Yashwantrao Chavan Maharashtra Open University

ज्ञानगंगा घरोघरी

Author Verse by

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Under the Guidance o f

Prof. Sandeep Vishwakarma

Submitted to the School Computer Science, YCMOU in partial fulfilment of the requirements for the award of the degree

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Chandrabhan Sharma College
Arts, Science & Commerce

Bachelor of Computer Applications (BCA) May 2024

Smt. Durgadevi Sharma Charitable Trust's Chandrabhan Sharma college of Arts, Commerce and science

(Affiliated to University of Mumbai)

NAAC RE-ACCREDITED 'A' GRADE (CGPA 3.10)

(LSC 31468)

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of Arts, Commerce & Science

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(Affiliated to the University of Mumbai)

Reaccredited 'A' Grade (CGPA 3.10) by NAAC

CERTIFICATE

This is to certify that the project report entitled **GEOGEMINI** submitted to **Yashwantrao Chavan Maharashtra Open University** in partial fulfilment of the requirement for the award of the degree of **BACHELOR OF COMPUTER APPLICATIONS (BCA)**, is an authentic and original work carried out by Nishi Tiwari Shekhar Thakur with PRN **2021017001607737, 2021017001607915**.

The matter embodied in this project is genuine work done by the student and has not been submitted whether to this University or to any other University / Institute for the fulfilment of the requirements of any course of study.

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Certificate of Completion

This is to certify that Nishi Tiwari, Shekhar Thakur the team of the following students of B.C.A have completed the Project Work titled "Author Verse" under my guidance and supervision. The project report has been written according to the guidelines given by the Yashwantrao Chavan Maharashtra Open University.

1. Nishi Tiwari
2. Shekhar Thakur

Signature of the Study Centre Coordinator Signature of the Guide

Name of the Study Centre Coordinator Name of the Guide

Stamp of the Study Centre

ABSTRACT

One of the standout features of our tool is the Group Promo functionality.

Authors can create or join promotional groups tailored to their genre or target audience. By pooling resources and cross-promoting each other's work, authors amplify their reach exponentially. Imagine the power of dozens of authors promoting your book to their dedicated fan bases. With our Group Promo feature, it's not just a dream – it's a reality.

Newsletter Swap: In the digital age, email marketing remains one of the most effective tools for reaching potential readers. Our Newsletter Swap feature enables authors to exchange placements in each other's newsletters.

By showcasing your book to a new audience through another author's newsletter, you tap into a pool of engaged readers eager for fresh content. It's a win-win situation that drives sales and fosters collaboration n within the writing community.

PREFACE

It gives me immense pleasure to present the project on "AUTHOR VERSE" of "CHANDRABHAN SHARMA COLLEGE OF ARTS, SCIENCE AND COMMERCE" prepared sincerely, punctually and with utmost efforts.

The contents of this book are presented into many chapters, in order to ease reading. The project has been illustrated with precise data elucidated with neat Dataflow diagram, Entity-Relationship diagram and Structure diagram that simplify the understanding of the project.

The project includes the software development tools. Meticulous care has been taken to make this project perfect and useful in every respect.

ACKNOWLEDGEMENT

We had a great pleasure for representing this project report for “CHANDRABHAN SHARMA COLLEGE” and we grab this opportunity to convey our immense regards towards all the distinguished people who have their valuable contribution in the hour of need.

We profoundly thank our principal "Dr. Mrs. Pratima Singh" for giving us support throughout the course and made us capable of being worthy of recognition and extended query facility to us for making and computing the project smoothly till now.

We are highly obliged to Prof. Sailaja Tiwari and Prof. Arvind Singh teaching staff member of the Information Technology department, who spread efforts in making the project a successful one by their guidance, appropriate advice and encouragement.

Thanking You,

Nishi Tiwari and

Shekhar Thakur

SYNOPSIS

Get ready for a marketing adventure with our " AUTHOR VERSE " app! It's not just another marketing platform; it's a lively celebration of the unique collaborations that make unknown novels special. That's what our app is all about – connecting communities through the joy of reading books. The app features a user-friendly interface allowing authors to submit their books, enhancing the application's database with a wide array of genres. The application's development is planned using HTML, CSS, JS, EJS, Node.js and Firebase, leveraging modern technology to create a seamless and engaging user experience. AUTHOR VERSE not only promotes novels of diverse genre but also aims to bring authors together through the shared love of reading. The AUTHOR VERSE – where everyone tells a story, and every bite feels like home. Welcome to the heart of reading!

DECLARATION

I hereby declare that the project entitled, "AUTHOR VERSE" done at place where the project is done, has not been in any case duplicated to submit to any other university for the award of any degree.

To the best of my knowledge other than me, no one has submitted to any other university.

The project is done in partial fulfillment of the requirements for the award of degree of BACHELOR OF COMPUTER APPLICATION to be submitted as final semester project as part of our curriculum.

Name and Signature of the Student

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CHAPTER 1 - INTRODUCTION

1.1 Company Profile:

Title of the Project: **AUTHOR VERSE**: **Collaborative Promotion for Authors**.

"Discover the power of collaborative promotion with Author Verse. Our Group Promo feature allows authors to join forces, amplifying their reach through shared promotional efforts. With Newsletter Swap, authors exchange placements in each other's newsletters, tapping into engaged audiences and driving sales. It's a win-win strategy for authors seeking to expand their readership and foster collaboration within the writing community."

Additionally, Author Verse employs best practices for code optimization, resource management, and infrastructure scaling to ensure that the platform can handle increasing user traffic and data volume without compromising performance or reliability.

Author Verse offers valuable tools and resources for authors to collaborate, promote their work, and engage with readers, it is important to acknowledge the limitations and challenges that may impact the platform's usage and effectiveness. By addressing these limitations through proactive measures, transparency, and continuous improvement, Author Verse can enhance its value proposition and better serve the needs of authors in the dynamic landscape of digital publishing.

Background:

Author Verse is to revolutionize the way authors approach book marketing and promotion by providing a dynamic and collaborative platform that empowers authors to amplify their reach, engage with readers, and build meaningful connections within the writing community. This section outlines the key objectives of the project in detail, highlighting the core principles and strategic goals driving the development and implementation of Author Verse.

Author Verse falls within the category of digital platforms aimed at empowering authors and revolutionizing the way they promote and market their books in the modern publishing landscape. It serves as a dynamic and collaborative hub where authors can connect, collaborate, and amplify their reach through strategic partnerships and innovative promotional tools. Let's explore the various dimensions of Author Verse's project category:

1.3 Objective:

Empower Authors Through Collaboration: At the heart of Author Verse lies a commitment to empowering authors through collaboration. The project aims to create a supportive and inclusive environment where authors can come together, share resources, and amplify their promotional efforts through collaborative initiatives.

By leveraging the collective power of the writing community, Author Verse seeks to democratize access to promotional opportunities and level the playing field for authors of all backgrounds and experience levels.

1. **Facilitate Cross-Promotion and Networking:**

Author Verse aims to facilitate cross-promotion and networking opportunities for authors, enabling them to connect with fellow writers, exchange promotional placements, and tap into new audiences. Through features such as Group Promo and Newsletter Swap, authors can collaborate on promotional campaigns, leverage each other's platforms and fan bases, and expand their reach beyond traditional marketing channels. By fostering meaningful connections and partnerships, Author Verse seeks to enhance the visibility and discoverability of authors' work in an increasingly crowded marketplace.

1. **Foster Community and Support:** Author Verse seeks to foster a sense of community and support among authors, providing them with opportunities to connect, collaborate, and learn from each other. Through features such as discussion forums, virtual events, and peer support groups, the project aims to create a vibrant and inclusive community where authors can share insights, seek advice, and celebrate each other's successes. By nurturing a supportive ecosystem of writers, Author Verse aims to combat the isolation and competitiveness often associated with the writing profession and create a culture of camaraderie and mutual support.

Purpose, Scope and Applicability:

Purpose: The purpose of Author Verse is to bring people together through stories by sharing novels and fostering community connection.

Scope: The scope of this project is as follows: Author Verse is a web app as of now. Features for users to easily upload, share, and discover BOOKS within the app. Implement functionalities for users to interact with each other, such as forums, ratings, and social sharing

options. Ensure scalability and adaptability of the app to accommodate future updates, community growth, and technological advancements.

Applicability: Author Verse serves as a versatile platform for fostering community engagement and culinary exploration, finding utility in various settings such as community events. Through features like book sharing, group promotion, and user connections, Author Verse enhances the communal experience of marketing.

1.5 Statement of Problem Area:

Existing System, Methods and Procedures**:**

As a beta version and evolving platform, Author Verse is committed to continuous improvement and innovation to better serve the needs of authors and in future even readers. The project aims to gather feedback from users, analyze market trends, and iterate on features and functionalities to stay ahead of the curve. By embracing emerging technologies, exploring new partnerships, and experimenting with novel approaches to promotion and engagement, Author Verse seeks to push the boundaries of what is possible in the realm of author marketing and promotion.

Author Verse incorporates provisions for scalability and performance optimization to accommodate growing user demand and maintain optimal system performance. Measures such as caching, load balancing, and database indexing are implemented to enhance system scalability and responsiveness

1.6 Existing System, Methods, and Procedures:

The existing system design of Author Verse lays the foundation for a comprehensive platform that empowers authors through collaborative promotion and networking opportunities. This section explores the key components of the existing system, including architecture, functionality, and user experience, as well as considerations for scalability and performance optimization.

1. **Architecture:** Author Verse adopts a modern and scalable architecture to accommodate the diverse needs of authors and ensure seamless functionality across various devices and platforms. The system architecture comprises both frontend and backend components, with a focus on modularity, flexibility, and reliability.
2. **Functionality:** Author Verse offers a diverse range of functionality aimed at empowering authors to promote their work, connect with readers, and collaborate with peers within the writing community. The core functionality of Author Verse includes:

- Group Promo: Authors can create or join promotional groups tailored to their genre or target audience, facilitating collaborative promotion and resource sharing.
- Newsletter Swap: Authors can exchange placements in each other's newsletters, leveraging email marketing to reach new audiences and drive book sales.
- Profile Management: Authors can manage their profile settings, update personal information, and track promotional activities and performance metrics.
- Analytics and Reporting: Authors have access to analytics dashboards and reporting tools to track the performance of their promotions, analyze audience engagement, and make data-driven decisions.

CHAPTER 2 - SURVEY OF TECHNOLOGIES

2.1 Technologies that have been used:

Author Verse harnesses a combination of cutting-edge programming languages and software tools to create a seamless and feature-rich platform for authors. From front-end development to backend infrastructure, each component is carefully chosen to ensure optimal performance, scalability, and user experience. Here's an in-depth look at the languages and software tools used in Author Verse:

2.1.1 Front-end Development:

HTML (HyperText Markup Language):

HTML serves as the backbone of Author Verse's front-end development, providing the structural framework for web pages. With HTML, developers define the layout, headings, paragraphs, images, and other essential elements of the user interface. By adhering to HTML standards, Author Verse ensures compatibility across different browsers and devices, delivering a consistent and user-friendly experience to authors.

CSS (Cascading Style Sheets):

CSS is instrumental in styling the visual presentation of Author Verse's web pages, including colors, fonts, layouts, and animations. By separating style from content, CSS enables developers to customize the appearance of each page and create a cohesive brand identity.

Through CSS frameworks and preprocessors, such as Bootstrap and Sass, Author Verse. achieves responsive design, ensuring that the platform adapts seamlessly to various screen sizes and resolutions.

JavaScript:

JavaScript powers the interactive and dynamic elements of Author Verse's user interface, enhancing usability and functionality. With JavaScript, developers implement features such as form validation, interactive menus, modal dialogs, and real-time updates. Leveraging modern JavaScript frameworks like React.js or Vue.js, Author Verse delivers a smooth and intuitive user experience, allowing authors to navigate, interact, and engage with the platform effortlessly.

ES6 (ECMAScript 6):

ES6, also known as ECMAScript 2015, introduces several enhancements and new features to JavaScript, making it more expressive, readable, and efficient. By leveraging ES6 syntax and features, developers optimize code readability and maintainability while harnessing the full power of JavaScript. With features like arrow functions, template literals, and destructuring assignments, Author Verse's front-end codebase remains concise, modular, and future-proof.

2.1.2 Backend Development:

Firebase:

Firebase serves as the backbone of Author Verse's backend infrastructure, providing a comprehensive suite of cloud-based services for web and mobile applications. With Firebase's real-time database, authentication, hosting, and cloud functions, Author Verse ensures seamless data synchronization, user authentication, and serverless computing.

Firebase's scalability and reliability enable Author Verse to handle growing user traffic and deliver high-performance services without managing complex server infrastructure.

1. **Version Control and Collaboration:**

Git: Git is the version control system of choice for Author Verse's development team, facilitating collaboration, code management, and version tracking. With Git, developers can work on separate branches, merge changes, and resolve conflicts

efficiently.

By leveraging Git repositories hosted on platforms like GitHub or GitLab, Author Verse ensures transparency, accountability, and continuity throughout the development lifecycle.

1. **Development Environment and Tools:**

Visual Studio Code: Visual Studio Code serves as the primary integrated development environment (IDE) for Author Verse's development team, providing a lightweight yet powerful platform for code editing, debugging, and collaboration.

npm (Node Package Manager):

npm is the package manager for JavaScript, used by Author Verse to manage dependencies, install packages, and run scripts. With npm, developers can easily integrate third-party libraries, frameworks, and tools into the project, enhancing functionality and productivity.

By leveraging npm scripts, Author Verse automates common tasks such as building, testing, and deploying, ensuring consistency and efficiency across the development environment.

2.2 Why the above Technologies?

On the backend, Author Verse leverages Firebase, a cloud-based platform, to handle data storage, user authentication, and real-time communication. Firebase provides a robust infrastructure for managing user accounts, storing promotional data, and facilitating seamless collaboration among authors. The system architecture is designed to accommodate future enhancements and scalability requirements, with provisions for integrating additional features, scaling infrastructure resources, and optimizing performance as the platform grows.

CHAPTER 3 - REQUIREMENT AND ANALYSIS

3.1 Problem Definition:

While Author Verse offers a robust platform for authors to collaborate, promote their work, and engage with readers, it is important to acknowledge the limitations and challenges that may arise in the course of its development and usage.

Understanding these limitations is crucial for effectively addressing them and optimizing the platform's performance and user experience. Below are some key limitations of Author Verse:

3.2 Problem with Existing System:

1. Dependency on Internet Connectivity: Author Verse relies heavily on internet connectivity for accessing and utilizing its features. Authors must have a stable internet connection to log in, navigate the platform, and engage in promotional activities. This dependency on internet connectivity may pose challenges for authors in areas with limited or unreliable internet access, restricting their ability to fully leverage the platform's capabilities.
2. Learning Curve for New Users: For authors unfamiliar with the platform's functionalities, there may be a learning curve associated with navigating Author Verse and effectively utilizing its features. While the platform strives to provide an intuitive user interface and comprehensive help resources, some users may require additional guidance and support to fully grasp the platform's capabilities and maximize their promotional efforts.
3. Limited Reach and Audience Engagement: While Author Verse offers opportunities for authors to collaborate and promote their work, the reach and engagement of promotional activities may vary depending on factors such as the size and demographics of the platform's user base, the effectiveness of promotional strategies, and the competitive landscape of the publishing industry. Authors may face challenges in attracting and engaging a significant audience for their promotional campaigns, particularly in highly saturated or niche markets.

3.3 Proposed Solution

There are other marketing tools out in the market but they often focus solely on providing one or two solutions without fostering community engagement or offering additional features.

Create a book promotional platform focused on highlighting book(s) swaps with similar genre thus increasing sales. Users can filter tags by genre, showcasing unique novels of different authors.

Encourage authors and readers (in future) to contribute, enriching the platform with authentic reviews. Implement rigorous curation, partnering with best seller authors to verify authenticity.

User reviews ensure trust. Develop advanced search with filters for books according to diverse reader preference.

Machine learning personalizes results. Provide promotion substitutes for accessibility

3.4 Requirement Specification:

Author Verse Module:

Account Creation:

• Users are provided with the capability to create accounts securely within the Author Verse platform.

• During the account creation process, users are required to provide essential details such as their name, email address, and a secure password.

Secure Login:

• The module ensures that users can securely log in to their accounts using their credentials. • Robust authentication mechanisms, such as encryption and hashing, are implemented to safeguard user login credentials and protect against unauthorized access.

Search, Browse, and Filter:

• Users are empowered with the ability to explore a vast repository of group promotions available within the Author Verse platform.

• The module enables users to search for newsletter swaps based on diverse criteria, including genre types, page count, professionally designed book cover, and more.

• Users can effortlessly browse through book collections, discovering new standalone books or series along the way.

3.5 Quality Parameters and Procedures:

1. Privacy and Data Security Concerns: As a digital platform that collects and processes user data, Author Verse must prioritize privacy and data security to safeguard authors' personal information and promotional data. While the platform implements robust security measures and compliance protocols to protect user data, there may still be concerns related to data breaches, unauthorized access, and data misuse. Authors may hesitate to fully engage with the platform if they have concerns about the security and privacy of their personal information.
2. Limited Monetization Opportunities: While Author Verse offers valuable promotional tools and resources for authors, the platform may have limited monetization opportunities to sustainably support its growth and development. While the platform may explore avenues such as premium subscription plans, sponsored content, and advertising partnerships, there may be challenges in generating sufficient revenue to cover operating costs. and invest in platform enhancements without compromising the platform's core mission and user experience.
3. Platform Stability and Performance: As the user base and usage of Author Verse grow over time, the platform may encounter challenges related to stability and performance. Factors such as increased traffic, system updates, and software compatibility issues may impact the platform's stability and responsiveness, leading to downtime, latency, or degraded user experience. To mitigate these challenges, Author Verse must prioritize continuous monitoring, testing, and optimization of platform performance to ensure a seamless and reliable user experience for all users.
4. Legal and Regulatory Compliance: As a digital platform operating in the publishing industry, Author Verse must comply with various legal and regulatory requirements related to copyright, intellectual property rights, data protection, and consumer privacy. Failure to comply with these regulations may expose the platform to legal liabilities, fines, and reputational damage. Authors may have concerns about the legal implications of sharing their work and promotional content on the platform, necessitating clear and transparent policies and procedures to address legal and regulatory compliance issues.

3.6 Planning and Scheduling

Planning and scheduling are crucial aspects of managing software projects effectively. They involve defining the project scope, estimating resources, establishing timelines, and coordinating tasks to ensure the successful completion of the project.

A Gantt chart is a visual representation of a project schedule that shows tasks and activities over time. It is named after Henry L. Gantt, who developed this type of chart in the early 20th century. Gantt charts are widely used in project management to illustrate the timing of tasks and the relationships between them.

On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by a bar; the position and length of the bar reflects the start date, duration and end of the activity. This allows seeing the proper glance.

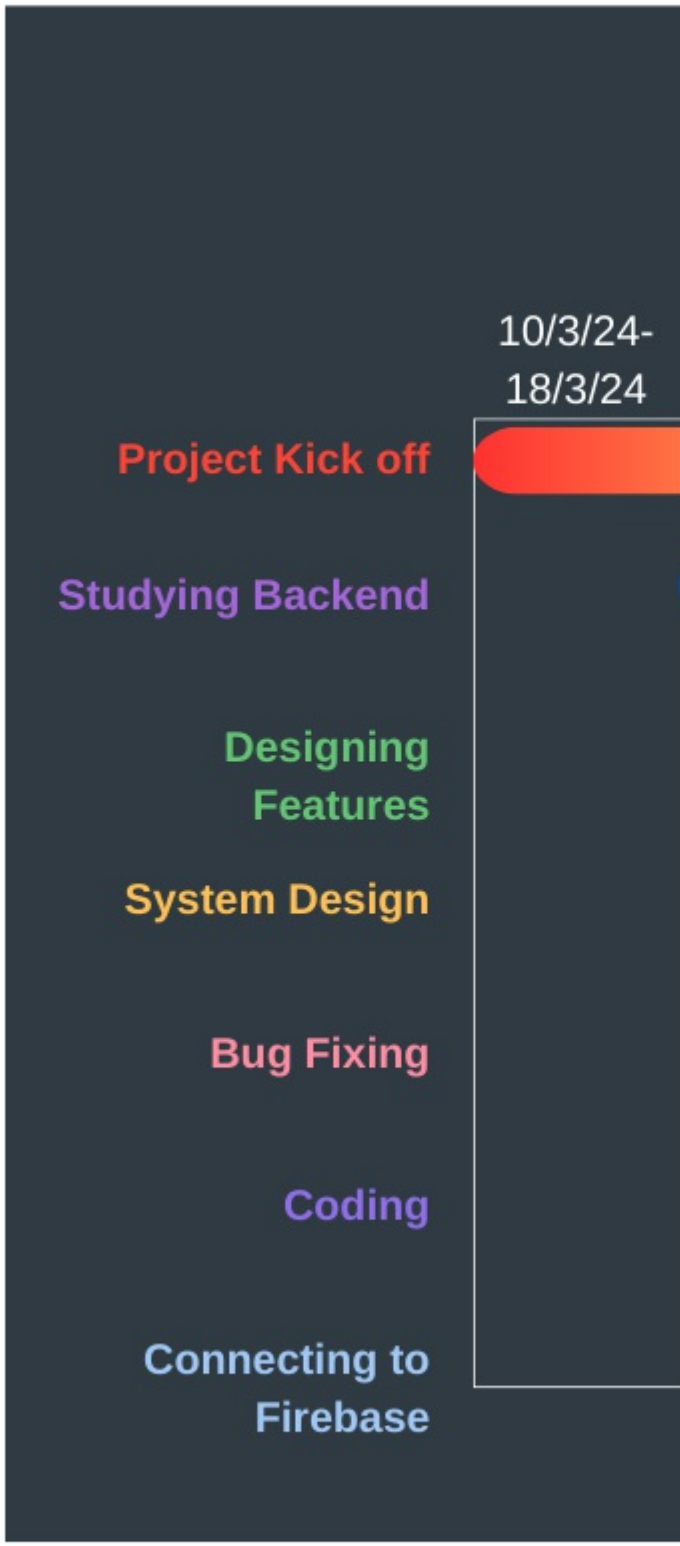
• What are the major phases and activities?

• How much time each activity is to be taken?

• How much activity begins and ends?

• When the project starts and ends?

3.6.1 Gannt Chart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18/3/24
Project Kick off
Studying Backend
Designing
Features
System Design
Bug Fixing
Coding
Connecting to
Firebase

3.7 Software and Hardware Requirements:

Software Requirements:

1. **Internet Connection:** Author Verse requires an active internet connection

to access its features and functionalities. A stable and reliable internet connection is recommended to ensure uninterrupted access to the platform and to facilitate real-time collaboration and communication among users. Here's a detailed overview of the software requirements for using Author Verse:

1. **Web Browser:** Author Verse is accessible through modern web browsers, including Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge. Users are encouraged to use the latest versions of these browsers to ensure compatibility and optimal performance with Author Verse's web- based interface.
2. **Operating System:** Author Verse is platform-independent and can be accessed from devices running various operating systems, including Windows (7, 8, 10), macOS, and Linux. Whether users are using desktop computers, laptops, tablets, or smartphones, they can access Author Verse from their preferred operating system.
3. **Firebase Account:** Users intending to interact with the backend functionalities of Author Verse, such as database management or authentication, will require a Firebase account. Firebase accounts can be created through the Firebase console (https://console.firebase.google.com/). Once created, users can seamlessly integrate Firebase services into Author Verse and leverage its features for enhanced functionality and security.
4. **Firebase SDK (Software Development Kit):** Developers integrating Firebase services into Author Verse will need to install the Firebase SDK for the desired platforms (Web, Android, iOS). The Firebase SDK provides libraries and tools for seamless integration of Firebase services into the web application, including features such as real-time database access, authentication, and cloud messaging.
5. **Authentication Mechanism:** Author Verse utilizes Firebase Authentication for user authentication and management. Users may need to log in using their Firebase-authenticated accounts to access certain features or functionalities within Author Verse.These software requirements ensure compatibility, security, and seamless integration of Author Verse with various software tools and platforms, enabling users to fully utilize its features and functionalities.

Hardware Requirements:

Author Verse is designed to be accessible and user-friendly, requiring minimal hardware specifications to ensure compatibility across a wide range of devices. Here's an overview of the hardware requirements for using Author Verse:

1. **Device:** Author Verse is accessible from various devices, including desktop computers, laptops, tablets, and smartphones. The platform is designed to be a web app, meaning it is compatible for desktop as of now. This ensures that authors can access Author Verse from their preferred device without compromising the user experience.
2. **Operating System:** Author Verse is compatible with popular operating systems, including:

Windows: Author Verse supports Windows 7 and later versions, ensuring compatibility with a wide range of Windows-based desktop and laptop computers.

-
    - macOS: Author Verse is compatible with macOS 10.11 (El Capitan) and later versions, providing a seamless experience for Mac users.
    - Linux: Author Verse can be accessed from Linux distributions such as Ubuntu, Fedora, and CentOS, allowing users to leverage the platform on Linux-based systems.

3.8 Conceptual Models

User Module Login: This module will allow users to first register into the system using their names, Email-ID and contact numbers.

Add Book: This module will let the user add books and tags according to them.

Search Promotions and Newsletter Swaps: This module will let user search any book (or author in future) they want.

View Books: This module will allow user to view the books that they have searched or browsed through.

Delete Books: This module will let the user delete any book they want to.

Logout: This module will let the user logout from the current user profile

Data Flow Diagram

It stands for Data flow diagram it is a diagrammatic representation of the data objects of the system. Basically, DFD is a way to show how the data is processed in the system it shows how data moves at different stages in the system. DFD is a graphical representation that depicts information flow / the transformations that are applied as data moves from input to output.

LOGOUT

LOGIN DATA

USER

EXPLORE

3.10 Use Case Diagram

A use case diagram is a dynamic or behavioral diagram in UML. Use case diagrams to use actors and use cases to model the functionality of a system. A use case is a set of actions, services, and functions that a system must perform. Here, "system" is what is developed or operated as a website. An "actor" is a person or entity that performs a specific role in a system. Use case diagrams are useful for visualizing the functional requirements of a system that will translate into design options and development priorities. It also helps to identify internal or external factors that can affect the system and should be considered. It provides an excellent level of analysis outside of the system. A use case diagram shows how the system interacts with an actor without worrying about the implementation details of that feature

Login/

Logout

Organize/

Join Promo

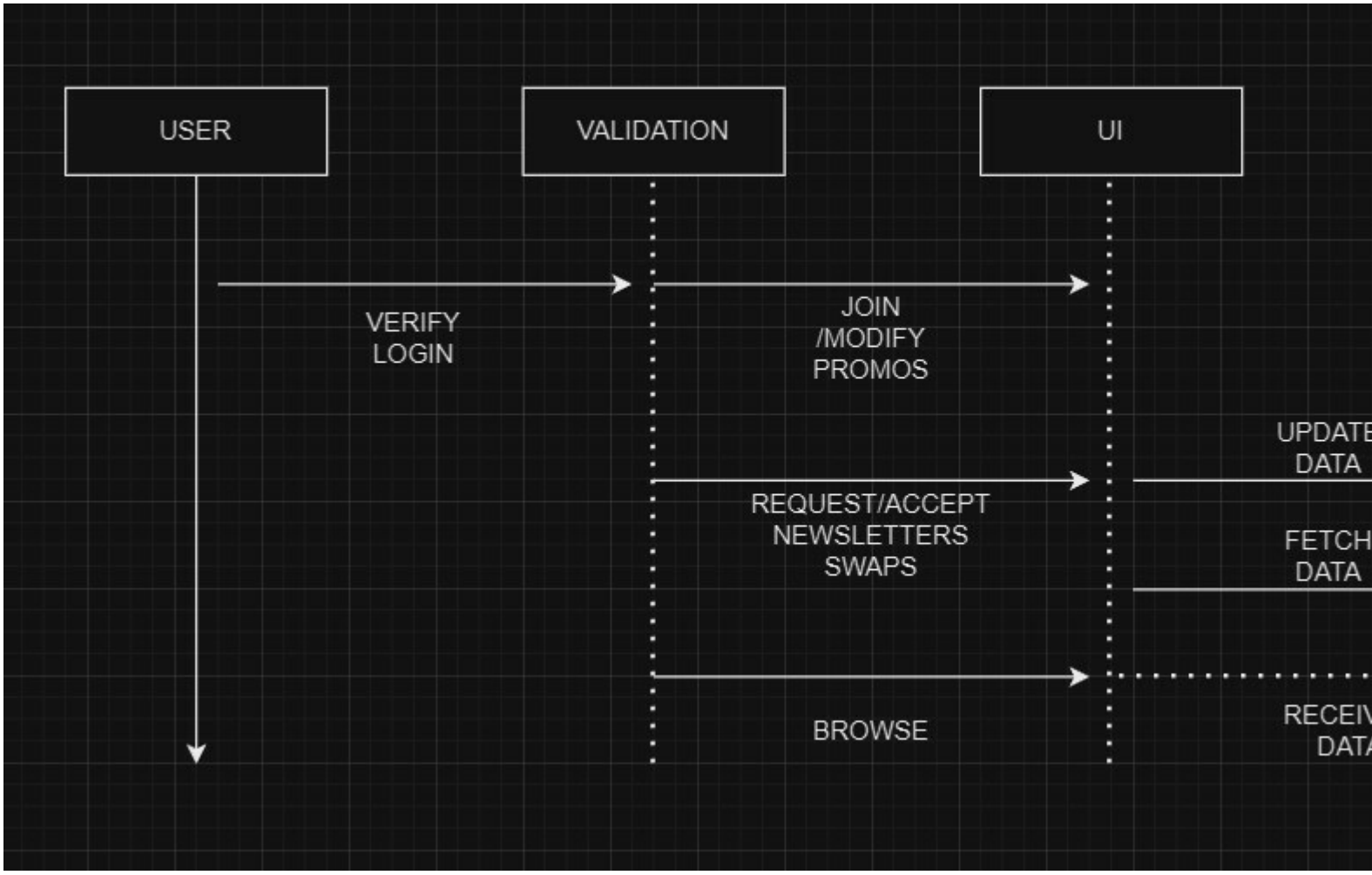
User

Swap Newsletters

3.11 Sequence Diagram

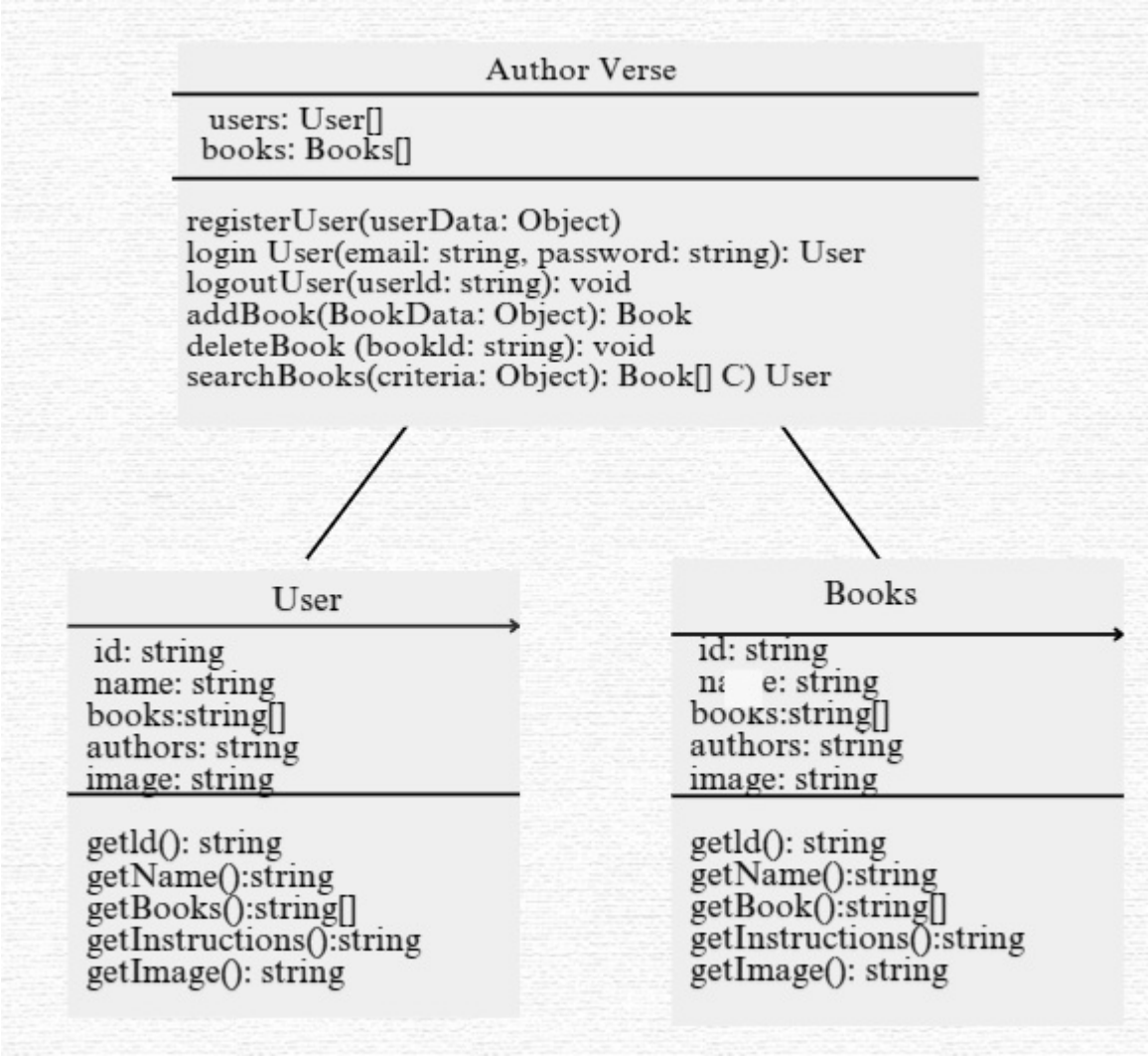
Sequence diagrams are a modeling approach for visualizing the behavioral execution of a system. The purpose of this study is to investigate security problems in behavioral models (sequence diagrams) by applying model refactoring. It provides an empirical evaluation of the proposed method as well as methods for detection

and correction.



3.12 UML. Class Diagram

The UML Class diagram is a graphical notation used to construct and visualize object- oriented systems. A class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the systems, classes, their attributes, operations (or methods), and the relationships among objects



CHAPTER 04 -SYSTEM DESIGN

Systems Design is the process of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. It involves translating user requirements into a detailed blueprint that guides the implementation phase. The goal is to create a well-organized and efficient structure that meets the intended purpose while considering factors like scalability, maintainability, and performance.

4.1 Functional Requirements:

User Management:

▪ Registration: Allow users to register by providing their name, email, and contact number.

▪ **Login: Provide a secure login mechanism for registered users to access their accounts.**

▪ **Logout: Allow users to logout from their accounts to terminate their session securely.**

▪ **Add Recipe: Enable users to add new recipes by providing details such as name, ingredients, instructions, and images.**

▪ **Delete Recipe: Allow users to delete recipes from their collection.**

▪ **View Recipe: Provide users with the ability to view details of recipes, including ingredients, instructions, and images.**

▪ **Search Recipe: Allow users to search for recipes using keywords, categories, cuisines, or dietary preferences**

4.2 Non-Functional Requirements

Performance requirements:

✓ **The system needs to be reliable.**

✓ **If error occurs. Then a suitable error message should be displayed.**

✓ **Use less resources.**

• **Safety requirements:**

✓ **The user details must be kept private.**

✓ **Security requirements:**

✓ **User location must not be shared with any other application**

4.3 Modules

Collaborative Promotion and Newsletter Swap

Author Verse's Collaborative Promotion and Newsletter Swap module revolutionizes the way authors promote their work and engage with readers. This dynamic module consists of two key features: Group Promo and Newsletter Swap, each designed to maximize authors' reach and impact in the digital publishing landscape.

1. Group Promo:

The Group Promo feature empowers authors to join forces and amplify their promotional efforts through collaborative groups tailored to specific genres or target audiences. Here's an in-depth look at its functionalities:

• Group Creation and Joining: Authors can create their promotional groups or join existing ones based on their genre or target audience preferences. This flexibility allows authors to connect with like-minded peers and participate in promotional activities aligned with their interests and goals.

• Cross-Promotion: Group members have the opportunity to cross-promote each other's work within the group, leveraging the collective audience reach of the

group members. By showcasing their books to a diverse audience of fellow authors and readers, authors can amplify their visibility and attract new readers to their work.

• Collaborative Opportunities: Group members can collaborate on joint promotional activities such as virtual events, book bundles, and social media campaigns. This collaborative spirit fosters a sense of community and camaraderie among authors, driving collective success and mutual support.

2. Newsletter Swap:

The Newsletter Swap feature enables authors to expand their reach by exchanging placements in each other's newsletters. Here's a detailed overview of its functionalities:

• Partnership Discovery: Authors can explore potential newsletter swap partners within Author Verse based on criteria such as genre, audience size, and engagement metrics. This matchmaking process helps authors find compatible partners with whom they can collaborate effectively.

• Swap Arrangement: Authors negotiate and arrange newsletter swaps with partner authors, specifying details such as promotion duration, placement position, and promotional content. This ensures that swaps are mutually beneficial and aligned with each author's promotional objectives.

• Audience Expansion: By showcasing their books to new audiences through newsletter swaps, authors tap into a pool of engaged readers eager for fresh content. This exposure to new readerships expands authors' reach and increases the likelihood of attracting new fans and followers.

• Community Collaboration: Newsletter swaps foster collaboration and networking within the writing community, as authors support each other's promotional efforts and share insights and best practices. This collaborative spirit strengthens the writing community and fosters a culture of mutual support and growth.

4.4 File System and Data structures

File System:

• Database Management System (DBMS): Author Verse utilizes a relational database management system i.e MongoDB to store and manage novels data, user profiles, and other relevant information.

• File Storage: Images and other media associated with books are stored in a file storage system for efficient retrieval and management.

Data Structures:

• Book Table: Stores information about each book, including title, subtitle, author name, and other metadata.

• Users Table: Contains user profiles with details such as username, email, password (hashed), profile picture, and user preferences. These data structures are designed to efficiently organize and retrieve data, and provide a seamless user experience on the Author Verse platform

4.5 User Interface Design:

The user interface (UI) design of Author Verse is meticulously crafted to provide authors with an intuitive, visually appealing, and seamless experience across various devices and platforms. The design principles revolve around ease of navigation, clear communication of features, and fostering a sense of community within the writing sphere:

-
    1. Homepage: Upon landing on the homepage of Author Verse, authors are greeted with a clean and inviting interface that sets the tone for the platform. The homepage features a prominent header with the Author Verse logo and navigation menu, providing easy access to essential sections such as Group Promo, Newsletter Swap, Profile. Below the header, authors encounter a visually striking banner showcasing recent promotions.
    2. Navigation Menu: The navigation menu is thoughtfully designed to ensure ease of access to various sections of the platform. It employs a simple and intuitive layout, featuring clear labels and icons for each category. Authors can effortlessly navigate between Group Promo, Newsletter Swap, Profile settings, and other relevant sections, enhancing the overall user experience.
    3. Group Promo: Within the Group Promo section, authors discover a dynamic and interactive interface that facilitates collaboration and promotion within tailored groups. The design incorporates features such as group creation, search functionality to discover relevant groups, and a feed showcasing recent promotions and discussions within each group. Authors can easily browse through group listings, join or create groups aligned with their genre or target audience, and engage in cross-promotional activities with fellow member

4.6 Prototyping

Prototypes serve as visual representations of the user interface design and functionality of Author Verse, allowing for testing and iteration before final development. They provide a tangible way to communicate design concepts and gather feedback from stakeholders and users. By leveraging the powerful features of Figma, the prototyping process for Author Verse was streamlined, allowing for the creation of interactive and visually engaging prototypes that closely resemble the final user interface.

1. Homepage Prototype: Designed layout and navigation in Canva. Created interactive buttons for seamless navigation.

2. Adding/Submitting Book Page Prototype: Developed form prototype for recipe input. Implemented validation prompts for accuracy.

3. Search Bar Prototype: Utilized Canva to create interactive search functionality. Included auto-suggestions and filtering options.

4. About Page Prototype: Designed layout prototype with mission and background info. Incorporated visual elements for appeal.

5. Contact Page Prototype: Crafted contact form and information using Canva. Enabled interactive submission of inquiries and feedback

4.7 Schema Design

4.7.1 Entity Relationship Diagram:

ER model stands for an Entity-Relationship model. It is a high-level data model. This model is used to define the data elements and relationship for a specified system.

It develops a conceptual design for the database. It also develops a very simple and easy to design view of data. In ER modeling, the database structure is portrayed as a diagram called an entity-relationship diagram.

- **Entities An Entity may be an object with a physical existence – a particular person, car, house, or employee – or it may be an object with a conceptual existence – a company, a job, or a university course. In the ER diagram, an entity can be represented as rectangles.**

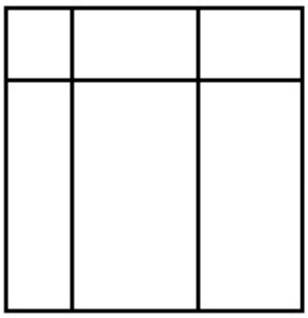
- **Attributes The attribute is used to describe the property of an entity.**

Eclipse is used to represent an attribute.

❖ **Relationships Relationships between entities are represented by lines. Relationships link the various components in an E-R diagram together. There are 3 types of relationships which are as follows: One to one relationship, one to many relationships, many to many relationships.**

User: User ID (Primary Key), Username, Email, Password, Profile Picture, Genre Preferences
Group: Group ID (Primary Key), Group Name, Description, Admin User ID (Foreign Key), Creation Date

Book: Book ID (Primary Key), Title, Author User ID (Foreign Key), Genre, Synopsis, Cover Image, Publication Date
Newsletter: Newsletter ID (Primary Key), Title, Author User ID (Foreign Key), Content, Sent Date
Promotion: Promotion ID (Primary Key), Title, Description, Book ID (Foreign Key), User ID (Foreign Key), Start Date, End Date



Represents as data entry and its entity.

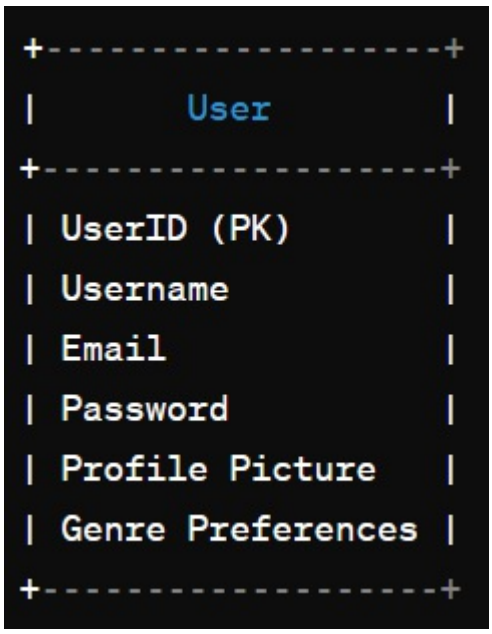
User-Group (Many-to-Many):
Users can create or join multiple groups.
Each group can have multiple users.
User-Book (One-to-Many):
Users can have multiple books.
Each book belongs to a single user.
User-Newsletter (One-to-Many):
Users can subscribe to multiple newsletters.
Each newsletter is managed by a single user.
Group-Book (Many-to-Many):
Groups can promote multiple books.
Each book can be promoted by multiple groups.
Newsletter-Book (One-to-Many):
Newsletters can feature multiple books.
Each book can be featured in multiple newsletters.
User-Promotion (One-to-Many):

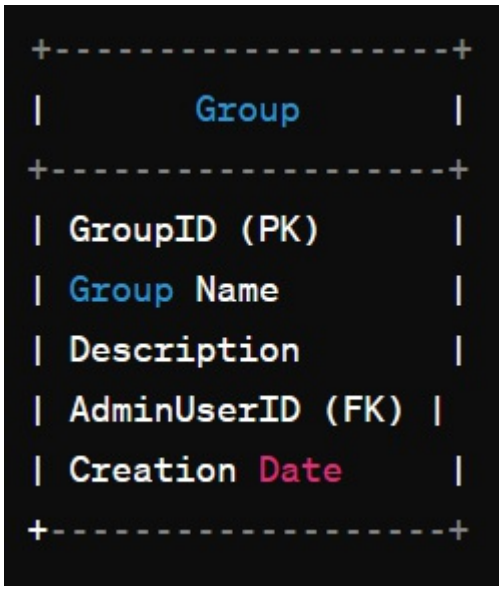
Users can create multiple promotions.
Each promotion is created by a single user.
Book-Promotion (One-to-Many):
Books can have multiple promotions.
Each promotion is associated with a single book.

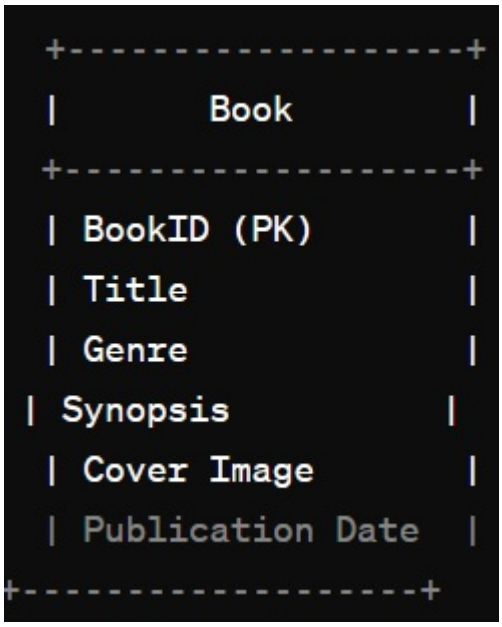
one to one (1 to 1)
one to many (1 to *)
many to many (* to *)
many to one (* to 1)

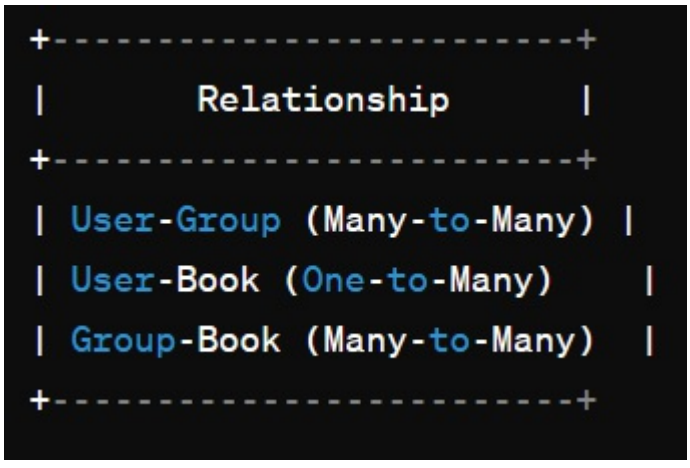
Entity Relationship Diagram

Simplified example of representing some of these entities, relationships, and attributes in an ERD:









4.8 Logic Diagram

User

User

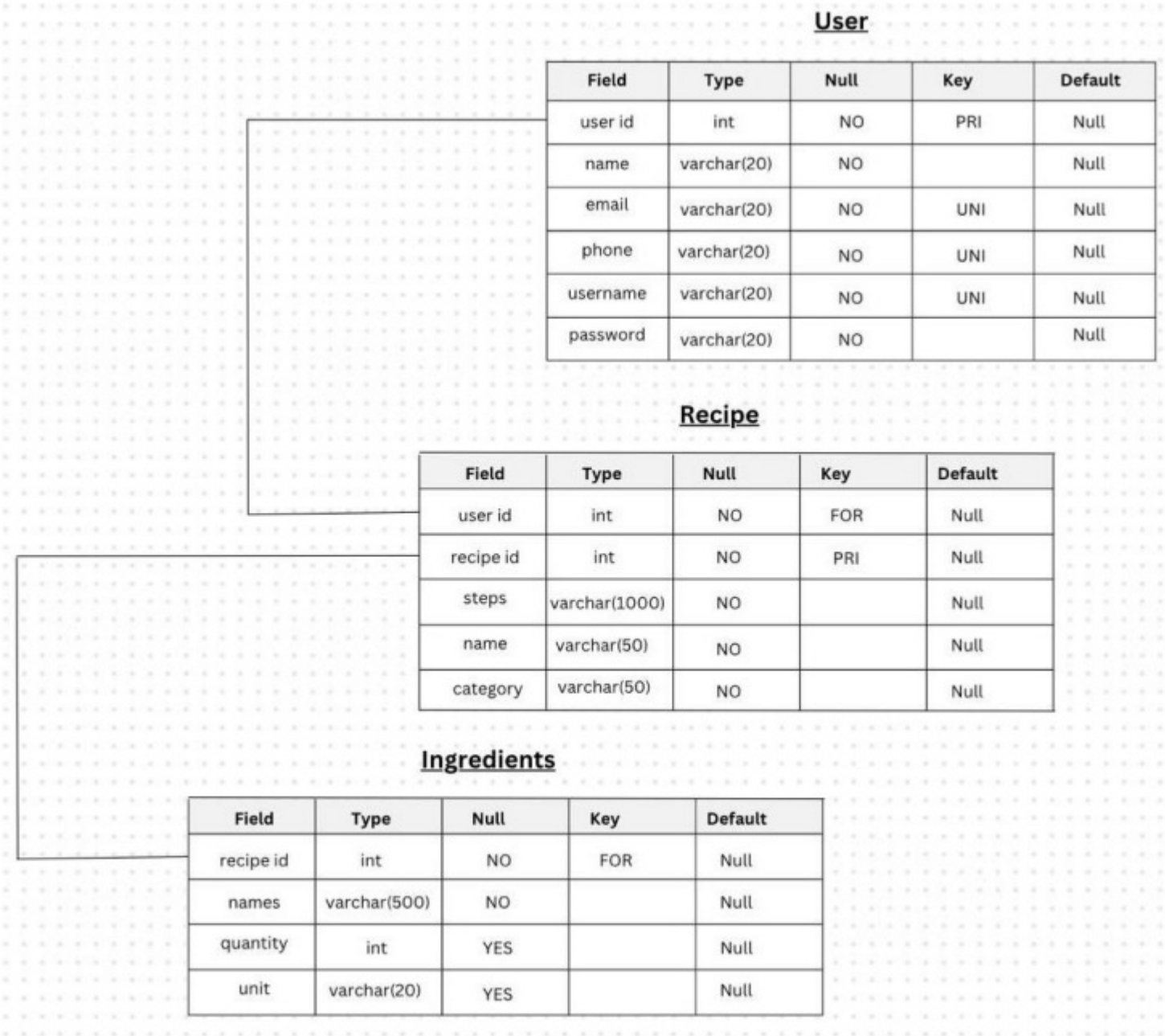
REMOVE BOOKS

Browse swaps/promos

ADD/MODIFY BOOKS

Database

4.10 Data Dictionary



User

Field	Type	Null	Key	Default
user id	int	NO	PRI	Null
name	varchar(20)	NO		Null
email	varchar(20)	NO	UNI	Null
phone	varchar(20)	NO	UNI	Null
username	varchar(20)	NO	UNI	Null
password	varchar(20)	NO		Null

Recipe

Field	Type	Null	Key	Default
user id	int	NO	FOR	Null
recipe id	int	NO	PRI	Null
steps	varchar(1000)	NO		Null
name	varchar(50)	NO		Null
category	varchar(50)	NO		Null

Ingredients

Field	Type	Null	Key	Default
recipe id	int	NO	FOR	Null
names	varchar(500)	NO		Null
quantity	int	YES		Null
unit	varchar(20)	YES		Null

book

promos

Books

Authors

CHAPTER 5 - IMPLEMENTATION AND TESTING

5.1 Code

Firebase Register.js

```
// Import the functions you need from the SDKs you need
import { initializeApp } from "https://www.gstatic.com/firebasejs/10.11.1/firebase-app.js";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries
import { getAuth, createUserWithEmailAndPassword } from "https://www.gstatic.com/firebasejs/10.7.2/firebase-auth.js";
// Your web app's Firebase configuration
const firebaseConfig = {
apiKey: "AIzaSyBFgi-TEApyKEKPj8rvwFmXeocI94DOduk",
authDomain: "login-author-verse.firebaseapp.com",
projectId: "login-author-verse",
storageBucket: "login-author-verse.appspot.com",
messagingSenderId: "1078071818090",
appId: "1:1078071818090:web:c1ab97cd2f89a65d001713"
};
// Initialize Firebase
const app = initializeApp(firebaseConfig);
const auth = getAuth(app);
//submit button
const submit = document.getElementById('submit');
submit.addEventListener("click", function (event) {
event.preventDefault()
// //inputs
const email = document.getElementById('email').value;
const password = document.getElementById('password').value;
createUserWithEmailAndPassword(email, password)
.then((userCredential) => {
// Signed in
const user = userCredential.user;
alert("Creating Account...")
window.location.href = "/dashboard.html";
```

```
// ...
})
.catch((error) => {
const errorCode = error.code;
const errorMessage = error.message;
alert(errorMessage)
// ..
});
})
```

Firebase Connection Login:

```
// Import the functions you need from the SDKs you need
import { initializeApp } from "https://www.gstatic.com/firebasejs/10.11.1/firebase-app.js";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries
import { getAuth, signInWithEmailAndPassword } from "https://www.gstatic.com/firebasejs/10.7.2/firebase-auth.js";
// Your web app's Firebase configuration
const firebaseConfig = {
apiKey: "AIzaSyBFgi-TEApyKEKPj8rvwFmXeocI94DOduk",
authDomain: "login-author-verse.firebaseapp.com",
projectId: "login-author-verse",
storageBucket: "login-author-verse.appspot.com",
messagingSenderId: "1078071818090",
appId: "1:1078071818090:web:c1ab97cd2f89a65d001713"
};
// Initialize Firebase
const app = initializeApp(firebaseConfig);
const auth = getAuth(app);
//submit button
const submit = document.getElementById('submit');
submit.addEventListener("click", function (event) {
event.preventDefault()
```

```
// //inputs

const email = document.getElementById('email').value;

const password = document.getElementById('password').value;

signInWithEmailAndPassword(email, password)

.then((userCredential) => {

// Signed in

const user = userCredential.user;

alert("Creating Account...")

window.location.href = "/dashboard.html";

// ...

})

.catch((error) => {

const errorCode = error.code;

const errorMessage = error.message;

alert(errorMessage)

// ..

});

})
```

Calendar Script:

```
const tbody = document.querySelector('.calendar tbody');

const monthHeader = document.getElementById('monthHeader');

const prevMonthBtn = document.getElementById('prevMonthBtn');

const nextMonthBtn = document.getElementById('nextMonthBtn');

let currentYear = new Date().getFullYear();

let currentMonth = 0;

const months = ['January', 'February', 'March', 'April', 'May', 'June', 'July', 'August', 'September', 'October', 'November',
'December'];

function createCalendar(year, monthOffset) {

currentYear = year;

currentMonth += monthOffset;

let html = '';

for (let month = currentMonth; month < currentMonth + 2; month++) {
```

```
const currentMonthIndex = (month + 12) % 12; // Ensure month index is between 0 and 11
const daysInMonth = new Date(currentYear, currentMonthIndex + 1, 0).getDate();
const firstDayOfMonth = new Date(currentYear, currentMonthIndex, 1).getDay();
html += '<tr>';
html += '<th colspan="7">' + months[currentMonthIndex] + '</th>';
html += '</tr>';
html += '<tr>';
for (let i = 0; i < firstDayOfMonth; i++) {
html += '<td></td>';
}
for (let i = 1; i <= daysInMonth; i++) {
html += '<td>' + i + '</td>';
if ((i + firstDayOfMonth - 1) % 7 === 0) {
html += '</tr><tr>';
}
}
html += '</tr>';
}
tbody.innerHTML = html;
updateMonthHeader();
}
function updateMonthHeader() {
const currentMonthIndex = (currentMonth + 12) % 12;
const nextMonthIndex = (currentMonth + 2 + 12) % 12; // Changed from +1 to +2
monthHeader.textContent = months[currentMonthIndex] + ' - ' + months[nextMonthIndex];
}
createCalendar(currentYear, 0);
tbody.addEventListener('click', function(event) {
const target = event.target;
if (target.tagName === 'TD') {
const selectedDate = target.textContent;
```

```
alert('Selected date: ' + selectedDate);

}

});

prevMonthBtn.addEventListener('click', function() {

createCalendar(currentYear, -2);

});

nextMonthBtn.addEventListener('click', function() {

createCalendar(currentYear, 2);

});
```

5.2 Implementation

Author Verse is like creating a brand-new playground for authors to collab with other authors but in a better way that also involves marketing of their novels and books. This part is called the Implementation Phase, where we build and arrange everything to make the new MAREKTING TOOL system work smoothly.

Direct Conversion: This is like switching from your old toy to a new one all at once. We quickly replace the old way of marketing books with the new Author Verse system. It's like changing from an old book to a new one in just a moment.

Collaboration Tools: Author Verse incorporates communication and collaboration tools seamlessly into the UI design to foster community engagement and support among authors. Features such as messaging, discussion forums, and virtual event notifications are integrated into the platform, enabling authors to connect, share insights, and collaborate on promotional initiatives in real-time.

Enhanced User Engagement Features: To further enhance user engagement and retention, Author Verse can introduce gamification elements, social features, and interactive challenges. Gamification elements such as badges, rewards, affiliates, and leaderboards can incentivize participation and encourage authors to actively engage with the platform. Social features such as author profiles, discussion forums, and community events can facilitate networking, collaboration, and peer support within the writing community.

Visual Design Elements: The visual design of Author Verse prioritizes

clarity, consistency, and aesthetics to create a cohesive and engaging user experience. The color palette is carefully selected to evoke a sense of professionalism, creativity, and warmth, while typography choices ensure readability and visual hierarchy. Iconography is employed judiciously to enhance navigation and convey functionality effectively.

Phased Conversion: Instead of changing everything at once, we make changes step by step. Each part of the Author Verse system gets introduced one after the other, like building one part of the LEGO set at a time until we finish the whole thing.

Once we've set up Author Verse, we make sure everyone knows how to use it safely and easily.

5.3 Unit Testing

Unit testing is a crucial aspect of software development, akin to meticulously examining each piece of a complex puzzle to ensure it fits seamlessly. In this approach, developers scrutinize individual units or components of a software application in isolation to validate their correctness and functionality.

These units, typically comprising functions, methods, or classes, undergo automated tests designed to verify their behavior against expected outcomes. By subjecting each unit to rigorous testing, developers can detect and address defects early in the development process, thus bolstering the overall quality, reliability, and maintainability of the codebase.

Moreover, unit testing facilitates rapid iteration and feedback during the development lifecycle, promoting a more efficient and effective software development workflow.

5.4 Test Cases

Test cases are like detailed plans that tell us exactly what to do when we're testing software. They lay out specific scenarios, inputs, actions, and what we expect to happen. The main goal of testing is to make sure the software does what it's supposed to do, find any mistakes or problems, and make the software better overall. why testing is important:

Ensuring Requirements are Met: We want to make sure the software does what the users need it to do.

Finding Defects and Errors: Testing helps us catch any mistakes or

problems in the software so we can fix them.

Improving Quality and Reliability: By testing, we can make sure the software works well and is reliable for users.

Making Users Happy: When the software works well, users are happy and trust it more.

Reducing Risks: Testing helps us find and fix problems before they cause big issues for users.

6. Delivering Quality Products: Ultimately, testing helps us make sure we're giving users the best possible software that meets their needs and expectations. Different levels of testing

• Regression Testing: This is like checking the parts of the software that have been changed to make sure they still work right.

• Stability Testing: We test to see if the software can keep working well over time without any problems.

• Usability Testing: This is all about checking if the software is easy for users to understand and use.

• Unit Testing: We test each small part of the software to make sure it works like it should.

• Integration Testing: This is about checking how different parts of the software work together

Test Case Id	Description	Expected Output	Actual Output	Pass /Fail
1.	User upload their book(s)	"Please upload a pdf version”	Displayed	Pass
2.	User creates group promo(s)	"Add your book(s)”	Displayed	Pass
3.	User joins a group promo	“Follow the guidelines by the organizer”	Displayed	Pass
4.	Sends a swap request for a book	“Include at least one book for swap”	Displayed	Pass

Testing Plans

Objective: Ensure the quality, reliability, and usability of the Author Verse booking system.

Types of Testing: Functional, Usability, Performance, Security, Compatibility.

Key Test Scenarios:

- User Registration (Free Trail: 3 Days)
- Book(s) Promotion Process
- Payment Processing
- User Account Management
- Test Environment: Development and Production environments.
- Execution: Execute test cases, record results, and address identified issues.
- Reporting: Document test cases, results, and provide regular updates to stakeholders.

Conclusion: Ensure the system meets quality standards and address any outstanding issues before deployment.

5.6 Encryption and Security Features

These encryption and security features are integral to ensuring the confidentiality, integrity, and availability of data within the Author Verse platform, thereby fostering trust and confidence among users and mitigating the risk of security breaches and data compromise.

1. Secure Socket Layer (SSL) Encryption: Implementation of SSL encryption to secure data transmission between users' devices and the Author Verse servers, ensuring confidentiality and integrity of data.

2. Password Hashing: Storage of user passwords using strong cryptographic hashing algorithms (e.g., bcrypt) to protect against unauthorized access in the event of a data breach.

3. Regular Security Audits and Vulnerability Assessments: Periodic security audits and vulnerability

assessments conducted to identify and mitigate potential security risks and weaknesses within the Author Verse platform.

4. Regular Software Updates and Patch Management: Timely installation of software updates and security patches to address known vulnerabilities and weaknesses in the underlying software components and dependencies of the Author Verse platform

CHAPTER 6 - RESULT AND DISCUSSION

6.1 Test Reports

The results of the above tests are successful and the application is in working condition. The application lets the users add, search, delete, books and immerse themselves in the world of easy marketing.

When clicked on group promos user can enroll their book or create a group promo from scratch. After clicking submit, the book is added in the database and available to view by any user.

Author Verse incorporates provisions for scalability and performance optimization to accommodate growing user demand and maintain optimal system performance. Measures such as caching, load balancing, and database indexing are implemented to enhance system scalability and responsiveness

6.2 Project Information

Project Name: Author Verse – A marketing tool for Authors

Name of the Project: Author Verse

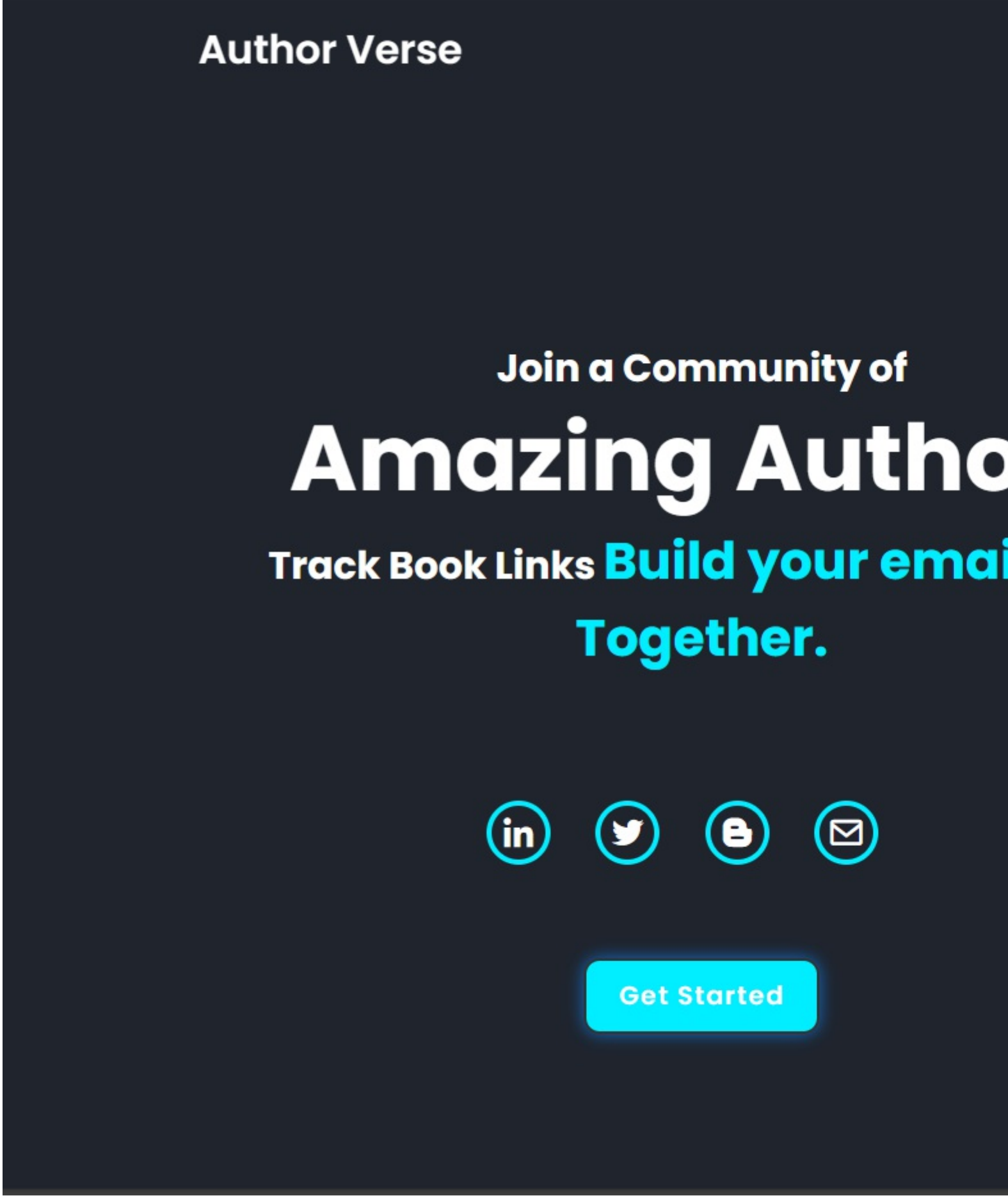
Product Description: A website for authors to create group promos and do newsletter swaps.

Project Description: Author Verse is a dynamic platform designed to empower authors through collaborative promotion and networking opportunities

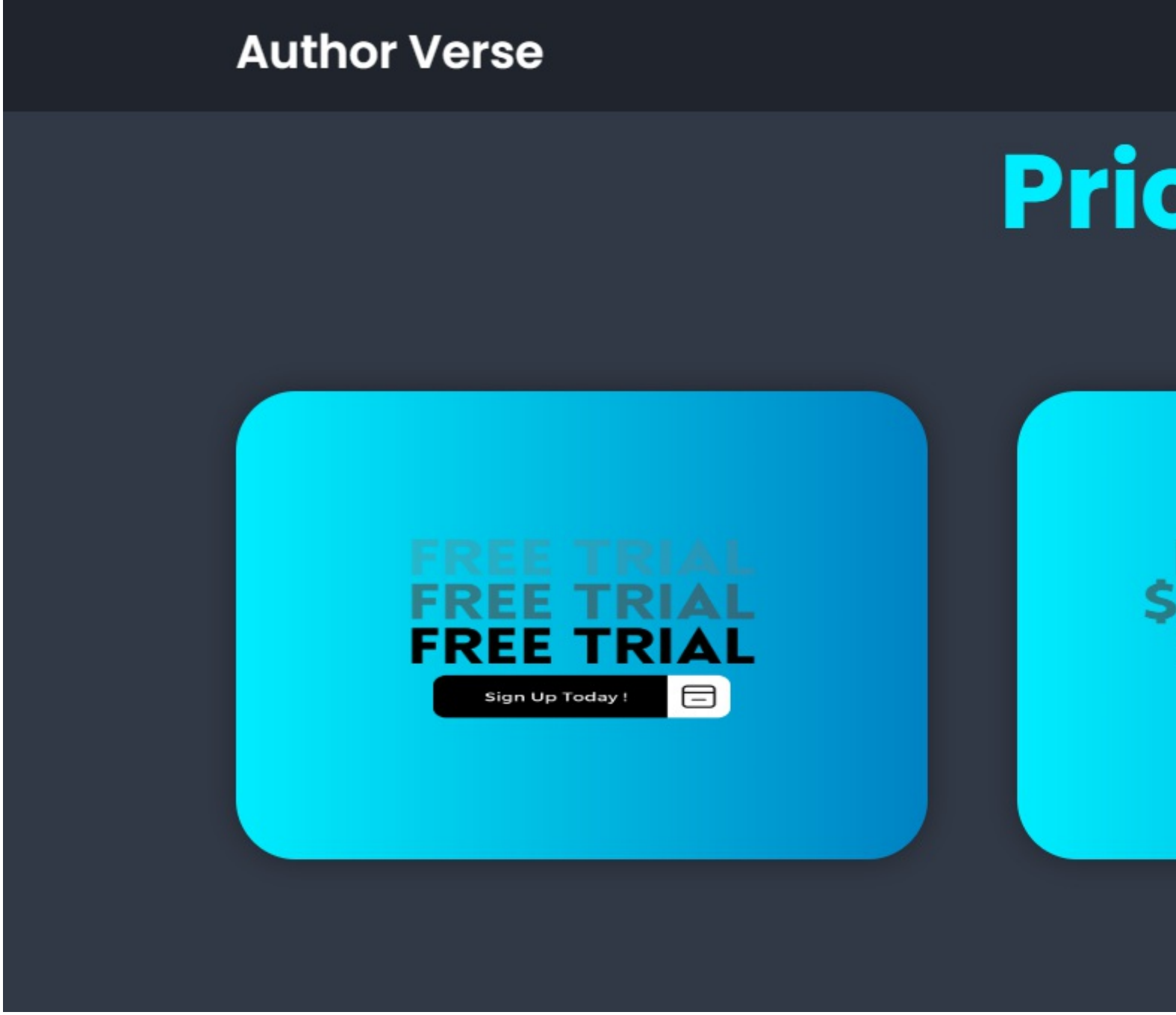
Project Duration: Start Date: 10 March 2024 & End Date 12th May 2024

6.3 Documentation

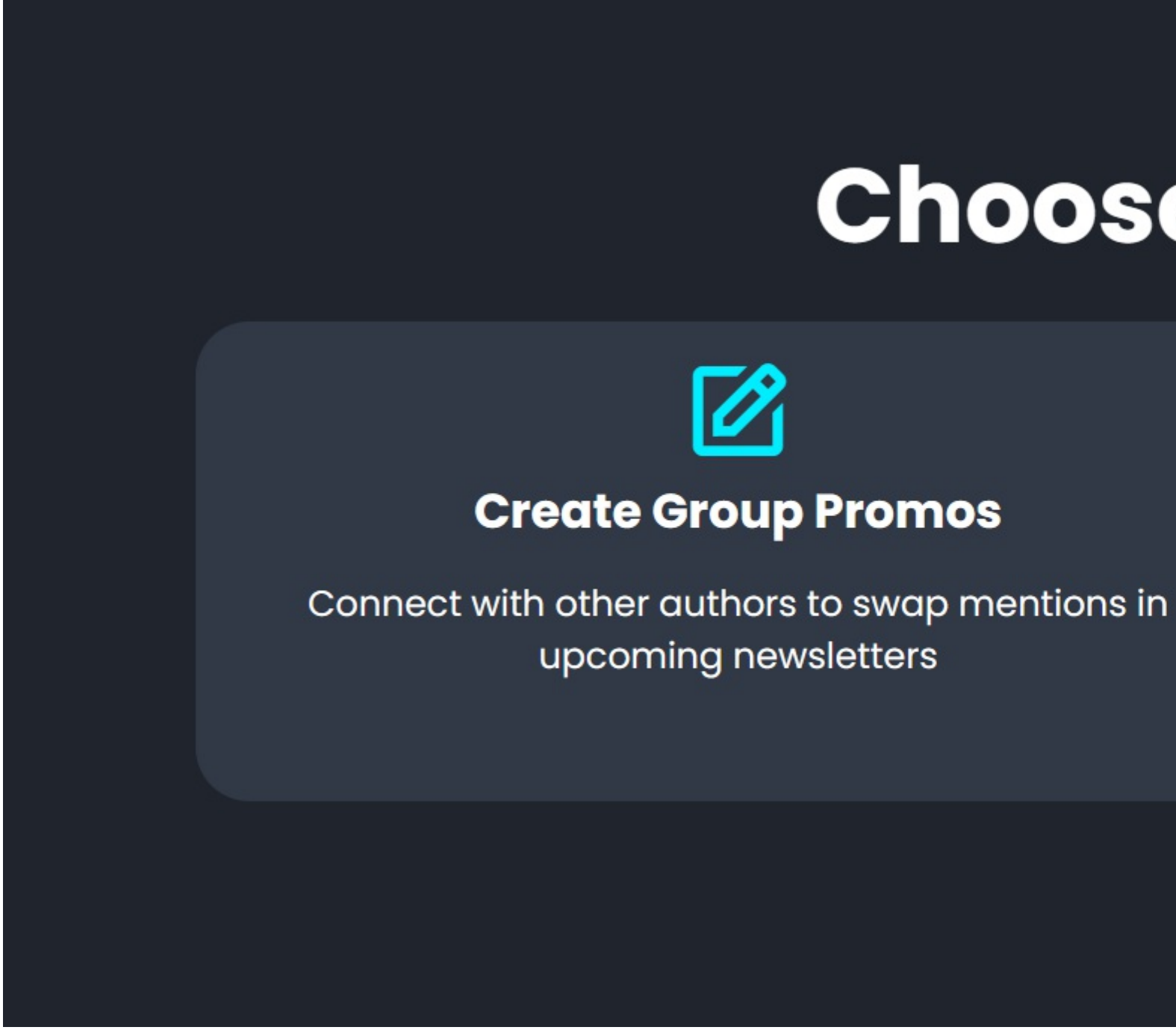
HOME:



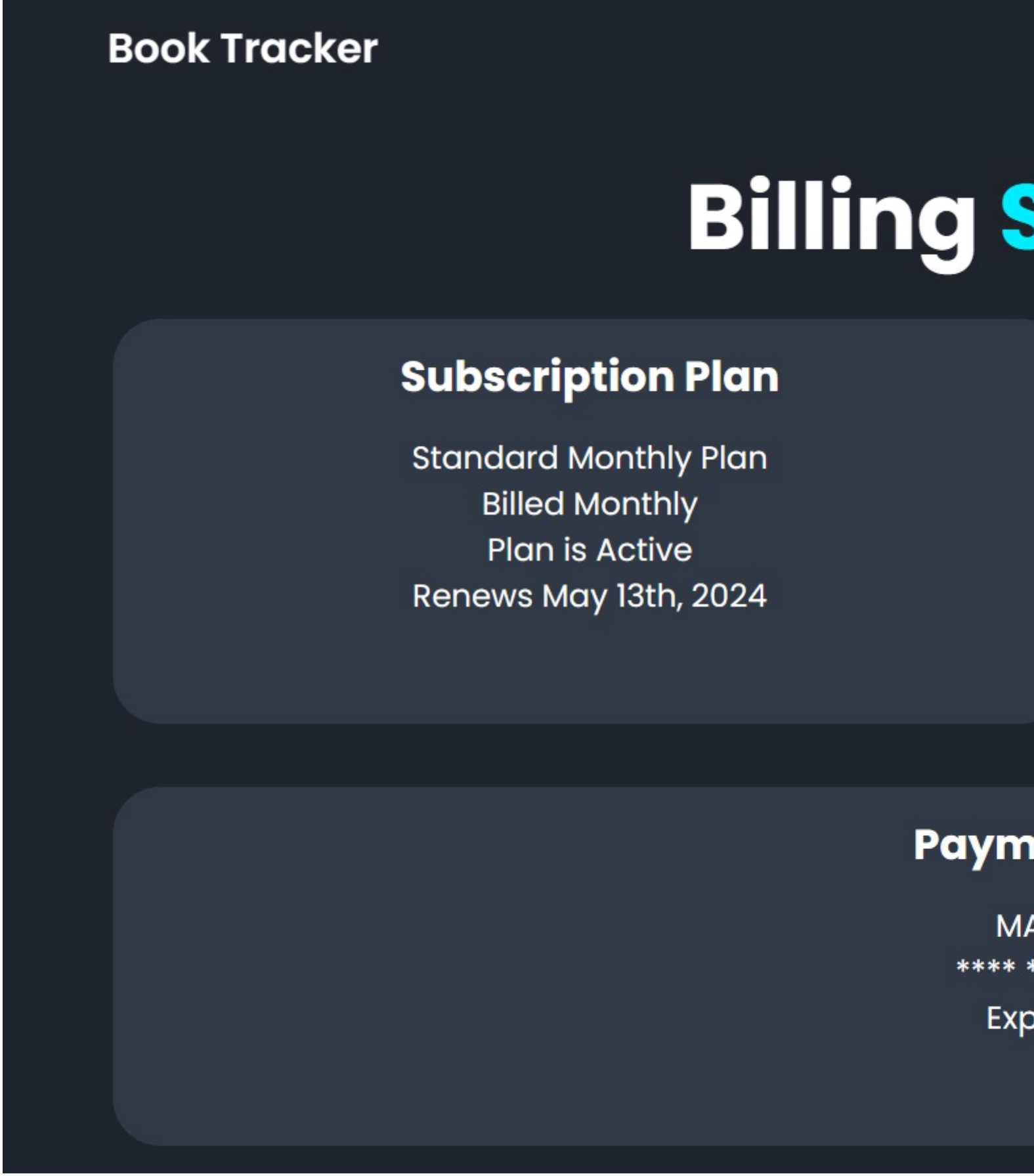
PRICING MODEL



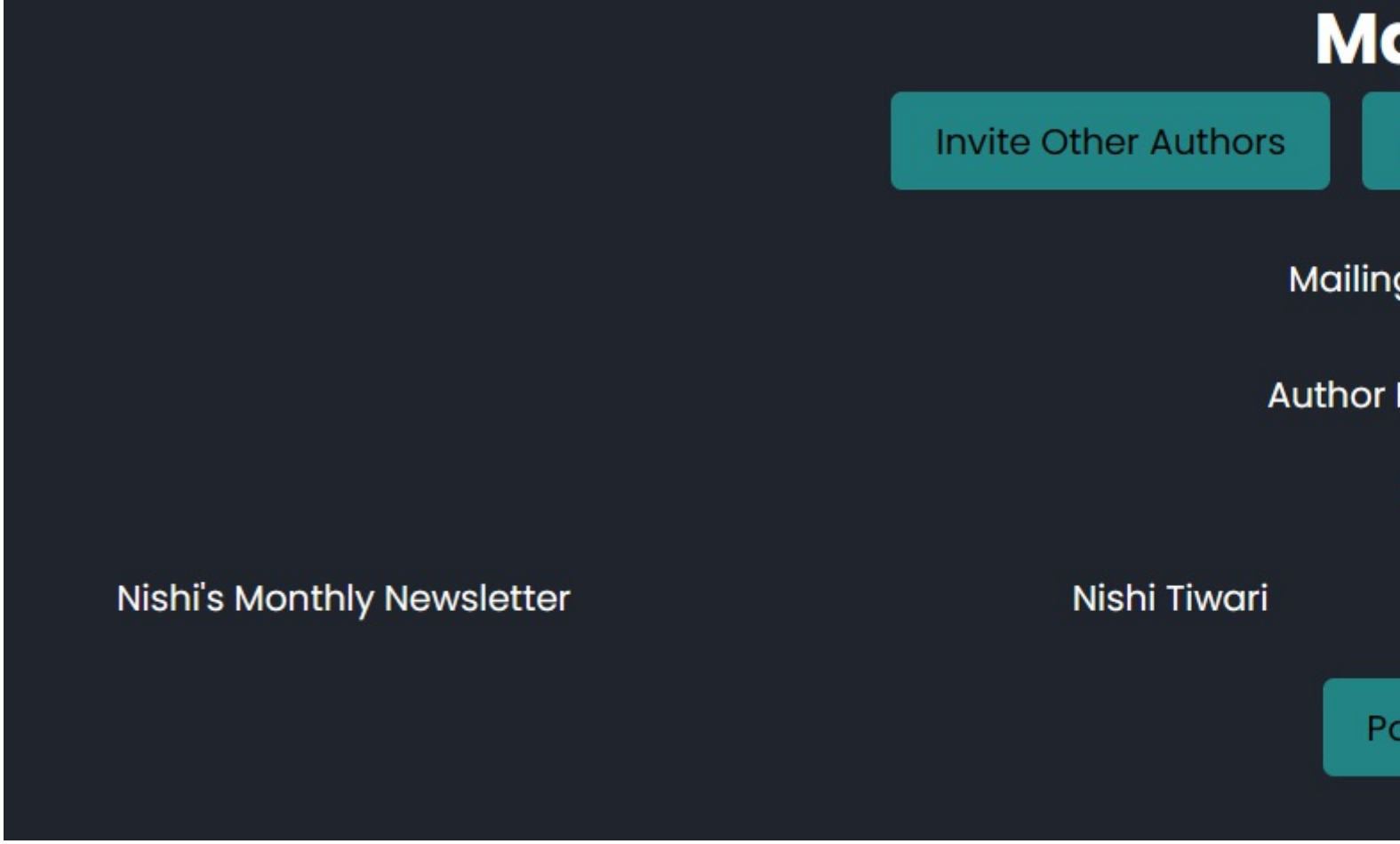
GROUP PROMOS



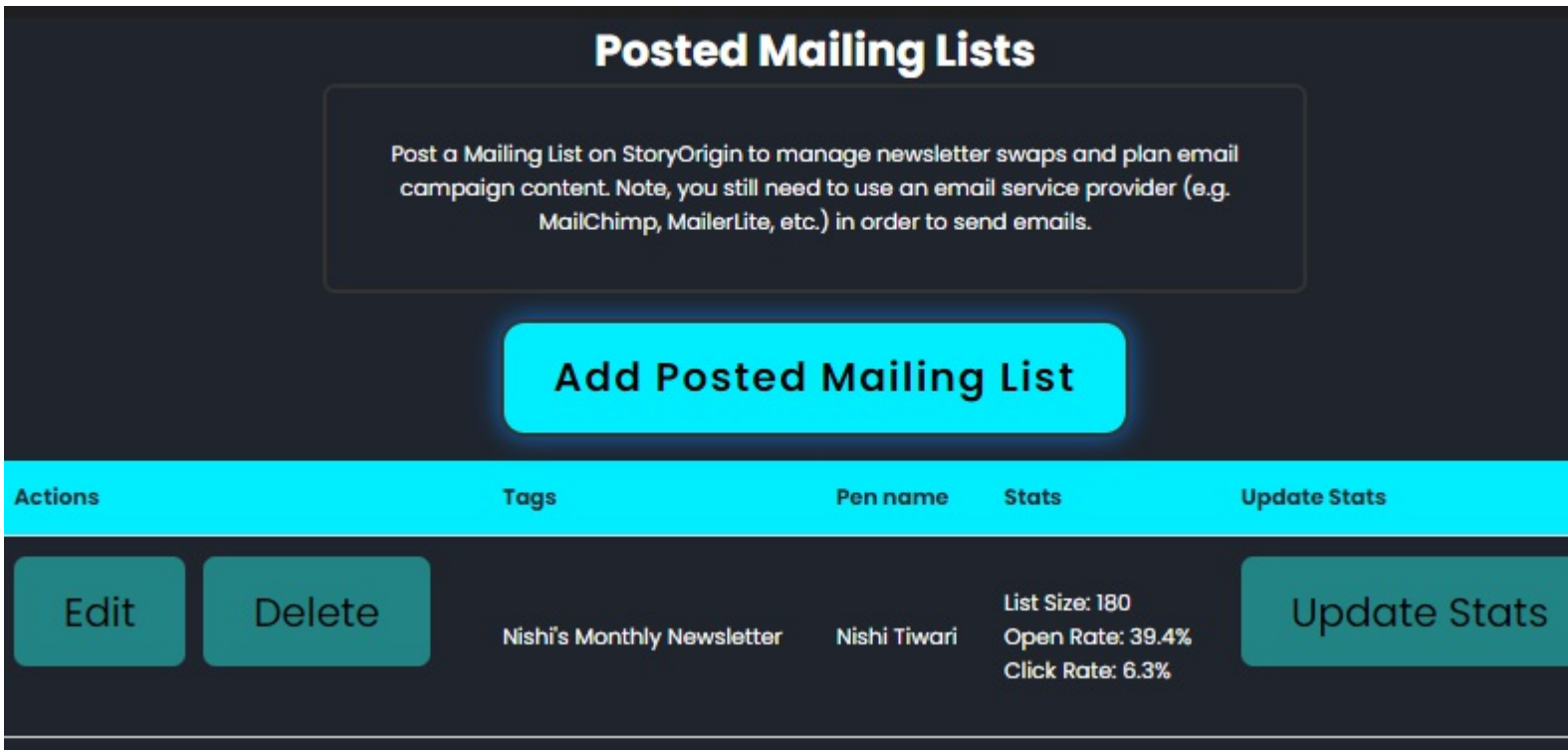
BILLING SIMPLIFIED



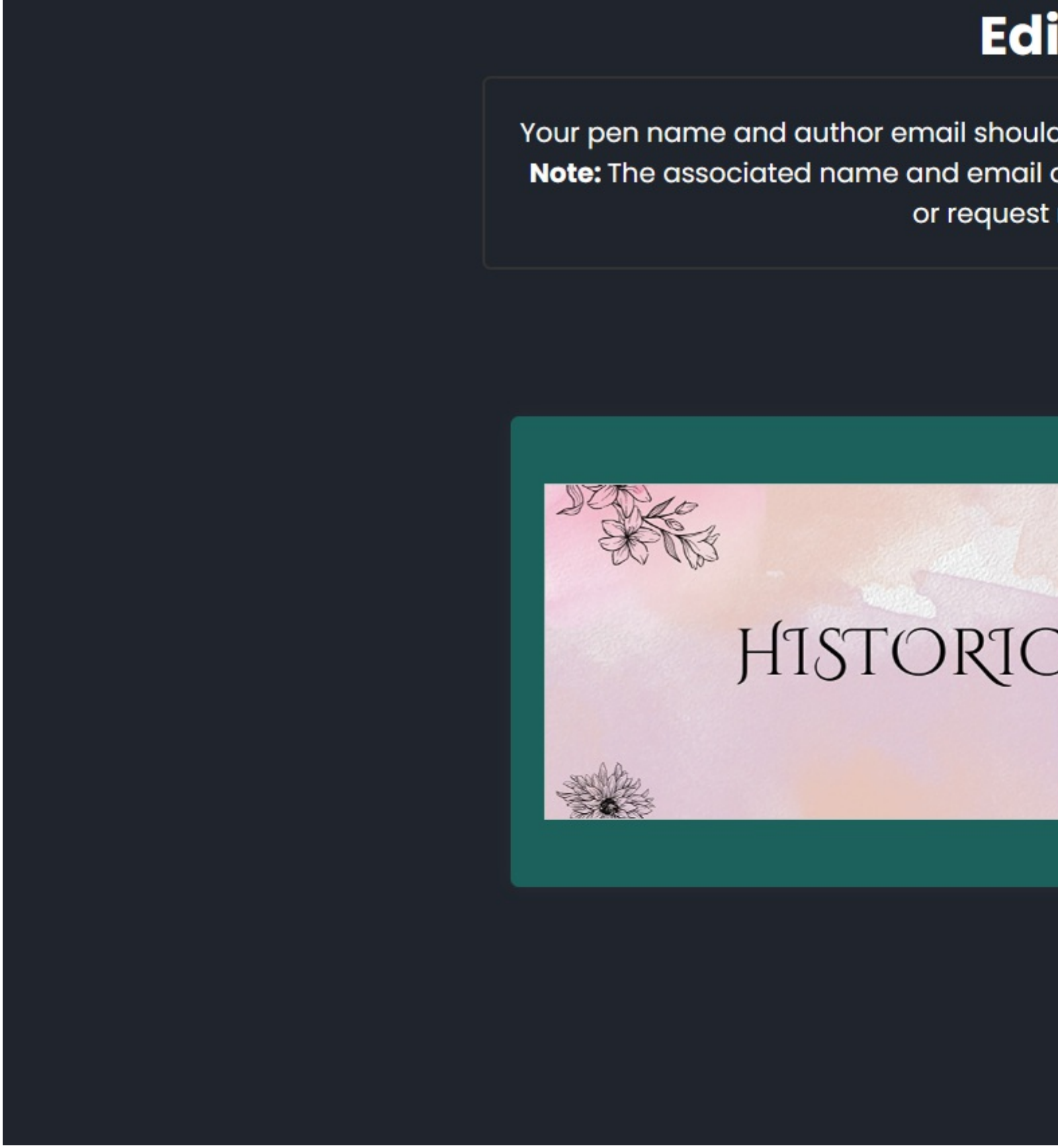
MAILING LIST



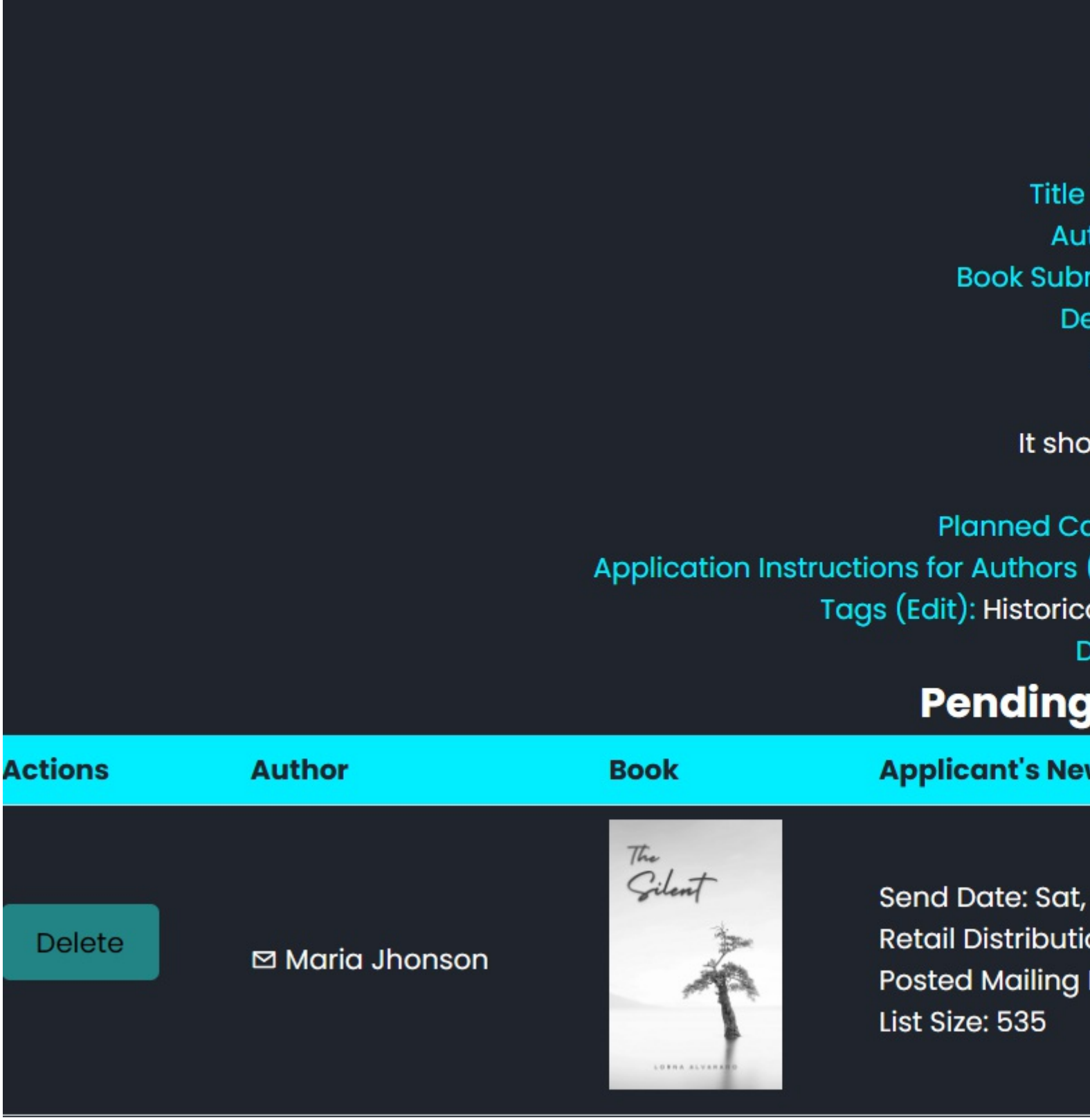
POSTED MAILING LISTS



CREATE GROUP PROMO



PENDING APPLICATION:



CHAPTER 7 - CONCLUSION AND FUTURE WORK

7.1 Conclusion:

Author Verse is a dynamic platform designed to empower authors through collaborative promotion and networking opportunities. As the digital landscape of publishing continues to evolve, there are numerous avenues for expansion and enhancement within the scope of the project. This section explores the future scope of Author Verse, including potential features, enhancements, and strategic initiatives to further support and engage authors within the writing community.

7.2 Future Scope of the Project for Author Verse:

1. Integration of Advanced Analytics: One key area for future development is the integration of advanced analytics tools to provide authors with deeper insights into their promotional activities and audience engagement.

2. Expansion of Collaboration Opportunities: Author Verse can explore opportunities to expand collaboration among authors through virtual events, workshops, and collaborative projects.
3. Expansion of Promotional Channels: In addition to Group Promo and Newsletter Swap, Author Verse can explore partnerships with other promotional channels such as social media platforms, book review websites, and literary magazines.
4. Localization and Internationalization: To cater to authors from diverse cultural backgrounds and language preferences, Author Verse can explore localization and internationalization efforts. Author Verse can create a more inclusive and welcoming environment for authors worldwide.
5. Monetization Opportunities: Author Verse can explore monetization opportunities to generate revenue and sustainably support the platform's growth and development. This may include offering premium subscription plans with enhanced features and benefits, partnering with publishing industry stakeholders for sponsored content or advertising opportunities, and facilitating transactions such as book sales, royalties, and licensing agreements through the platform.
6. Integration with Publishing Tools and Services: To streamline the publishing process for authors, Author Verse can integrate with existing publishing tools and services such as manuscript editing software, book formatting tools, and distribution platforms.
7. Community Building and Support Initiatives: Author Verse can invest in community building and support initiatives to foster a supportive and inclusive environment for authors.

7.3 Future Research

This project can be explored in a number of areas of exploration and development that could enhance the functionality, effectiveness, and reach of the application:

❖ Authors can save filters of the tags so it’s easy to search for promos and newsletter swaps.

❖ Saved books are stored in the database under the user's account. A "My Bookmarks" section in the user profile allows management of saved books.

❖ Integrates an API to fetch data for mailing service provider ingredients.

❖ Displays stats, such as click rate, open rate.

❖ Develops a URL tracking feature to analyze how book(s) are performing.

❖ Returns total word count of a month by using goal tracker.

❖ Suggests multiple authors books based on user preferences.

❖ Analyzes stats to enroll in group promotions wisely.

❖ Allows users to customize and save preferred substitutions

7.4 References and Bibliography:

The development and implementation of Author Verse draw upon a diverse range of sources, including academic research, industry best practices, and technological innovations. This section provides an extensive list of references and bibliography, spanning various disciplines and domains relevant to the design, development, and operation of the platform.

Books:

- **"The Lean Startup" by Eric Ries:**. The concepts outlined in this book have informed the agile development approach adopted in building Author Verse.
- "Collaborative Promotion in the Digital Age: **A Case Study of Online Author Communities" by Smith, J., & Johnson, R. (2020):** The findings of this study have provided valuable insights into the effectiveness of collaborative promotion strategies, informing the design and implementation of Group Promo functionality in Author Verse.
- "Email Marketing Effectiveness: **A Meta-Analysis of Research" by Lee, S., & Kim, M. (2019):** The findings of this study have informed the design and optimization of Newsletter Swap functionality in Author Verse.

Online Resources:

- Firebase Documentation (https://firebase.google.com/docs)

W3Schools HTML, CSS, and JavaScript Tutorials (https://www.w3schools.com): .

Technical Documentation and APIs:

- Google Cloud Platform Documentation (https://cloud.google.com/docs)
- Mailchimp API Documentation (https://mailchimp.com/developer/api/):