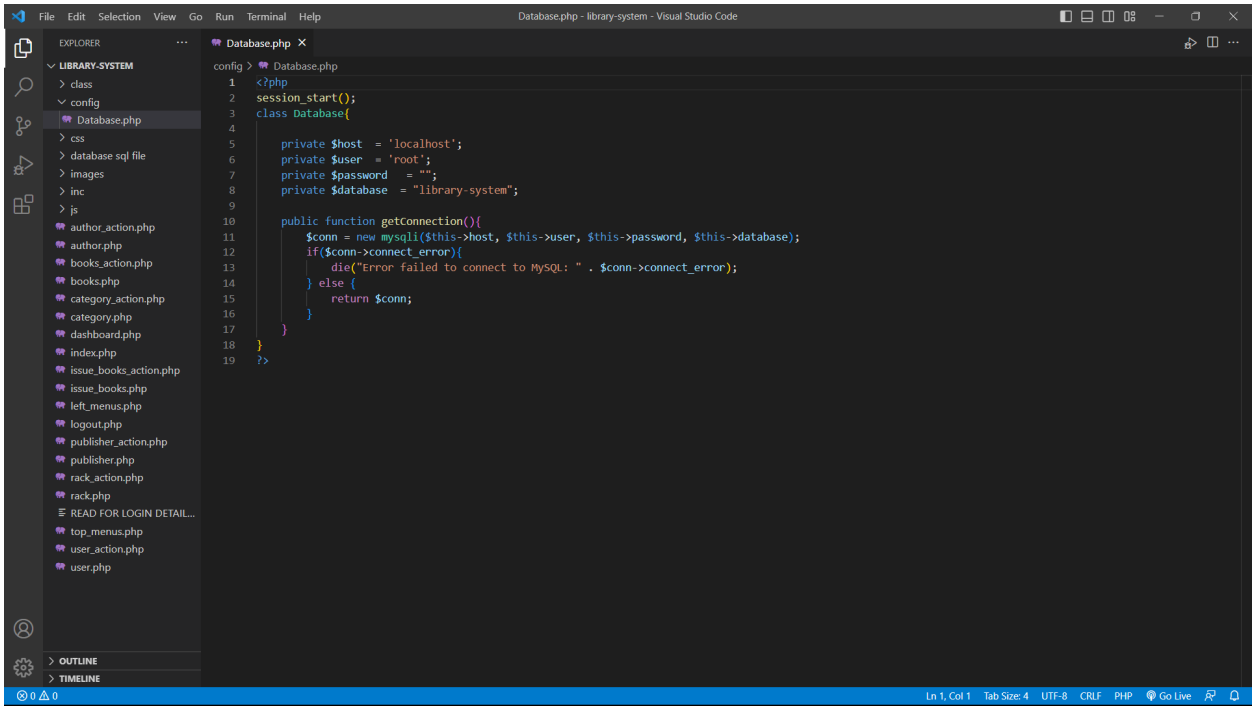
The screenshots below are files used for the library management system. These are PHP, CSS, Javascript, and MYSQL files. Furthermore, only screenshots are provided as this project has many files for the creators to copy and paste everything.



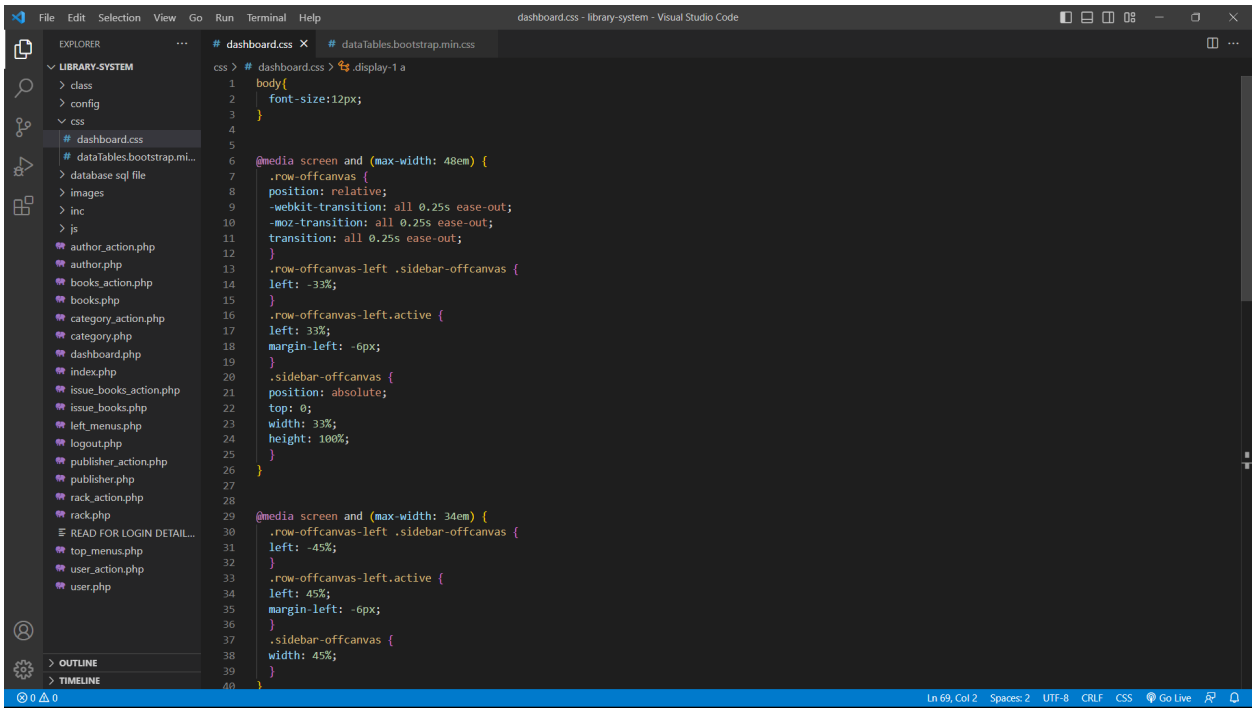
CLASS FOLDER



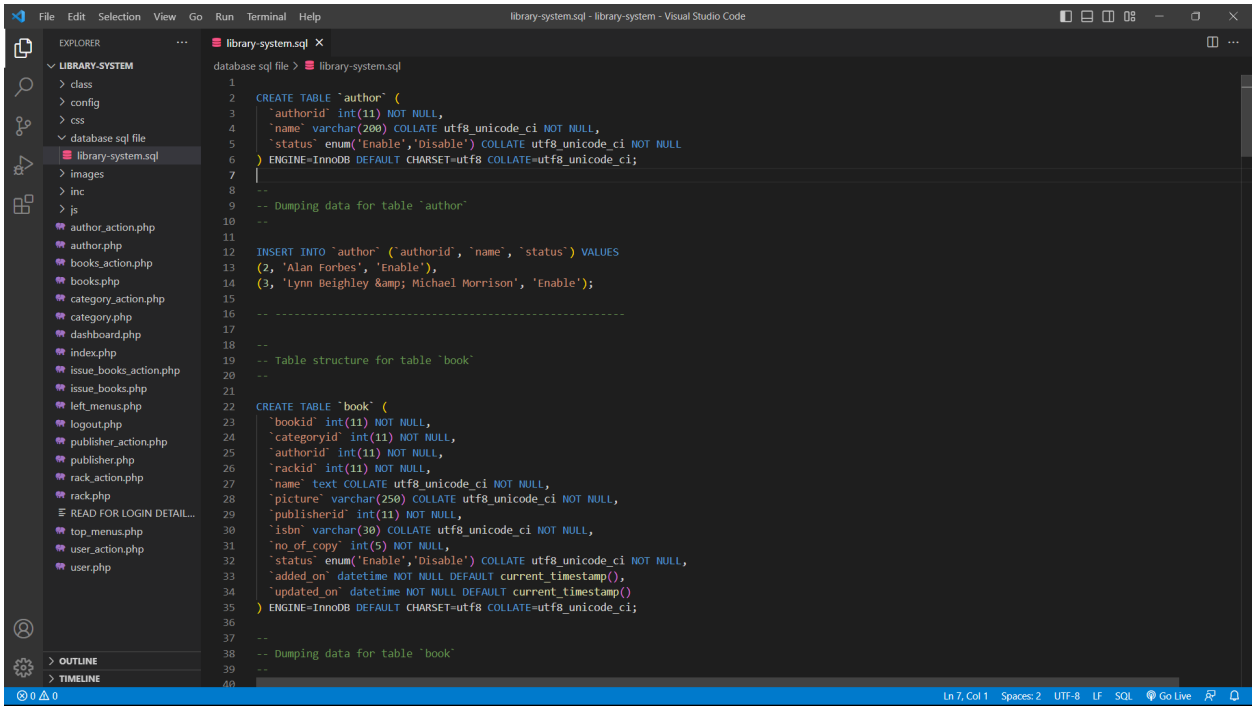
CONFIG FOLDER



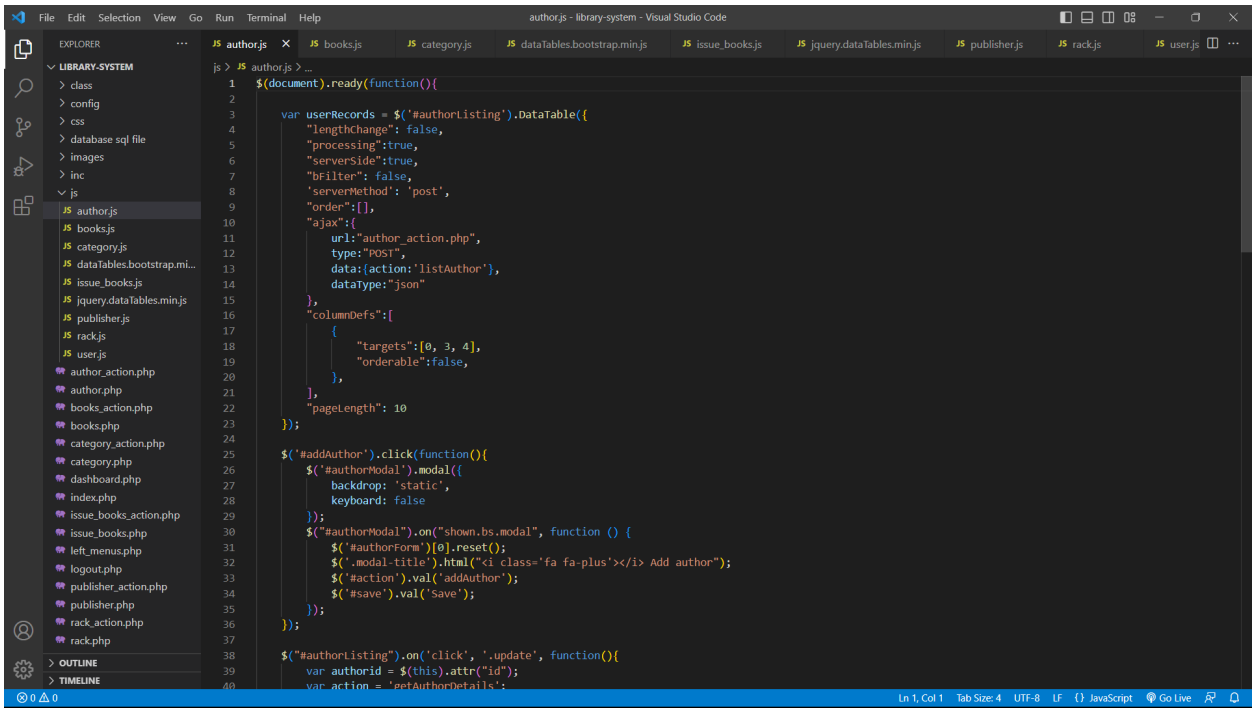
CSS FOLDER



DATABASE SQL FILE



JAVASCRIPT FOLDER



3.1 PROGRAMMING LANGUAGES

The AI-rchive online library management system is for digital libraries built using the web technologies JavaScript (JS), PHP, and SQL. The system manages multiple facets of library management, including handling book records, and user data, requesting and returning books,

producing reports, and potentially integrating features like search functionality, authentication of users, and administrative controls. A variety of the following programming languages are utilized in various modules and upgrades of the system:

- **JavaScript** makes websites more engaging by handling tasks like client-side validation, real-time updates, and the behavior of user interface elements.
- **PHP** is a server-side scripting language responsible for managing backend processes like user authentication, database connectivity, and the generation of dynamic web pages.
- **MySQL** is a database management system (DBMS) used for various tasks, including database schema creation, data storage, user data collection, and query execution.

3.2 DATABASE(S)

Here are the MySQL database tables needed to roll out our library management system. The schema for making tables is provided below.

- **USER TO STORE USER LOGIN DETAILS**

```
CREATE TABLE `user` (
  `id` int(11) UNSIGNED NOT NULL,
  `first_name` varchar(255) DEFAULT NULL,
  `last_name` varchar(255) DEFAULT NULL,
  `email` varchar(255) DEFAULT NULL,
  `password` varchar(64) NOT NULL,
  `role` enum('admin','user') DEFAULT 'admin'
) ENGINE=InnoDB DEFAULT CHARSET=utf8;

ALTER TABLE `user`
  ADD PRIMARY KEY (`id`);

ALTER TABLE `user`
  MODIFY `id` int(11) UNSIGNED NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=5;
```

- **AUTHOR TO STORE BOOK AUTHOR DETAILS**

```
CREATE TABLE `author` (
  `authorid` int(11) NOT NULL,
  `name` varchar(200) COLLATE utf8_unicode_ci NOT NULL,
  `status` enum('Enable','Disable') COLLATE utf8_unicode_ci NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8 COLLATE=utf8_unicode_ci;

ALTER TABLE `author`
  ADD PRIMARY KEY (`authorid`);

ALTER TABLE `author`
  MODIFY `authorid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=4;
```

- **PUBLISHER TO STORE BOOK PUBLISHER DETAILS**

```
CREATE TABLE `publisher` (
  `publisherid` int(11) NOT NULL,
  `name` varchar(255) NOT NULL,
  `status` enum('Enable','Disable') NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

ALTER TABLE `publisher`
  ADD PRIMARY KEY (`publisherid`);

ALTER TABLE `publisher`
  MODIFY `publisherid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=10;
```

- **CATEGORY TO STORE BOOK CATEGORY DETAILS**

```
CREATE TABLE `category` (
  `categoryid` int(11) NOT NULL,
  `name` varchar(200) COLLATE utf8_unicode_ci NOT NULL,
  `status` enum('Enable','Disable') COLLATE utf8_unicode_ci NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8 COLLATE=utf8_unicode_ci;

ALTER TABLE `category`
  ADD PRIMARY KEY (`categoryid`);

ALTER TABLE `category`
  MODIFY `categoryid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=7;
```

- **RACK TO STORE BOOK RACK LOCATION DETAILS**

```
CREATE TABLE `rack` (
  `rackid` int(11) NOT NULL,
  `name` varchar(200) COLLATE utf8_unicode_ci NOT NULL,
  `status` enum('Enable','Disable') COLLATE utf8_unicode_ci NOT NULL
DEFAULT 'Enable'
) ENGINE=InnoDB DEFAULT CHARSET=utf8 COLLATE=utf8_unicode_ci;

ALTER TABLE `rack`
  ADD PRIMARY KEY (`rackid`);

ALTER TABLE `rack`
  MODIFY `rackid` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=4;
```

- **BOOK TO STORE BOOK DETAILS**

```
CREATE TABLE `book` (
  `bookid` int(11) NOT NULL,
  `categoryid` int(11) NOT NULL,
  `authorid` int(11) NOT NULL,
  `rackid` int(11) NOT NULL,
  `name` text COLLATE utf8_unicode_ci NOT NULL,
```

```
  `picture` varchar(250) COLLATE utf8_unicode_ci NOT NULL,
  `publisherid` int(11) NOT NULL,
  `isbn` varchar(30) COLLATE utf8_unicode_ci NOT NULL,
  `no_of_copy` int(5) NOT NULL,
  `status` enum('Enable','Disable') COLLATE utf8_unicode_ci NOT
NULL,
  `added_on` datetime NOT NULL DEFAULT current_timestamp(),
  `updated_on` datetime NOT NULL DEFAULT current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=utf8 COLLATE=utf8_unicode_ci;

ALTER TABLE `book`
  ADD PRIMARY KEY (`bookid`);

ALTER TABLE `book`
  MODIFY `bookid` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=5;
```

- **ISSUED_BOOK TO STORE BOOK ISSUE DETAILS**

```
CREATE TABLE `issued_book` (
  `issuebookid` int(11) NOT NULL,
  `bookid` int(11) NOT NULL,
  `userid` int(11) NOT NULL,
  `issue_date_time` datetime NOT NULL DEFAULT current_timestamp(),
  `expected_return_date` datetime NOT NULL,
  `return_date_time` datetime NOT NULL,
  `status` enum('Issued','Returned','Not Return') COLLATE
utf8_unicode_ci NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8 COLLATE=utf8_unicode_ci;

ALTER TABLE `issued_book`
  ADD PRIMARY KEY (`issuebookid`);

ALTER TABLE `issued_book`
  MODIFY `issuebookid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=4;
```

4.0 RESOURCE REQUIREMENTS

The resource requirements for the AI-rchive library management system may differ depending on elements such as the scope of the system, the number of users, and the desired features and functionalities. Here are a few common resource requirements to take into account:

4.1 HARDWARE REQUIREMENTS

A digital library is a learning companion for users who want quick and easy access to world-class educational resources from different educational websites, libraries, etc. Here are three specific objectives that a business can aim to achieve by setting up a digital library:

1. It strives to increase excellent user experience by developing and creating an intuitive and user-friendly website, integrating simple search and navigation features.

2. It seeks to retrieve information accessible to everyone, wherein users can access numerous journals, research papers, case studies, online courses, and other knowledge resources.
3. It aims to be cost-efficient. A digital library eliminates the necessity of physical library visits. As long as there is an Internet connection, people can access the same information anywhere.

USER REQUIREMENTS: *For each project feature, list down what the user can do in the software and what it achieves for the business.*

USER FORUM:

- **What the user can do:** Users can participate in a discussion of moral and responsible AI practices in a community of online AI specialists.
- **What it accomplishes for the business:** Encouraging knowledge sharing among AI experts will help organizations stay current on the newest developments and best practices in ethical and responsible AI.

RESOURCE LIBRARY:

- **What the user can do:** Users can browse a database of articles on moral and responsible AI, which includes whitepapers, case studies, and other resources.
- **What it achieves for the business:** It gives businesses a centralized location to find valuable tools and knowledge on ethical and responsible AI practices, enabling them to make well-informed decisions regarding their AI-powered apps.

CONFERENCE VIDEOS:

- **What the user can do:** Users can watch recorded conference sessions on the ethical implications of AI for businesses
- **What it achieves for the business:** It offers businesses essential insights and perspectives on the ethical implications of AI, enabling businesses to stay informed and make more ethical and responsible decisions when developing and deploying AI-powered applications.

BLOG ENTRIES:

- **What the user can do:** Allows the users to read blog entries about AI for businesses.
- **What it achieves for the business:** It provides businesses with educational knowledge about the moral limits of AI. Assisting companies and businesses to stay informed of recent developments and best practices.

FUNCTIONAL REQUIREMENTS: *For each feature, explain what it should accomplish and what the users and system should do and comply with. An example can be found in the PowerPoint given in week 5.*

- **TERMS OF SERVICES**

- Upon visiting the website, the user must accept the terms of service to gain access.

- **CREATING NEW USERS**
  - This function allows the user to register on the website as a customer.
  - The customer can sign up to gain access to the website with the following details:
    - Email
    - First Name
    - Last Name
    - Birthdate
    - Username
    - Password
    - Confirmed Password
    - Contact Number
  - The system administrator can also create new users with the role of admin.
  - The following details are required to be inputted by the system administrator to create an account for an admin:
    - First Name
    - Last Name
    - ID Number
    - Birthdate
    - Address
    - Username
    - Password
    - Confirmed Password
    - Contact Number
    - Starting date

- **LOGIN FOR USERS**
  - The users can choose what type of user log in they are authorized to use.
    - Admin
    - Customer
  - The authorized users of the system or website can log in with the proper credentials. These credentials include the following:

        - Email/Username
        - Password

- **EDITING USER INFORMATION**
    - The users are allowed to change their user information. The following are the different user information that they can change:
        - Contact Number
        - Email Address
        - Password
        - Address

- **ACCESS TO RESOURCE LIBRARY**
    - The authorized user has access to different relevant resources in the Resource Library; These resources are about AI-driven application development and its ethical implications.
    - The website allows users to search for resources by name.
    - The users are allowed to download the given documents if desired.
    - These resources include:
        - Research papers
        - Case studies
        - Policy documents

- **ACCESS TO EDUCATIONAL RESOURCES**
    - The authorized user also has access to different educational resources.
    - The website allows users to search for resources by name.
    - These educational resources include
        - Collection of sites that provide free webinars.
        - Collection of sites that provide online courses.
        - Recorded online conferences.
        - Recorded online podcasts.
    - These webinars and online courses are about the ethical usage of artificial intelligence in business.
    - These Recorded online conferences and podcasts are about expert panelists addressing developing ethical problems relating to AI in the workplace.

- **ONLINE FORUM**
    - Authorized users are allowed to view and interact in the online forum.

- This function shall be an open space for users to publish what they want. These are the requirements for a user to be able to post something:
    - Authorized account
    - Words do not exceed the given word limit.
    - No hate speech, violent acts, harassment, bullying, or obscene imagery
    - No sharing or discussing NSFW content.
- The published works can be edited and deleted by their respective creators and admins.
- Other users can also interact with a published work from another user by commenting.
- The comments a user posts can also be edited and deleted by the respective user and admins.
- This function shall serve as a gateway for users with little to no experience in ethical AI utilization to learn more from experienced users.

- **BLOGS**
    - Authorized users are allowed to create, update, and delete blogs containing relevant information about AI's ethical utilization.
    - Users are also allowed to view different blogs from different users.
    - The website allows users to search for specific blogs by title or name of the author.

- **LOGOUT FOR USERS**
    - This function allows users to log out of their accounts after utilizing the website.

- **SUBMIT FEEDBACK OR SUPPORT REQUESTS**
    - The website allows users to submit inquiries, feedback, or support requests to the website's customer service team.
    - The feedback form includes clear instructions and fields for relevant information. These information are:
        - Username
        - First Name
        - Last Name
        - Email Address
        - Contact Number
        - Description of their issue or feedback

4.2 SOFTWARE REQUIREMENTS

The software should meet the following non-functional requirements:

- Usability: The software should be easy to use and navigate for learners with varying levels of technical proficiency.
- Security: User data should be encrypted and stored securely. The software should have mechanisms to prevent unauthorized access and protect against cyber threats.
- Performance: The software should be able to handle multiple users simultaneously without compromising the user experience.

4.3 HUMAN RESOURCES REQUIREMENTS

This human resources requirements document provides a detailed outline of the requirements for the development team of the "AI Ethics for Business" course. It serves as a reference for HR managers and recruiters to ensure that the project team is appropriately staffed, skilled, and compensated and that the project is completed on time, within budget, and to the expected quality standards. The project team should consist of the following members:

- Project Manager: responsible for managing the project and ensuring that it meets the project objectives, timelines, and budget.
- Instructional Designer: responsible for designing and developing the course content, assessments, and evaluations in collaboration with the subject matter experts.
- Subject Matter Expert: responsible for providing subject matter expertise and guidance on the course content and case studies.
- Web Developer: responsible for developing the web-based application, integrating the content, and ensuring that it is accessible and user-friendly.
- Quality Assurance Specialist: responsible for testing the software and ensuring that it meets the expected quality standards.