

Florida International University

Knight Foundation School of Computing and Information Sciences

Software Engineering Focus

Final Deliverable

Project Title: Book Finder

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Mentor(s): Florida International University

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Abstract

This document presents the information necessary to gain an understanding of Book Finder, the website used for authors of any size or caliber to publish books online for everyone to read.

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Introduction

Book Finder is a website based platform that is honed in on authors and readers. It allows users to read, publish, write, and review books that the community creates, allowing a free platform for authors to write whatever they please, without having to worry about costs or advertisement worries.

In today's digital landscape, many aspiring writers face challenges when trying to publish their personal content, often due to the financial limitations, lack of visibility, or restrictive publishing platforms. Similarly readers may struggle to discover new and unique content outside of the main sources like libraries, or book stores. Book Finder addresses these issues by offering an open environment where creativity and accessibility are always prioritized. The platform is designed to support every and any writer or reader by providing features such as account creation, book publishing tools, search and filtering

options, and user interaction through reviews. These features work together to create a community centered website that encourages both content creation and discovery.

Current System

The current system focuses more on the bare bones of a website, where comfortable, seventy five percent of it is complete. This does not mean that it is impossible to function or work, it runs just like a normal website, however there are some limitations to what was wanted for the final project. Right now it is based on a website, so it will not function without a wifi connection present. This is an additional fact with other websites like Wattpad or Kindle Publishing, however they have features where books can be downloaded and read anywhere, as Book Finder does not. However, the limitations with those is that for Wattpad, it is only centered on manga or picture drawn novels, while Book Finder is meant to be based off of written stories. As for Kindle, their system is similar to Book Finder's, except for the fact that Book Finder does not center itself around the large publishers, but instead, the community. There is a potential for users to be able to review and find books they like, without a pay wall, which is something Kindle Publishing does not have.

Purpose of New System

The purpose of Book Finder is to create an accessible and user friendly platform where authors can publish their work and readers can easily discover new content. The system emphasizes ease of use, as well as content discoverability, and community interaction through its features. This system was created as just the start, to see if it were even possible to have a website centered on authors and readers without a cost. The Product Owner of the website discuss additionally that he is an author and found it incredibly difficult to publish his book, so this system is made specifically for those who feel the same way.

FUTURE GOALS

- Ensure a friend system that allows users to add each other as friends.
- Allow users to highlight book pages to return to them
- Have a system that allows users to send money to authors if they please.
- Allow users to follow their favorite authors to always be updated when they publish.

User Stories

The following section provides the detailed user stories that were implemented in this iteration of the project. These user stories served as the basis for the implementation of the project's features. This section also shows the user stories that are to be considered for future development.

User Story #1: As a user I want to be able to create a new account so that way I can access past the first chapters of books.

User Story #2: As a user I want to be able to login with my account so that way I can access past the first chapters of books I wish to read.

User Story #3: As a user I want to be able to log out of my account so that way my account is safe and others cannot use it in different ways.

User Story #4: As a user I want to be able to press different buttons and they lead me into different sections within the website to allow me to navigate to other books.

User Story #5: As a user I want to be able to read books by clicking on their respective chapters to be able to enjoy what authors have completed so far.

User Story #6: As a user I want to be able to write a book by simply clicking a button so that way I can publish my own novels onto the website for anyone to read.

User Story #7: As a user I want to be able to press a button that either allows my book to be published or in draft, allowing me to have the visibility different for everyone based on my wants.

User Story #8: As a user I want to be able to write reviews on my favorite books so that way the author knows where they can improve and develop stronger stances to their books.

User Story #9: As a user I want to be able to edit my books so that if there are any errors I can change them with ease.

User Story #10: As a user I want to be able to report a user if they have an inappropriate name or book so that way the community can be safe and without any issues.

User Story #11: As a user I want to be able to edit my profile so that way I can differentiate myself from others and people can know who I am.

User Story #12: As a user I want to be able to upload my chapters using either the writing software or HTML to ensure all of my text is correctly presented within the website.

User Story #13: As a user I want to be able to remove my book if I do not wish it to be on the website anymore.

User Story #14: As a user I want to be able to filter through the list of books to easily discover and find other authors' books.

User Story #15: As a user I want to be able to use the search bar on the top to locate books that I specifically want to read.

User Story #16: As an admin I want to be able to read the reports written by users to determine if the report is valid or not.

User Story #17: As an admin I want to be able to make users into banned users if they created an account against the terms of service or guidelines to ensure a safe space within the website.

User Story #18: As an admin I want to be able to remove books if they include anything against the terms of service or guidelines to ensure a safe space within the website.

User Story #19: As an admin I want to be able to edit user accounts to ensure they are up to the terms of service to ensure a safe space within the website.

User Story #20: As a user I want to be able to make and add friends within the website so I can see whenever they publish books or write reviews.

User Story #21: As a user I want to be able to subscribe to my favorite authors and follow them to get updates whenever they publish.

User Story #22: As a user I want to be able to protect my username and password with two-factor authentication to ensure my profile is always secure and safe.

User Story #23: As a user I want to be able to highlight words so that I can have notes for it later.

User Story #24: As a user I want to be able to have a button that automatically opens the book I was previously reading so that way I can access it easily.

User Story #25: As a user I want to be able to edit my books offline and save it once I get online to ensure that my books are able to be written wherever I am.

Implemented User Stories

User Story #1: As a user I want to be able to create a new account so that way I can access past the first chapters of books.

User Story #2: As a user I want to be able to login with my account so that way I can access past the first chapters of books I wish to read.

User Story #3: As a user I want to be able to log out of my account so that way my account is safe and others cannot use it in different ways.

User Story #4: As a user I want to be able to press different buttons and they lead me into different sections within the website to allow me to navigate to other books.

User Story #5: As a user I want to be able to read books by clicking on their respective chapters to be able to enjoy what authors have completed so far.

User Story #6: As a user I want to be able to write a book by simply clicking a button so that way I can publish my own novels onto the website for anyone to read.

User Story #7: As a user I want to be able to press a button that either allows my book to be published or in draft, allowing me to have the visibility different for everyone based on my wants.

User Story #8: As a user I want to be able to write reviews on my favorite books so that way the author knows where they can improve and develop stronger stances to their books.

User Story #9: As a user I want to be able to edit my books so that if there are any errors I can change them with ease.

User Story #10: As a user I want to be able to report a user if they have an inappropriate name or book so that way the community can be safe and without any issues.

User Story #11: As a user I want to be able to edit my profile so that way I can differentiate myself from others and people can know who I am.

User Story #12: As a user I want to be able to upload my chapters using either the writing software or HTML to ensure all of my text is correctly presented within the website.

User Story #13: As a user I want to be able to remove my book if I do not wish it to be on the website anymore.

User Story #14: As a user I want to be able to filter through the list of books to easily discover and find other authors' books.

User Story #15: As a user I want to be able to use the search bar on the top to locate books that I specifically want to read.

User Story #16: As an admin I want to be able to read the reports written by users to determine if the report is valid or not.

User Story #17: As an admin I want to be able to make users into banned users if they created an account against the terms of service or guidelines to ensure a safe space within the website.

User Story #18: As an admin I want to be able to remove books if they include anything against the terms of service or guidelines to ensure a safe space within the website.

User Story #19: As an admin I want to be able to edit user accounts to ensure they are up to the terms of service to ensure a safe space within the website.

Pending User Stories

User Story #20: As a user I want to be able to make and add friends within the website so I can see whenever they publish books or write reviews.

User Story #21: As a user I want to be able to subscribe to my favorite authors and follow them to get updates whenever they publish.

User Story #22: As a user I want to be able to protect my username and password with two-factor authentication to ensure my profile is always secure and safe.

User Story #23: As a user I want to be able to highlight words so that I can have notes for it later.

User Story #24: As a user I want to be able to have a button that automatically opens the book I was previously reading so that way I can access it easily.

User Story #25: As a user I want to be able to edit my books offline and save it once I get online to ensure that my books are able to be written wherever I am.

Project Plan

This section describes the planning that went into the realization of this project. The development of Book Finder followed Agile methodologies, allowing the team to work in iterative cycles and continuously improve the system through feedback and testing. As a result, multiple sprints were carefully planned and executed, each focusing on specific features and deliverables that contributed to the overall system.

Hardware and Software Resources

The following is a list of all hardware and software resources that were used in this project:

- Java (language)
- Javascript (language)
- HTML (language)
- CSS (language)
- Github (Repository)
- Spring Boot (Connector to Backend)
- PostGRES (Connector to Backend)
- Railway (Backend)
- Discord (Communication App)
- WhatsApp (Communication App)

- IntelliJ (IDE)

Sprints Plan

The development of Book Finder was organized into multiple sprints, each focusing on specific features and deliverables. The following sections outline the planning, tasks, and outcomes of each sprint.

Sprint 1

SPRINT PLANNING MEETING 1 (1/12/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 7:00PM

End time: 7:30PM

After discussion, the velocity of the team was estimated to be 20.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story #1:

- As a developer, I want to work on researching and developing an accurate system of communication to ensure all information is constantly shared and readily available.
- Task:
 - Create a discord server so information can be appropriately shared and distributed.
 - Create a WhatsApp so the team can easily communicate with the other.
 - Develop a Google Doc so all documents are shared.
 - Make a GitHub to allow all code to be easily transferred.
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story #2:

- As a developer, I want to further my understanding of databasing, and gain information on Spring Database.
- Task:

- To watch
https://youtube.com/playlist?list=PL5Y4hrqdSffuBjo_KhgADuRJRwIVoZKS&si=QFDaOk1lYIBcytSs
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I would like to learn more about the project and create a mindset on what is exactly needed to complete the starting development of it.
- Task
 - To relearn / understand Java, JavaScript, html, and any coding languages needed for the project.
 - To make a simple layout with paper as to what the project will look like.
- Estimate: 7 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I would like to gather any old or past documents from Capstone 1 and Software Engineering to make correct documents and future plans.
- Task
 - To relearn / learn Papyrus for the correct associated graphs
 - To gather every document needed so that way an understanding of the final goal can be estimated.
- Estimate: 3 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 2

SPRINT PLANNING MEETING (1/26/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 8:30PM

End time: 9:00PM

After discussion, the velocity of the team was estimated to be 21.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story #1:

- As a developer, I want to work on researching and developing an accurate system of communication to ensure all information is constantly shared and readily available.
- Task:
 - Create a discord server so information can be appropriately shared and distributed.
 - Create a WhatsApp so the team can easily communicate with the other.
 - Develop a Google Doc so all documents are shared.
 - Make a GitHub to allow all code to be easily transferred.
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story #2:

- As a developer, I want to create diagrams needed to display what exactly is needed for the program to function.
- Task:
 - Create a Use Case Diagram (Zachary) .
 - Create a Class Diagram. (Christopher, Mia)
 - Create an ERD Diagram (Christopher).
 - Create a Sequence Diagram. (Mariah, David)
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop the code for a log in and log out.
- Task:
 - Create a log in for Book Finder.
 - Create a log out for Book Finder.
 - Create 'Register Accounts' for Book Finder.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the database for users and admins.
- Task:
 - Develop a basic database for users.
 - Develop a basic database for admins.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop a correct approach to find what is needed for user stories.
- Task:
 - Define what is going to be the most important features to be created.
 - Define the features that are not as important.
 - Define the features that are not important.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 3

SPRINT PLANNING MEETING 3 (2/9/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 8:30PM

End time: 9:00PM

After discussion, the velocity of the team was estimated to be 26.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story #1:

- As a developer, I want to develop the web browser for logging in and logging out
- Task:
 - Create the web browser for logging in.
 - Create the web browser for logging out.
 - Create the web browser for creating an account.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story #2:

- As a developer, I want to code the database for storing user made books.
- Task:
 - Separate the preexisting database for users into users and books.
 - Develop the database to store different books and divide them by chapters.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop the main home page for the website.
- Task:
 - Create a web browser for when a user enters into the website's domain.
 - Ensure the ability to log in and log out websites also function properly.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to fully integrate the databases with the website.
- Task:
 - Allow the website to work with the front end code and the back end databases.
 - Have a functioning ability to create an account through the website and it submits it to the database.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to upload books into the website.
- Task:
 - Create a button within the website that allows the user to click and upload a book.
 - The button allows the user to add the book to the database where it is saved.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 4

SPRINT PLANNING MEETING 4 (3/2/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 8:30PM

End time: 9:00PM

After discussion, the velocity of the team was estimated to be 31.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to develop the main home page for the website.
- Task:
 - Create a web browser for when a user enters into the website's domain.
 - Ensure the ability to log in and log out websites also function properly.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to develop the ability to upload books into the website.
- Task:
 - Create a button within the website that allows the user to click and upload a book.
 - The button allows the user to add the book to the database where it is saved.

- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop services and controllers that assist with the databases.
- Task:
 - Create a Book Controller.
 - Create a Service Controller.
 - Create a Chapter Controller.
 - Create a Book Service.
 - Create a Series Service.
 - Create a Chapter Service.
- Estimate: 7 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the ability for users to report, view, and save books.
- Task:
 - A button that allows the user to report a book if it is against community guidelines, informing an admin to read it over.
 - A button that allows a user to view the book and scroll through it as they please.
 - A button that allows a user to save a book into different folders or categories for their own personal self.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to search and filter through different books.
- Task:
 - Create a way to filter books depending on their hashtags, reviews, genre, name, and authors.
 - Have the ability to search books within the main home page.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 6

- As a developer, I want to develop the ability to add people as friends.
- Task:
 - Develop a way for people to be able to follow their favorite authors.
 - Develop the ability for people to follow each other and get informed when they publish another book or part of a book.
- Estimate: 3 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 5

SPRINT PLANNING MEETING 5 (3/16/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 6:00PM

End time: 7:00PM

After discussion, the velocity of the team was estimated to be 27.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to develop the full front end functionality for users if they wish to read.
- Task:
 - Create the web browser to have the ability to click books and open them up for the user to read.
 - Create the web browser to have the option to view, like, and review books.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to develop the ability to publish books into the website by url.
- Task:
 - Create a way so that the user can upload books with a url, so that when another user wishes to read they can simply do so.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop a bucket that holds all of the URL's for published books.
- Task:
 - Create a bucket within the code that graves the url that the author wants, that displays the book.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris

- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the ability for users to visualize and see the main page without the need of logging in.
- Task:
 - Create a way so that users can see the main page and books without having to log in.
 - Allow users to read the first chapter of any book for free before having to sign up.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to search for books based on their tags.
- Task:
 - Create a way to filter books depending on their hashtags.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 6

- As a developer, I want to develop the ability for admins to read reports.
- Task:
 - Develop a way for the admin role to be able to read the reports that the users submit.
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 6

SPRINT PLANNING MEETING 6 (3/30/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 6:00PM

End time: 6:30PM

After discussion, the velocity of the team was estimated to be 26.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to develop the final front end functionality for users if they wish to read.
- Task:
 - Allow users without an account to view the first chapters of books.
 - Developed a smooth and constructed interface for the final project.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to develop the ability to allow individuals to save the location of where the reader read up to.
- Task:
 - Create a way so that the user can stop reading wherever and it gets that position saved into the website.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea

- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop a settings menu that allows the user to customize and edit their account.
- Task:
 - Create a settings section within the main menu that allows a user to edit their name, password, profile, biography, and other information.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the ability for admin's to be able to remove books if they are against community guidelines.
- Task:
 - Create a way so that the admin can read and review all reports based on a novel.
 - Allow the admin to delete and remove the book from being displayed on the website, but not removing it from the database all together.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to allow a user to have a favorites book section.
- Task:
 - Allow the user to have a section within their account that allows them to have one favorite book, that is exclusively on the website.
- Estimate: 3 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 7

SPRINT PLANNING MEETING 7 (4/13/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 6:00PM

End time: 7:00PM

After discussion, the velocity of the team was estimated to be [INSERT].

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to ensure all code is up to correct measure and running smoothly without issue.
- Task:
 - Locate any bugs within the program and remove them.
- Estimate: 5 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to complete the final deliverable document.
- Task:
 - Record all videos needed.
 - Ensure all teammates can make it in person to the presentation.
 - Ensure all code is completed.
 - Finish all meeting minutes and sprints.

- Estimate: 8 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a team member, I want to communicate with the team and ensure we are all prepared for the presentation.
- Task:
 - Run through multiple example presentations to make sure we are all informed of the background, as well as the coding.
 - Knowledge of difficult questions to combat any that may come at us during the presentation.
- Estimate: 6 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop a system that allows users to report and hide stories that they find unfit or inappropriate for the website.
- Task:
 - Add a reporting system that ensures all users can report books that do not follow guidelines.
 - Have a blue effect on books that users reported for themselves.
- Estimate: 5 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to make a friend system within the website to allow user connectivity.

- Task:
 - Develop a friend system that will allow users to communicate with each other based on their favorite books and novels.
- Estimate: 4 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

System Design

The system follows the Model-View-Controller (MVC) architectural pattern, which separates the application into three main components.

Architectural Patterns

These components are the Model, the View, and the Controller. This separation allows for clear organization of responsibilities within the website, where the Model manages data and database interactions, while the View handles the user interface and presentation layer. Finally, the Controller is the processor for user inputs as well as the coordination of communication between the Model and the View.

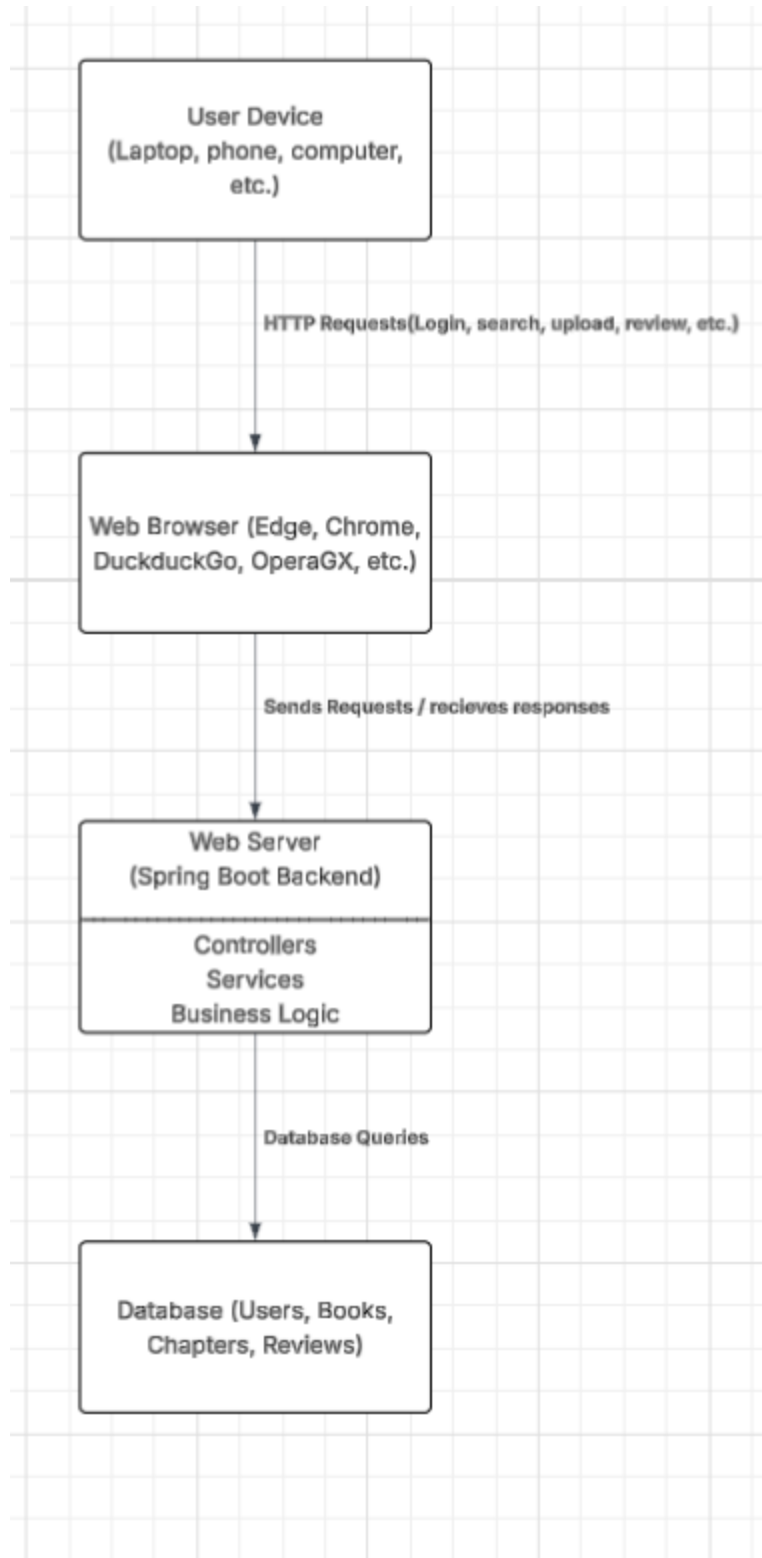
This architectural plan was chosen to improve the overall maintainability, scalability, and system organization for Book Finder. By separating these concerns developers are able to fully modify or update one of the components of the system without significantly impacting the other ones. One example would be changes done to the user interface can be made independently from the database or backend logic.

As for Book Finder's system, the frontend interface is responsible for displaying all of the books, user profiles, and navigation elements to the user. The backend services and controllers handle all of these requests such as user authentication, book uploads, and search functionality. The database and data models then manage user accounts, book content, chapters, pages, and reviews.

System and Subsystem Decomposition

The Book Finder system is divided into several subsystems, each responsible for specific functionality within the website. This decomposition improves organization, as well as its maintainability by separating responsibilities across different layers of the system. First is the frontend subsystem. The frontend subsystem is responsible for the user interface and overall user experience. It includes all visual components such as the homepage, login and registration pages, book reading interface, and navigation menus. This subsystem allows users to interact with the platform, browse books, and perform actions such as reading, reviewing, and uploading content. Next is the backend subsystem. The backend subsystem manages the core application logic and processes user requests. It includes controllers and services that handle operations such as authentication, book management, search functionality, and user interactions. This subsystem acts as the bridge between the frontend and the database. Then it is the database subsystem. The database subsystem is responsible for storing and managing all persistent data within the system. This includes user accounts, book information, chapters, reviews, and other related data. The database ensures data consistency and supports efficient retrieval of information for the application. Finally, it is the search and filtering subsystem. The search and filtering subsystem allows users to locate books based on specific criteria such as title, author, genre, and tags. This subsystem improves usability by enabling efficient content discovery within the platform.

Deployment Diagram



Design Patterns

The Book Finder system uses a few common software design patterns to keep the code organized, easy to maintain, and able to grow over time. Most of these patterns are used in the backend to help manage data, user actions, and the overall system logic. The main pattern used is the MVC pattern. It splits the app into three parts: Model, View, and Controller. Keeping these parts separate makes the system easier to update and work on without breaking other areas.

The repository pattern is used to handle all database operations. Instead of letting the rest of the system talk directly to the database, everything goes through repository interfaces. This makes it easier to change how data is stored or how queries work later on without affecting the rest of the code. The service layer pattern is used to manage the business logic. Services sit between the controllers and the repositories. They handle things like data processing and validation so controllers don't get overloaded with too much logic.

System Validation

The Book Finder system was validated through a series of testing methods to ensure that all components function correctly and meet the project requirements. First, any time an error or bug was discovered, it was written down to ensure the team does not forget about it until we have time to work on it. Then, once the team had time to work on it, the bug was pushed multiple times to ensure it can be fixed. Additionally, some testing that was done was a functionality testing, which ensured that all of the core features of the system would operate as expected. This type of testing included user registration and login, book publishing, reading functionality, search and filtering, and review submissions. Each of these features were tested with various inputs to confirm that the system produces correct and consistent outputs.

Integration and user interface testing were also conducted. The team ensured that all frontend, backend, and database compatibility worked, and that the data flowed correctly between each layer. One example of this was that whenever a user uploaded a book, either by HTML or but plainly writing it, the system would correctly process the request, store the data within the database, and display it onto the frontend. As for user interface testing, it was mostly things like the login, log out, and book viewer page to confirm they were all in correct layouts and easy navigation. This ensured all users could interact with the platform without any confusion or errors.

Lastly was error and handling validation. This is so that no matter what the website wouldn't produce an error at any point. One example is that users may try to provide credentials during the login and registration phase. This is where the correct error message would be displayed, and inform the user to try again. This will make sure that the system is always reliable, and able to handle the overall user experience.

Glossary

Agile Development - An iterative approach to software development where requirements and solutions evolve through collaboration and repeated cycles called sprints.

Backend - The server-side of the application responsible for processing logic, handling requests, and interacting with the database.

Bug - An error or flaw in the system that causes incorrect or unexpected behavior.

Controller - A component in the MVC architecture that handles user input and updates the Model and View accordingly.

Database - A structured system used to store, manage, and retrieve data such as user accounts, books, and reviews.

Deployment - The process of making the application available for use, typically by hosting it on a server.

DTO (Data Transfer Object) - An object used to transfer data between different layers of the application without exposing full database structures.

Frontend - The client-side of the application that users interact with, including the interface and visual elements.

GitHub - A platform used for version control and collaboration, allowing developers to manage and track code changes.

HTML (HyperText Markup Language) - The standard language used to create and structure content on web pages.

CSS (Cascading Style Sheets) - A language used to style and design the layout of web pages.

JavaScript - A programming language used to create dynamic and interactive features on the frontend.

Java - A programming language used primarily for backend development in this project.

Model - A component in MVC that manages data, logic, and rules of the application.

MVC (Model-View-Controller) - An architectural pattern that separates an application into Model, View, and Controller components to improve organization and scalability.

PostgreSQL - A relational database management system used to store and manage application data.

Repository Pattern - A design pattern that abstracts database operations, allowing the application to interact with data through a consistent interface.

REST API - A set of rules that allows communication between the frontend and backend using HTTP requests.

Service Layer - A layer in the application that contains business logic and acts as a bridge between controllers and repositories.

Sprint - A fixed time period in Agile development where specific tasks and features are planned and completed.

Spring Boot - A framework used to simplify backend development and create stand-alone Java applications.

UI (User Interface) - The visual layout and design through which users interact with the system.

User Authentication - The process of verifying a user's identity, typically through login credentials.

Validation - The process of ensuring that user input or system data meets required conditions before being processed.

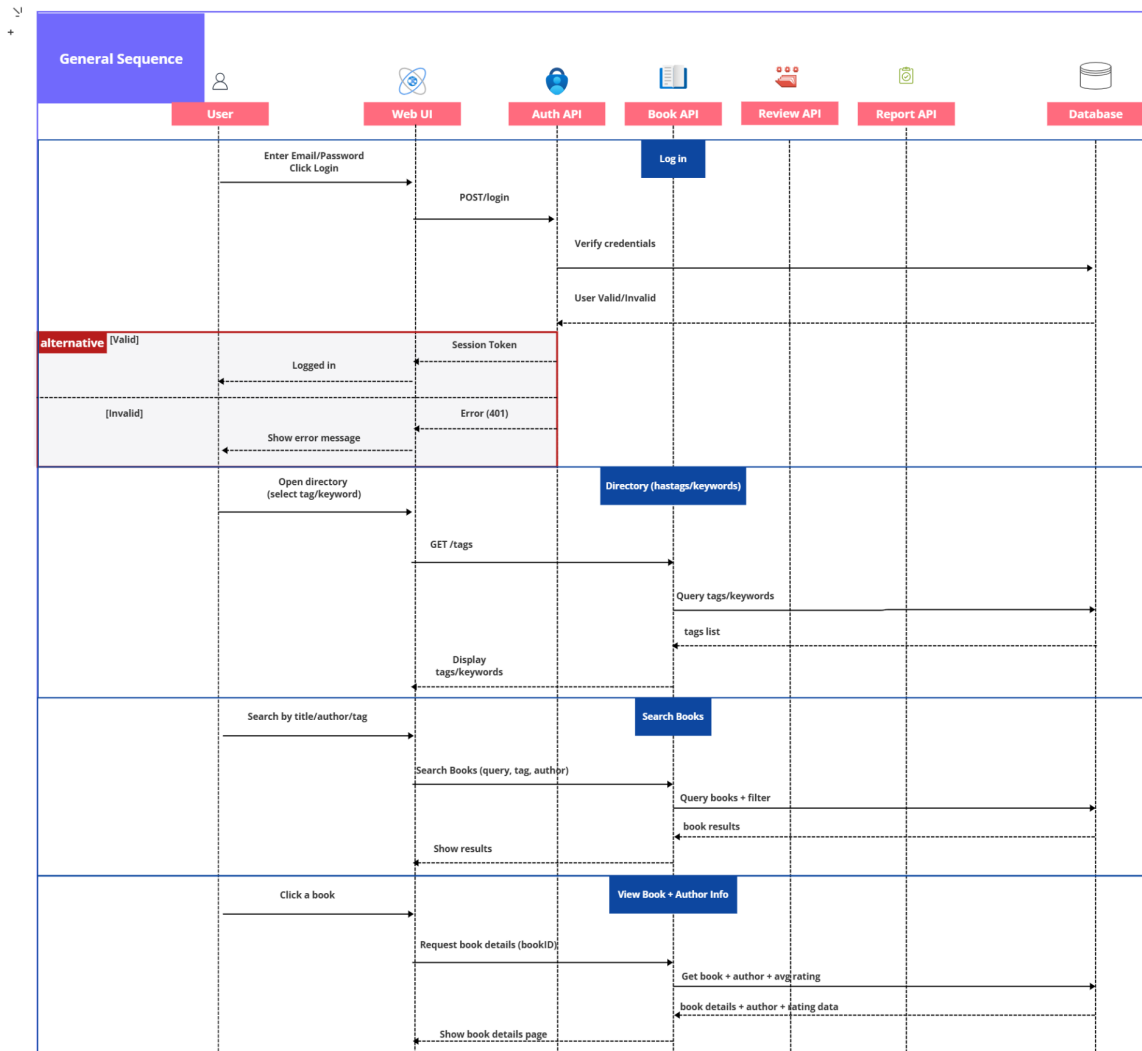
Version Control - A system that tracks changes to code over time, allowing developers to collaborate and revert to previous versions if needed.

Scalability - The ability of a system to handle increased workload or expand in capacity without compromising performance.

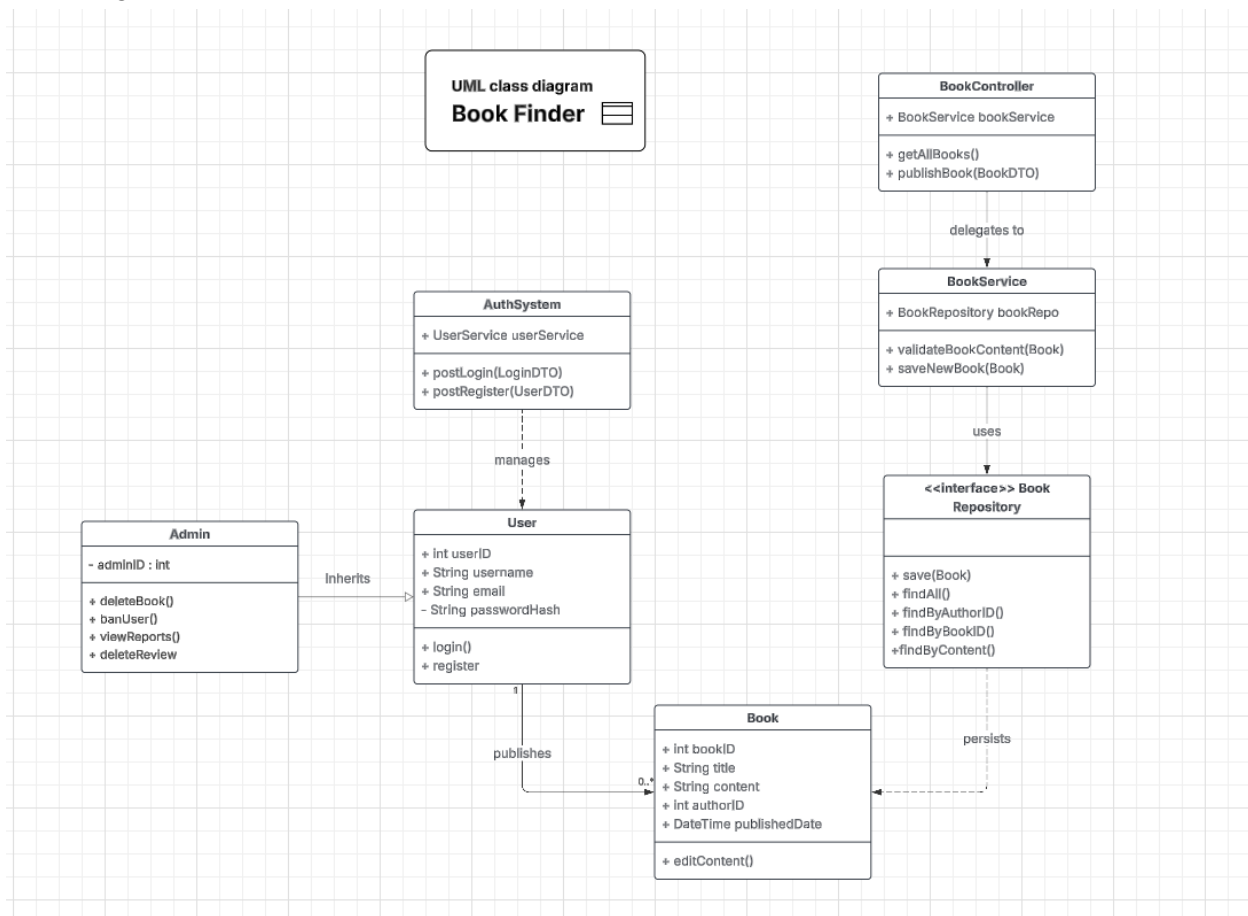
Appendix

Appendix A - UML Diagrams

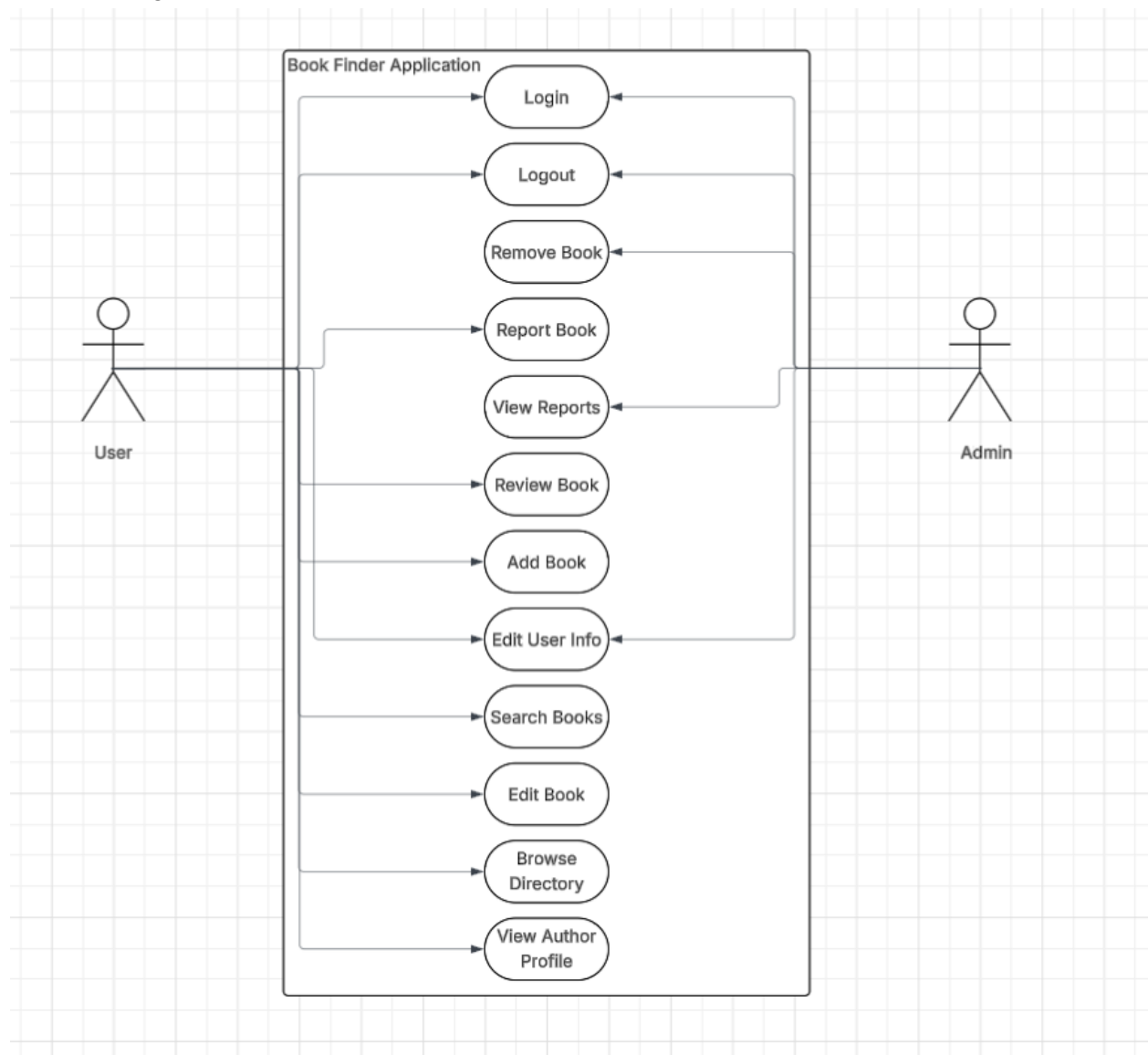
Sequence Diagram



Class Diagram

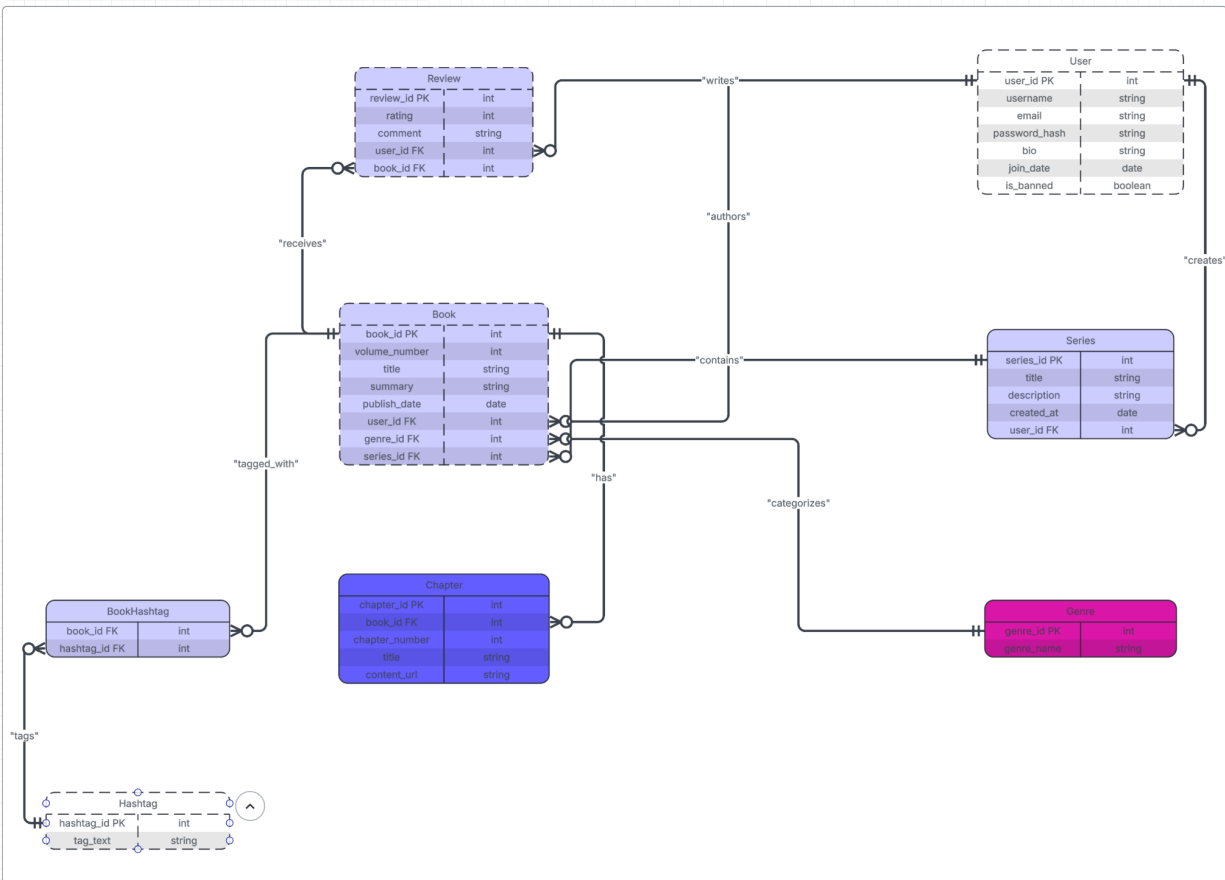


Use Case Diagram

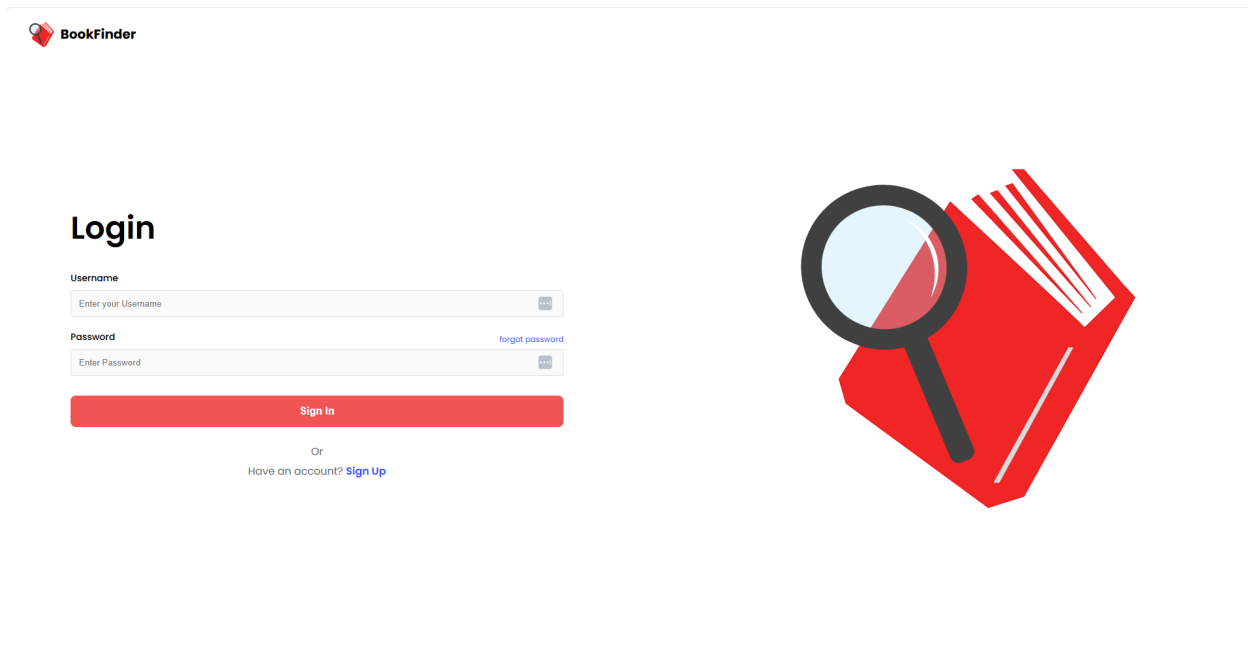
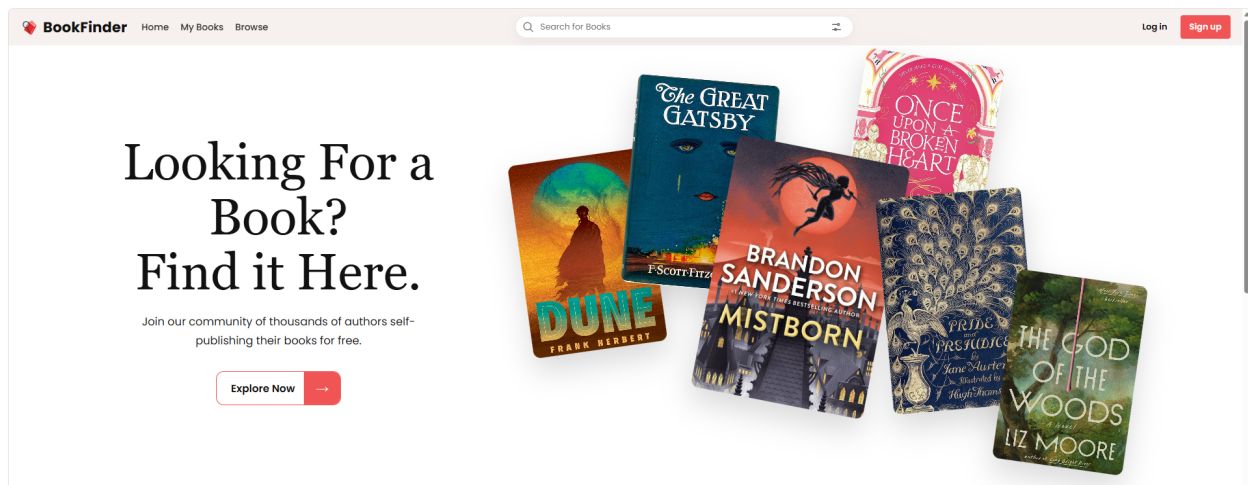


ERD Diagram

BookFinder Entity-Relationship Diagram



Appendix B - User Interface Design



Sign Up

Username

Email address

Password

☐ I agree to the terms & policy.

Signup

Or
 Have an account? [Log In](#)




[Home](#)
[My Books](#)
[Browse](#)

[Log in](#)
[Sign up](#)

DISCOVER

Browse Books

Search published books by title, genre, series, author, and hashtags.

Filters
 Use one or many filters to narrow your results.

Keyword

Author

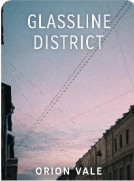
Series

Hashtags Press enter or comma to add one.
 Add
 No hashtags added yet.

Genres Choose any that apply.

- ☐ Action
- ☐ Adventure
- ☐ Biography
- ☐ Contemporary Fiction
- ☐ Crime

Browse published books
 Showing 12 of 52 books.



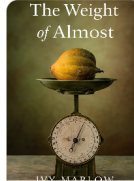
Glassline District
 By Orion Vale
 Standalone 4/13/2024
[View Details](#)



MIDNIGHT CIRCUIT
 VOLUME 2
 By Orion Vale
 Neon City Files 3/26/2024
[View Details](#)



SIGNAL IN THE STATIC
 VOLUME 1
 By Orion Vale
 Neon City Files 3/17/2024
[View Details](#)



The Weight of Almost
 By Ivy Marlow
 Standalone 6/6/2024
[View Details](#)



Rooms We Left Behind



THE LAST



Silence

Filters

Use one or many filters to narrow your results.

Keyword

Author

Series



Hashtags

Press Enter or comma to add one.

No hashtags added yet.

Genres

Choose any that apply.

☐ Action☐ Adventure☐ Biography☐ Contemporary Fiction☐ Crime☐ Cyberpunk

BookFinder

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Currently Reading Books (1)

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The Last Firewall

By Orion Vale

Your Published Books

Published Books (5)

[View All Books >](#)

The Last Firewall

4/22/2024

Glassline District

4/13/2024

Ghost Protocol Nine

Neon City Files • 4/4/2024

Midnight Circuit

Neon City Files • 3/26/2024

Signal in the Static

Neon City Files • 3/17/2024

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Drafts

0

Published

5

Standalone

2

Search by title...

All Statuses

All Series

Your Books

Showing 5 of 5 books.



The Last Firewall

PUBLISHED

Date: 4/22/2024

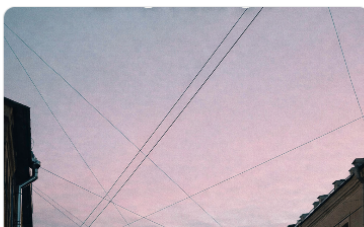
Series: Standalone

Edit

Write

Unpublish

Delete



Glassline District

PUBLISHED

Date: 4/13/2024

Series: Standalone

Edit

Write

Unpublish

Delete



Ghost Protocol Nine

PUBLISHED

Date: 4/4/2024

Series: Neon City Files

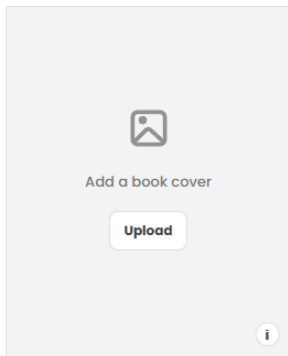
Volume 3

Edit

Write

Unpublish

Delete



Book Details

Create a new book draft and organize it however you want.

Current Status

DRAFT

Title

Untitled Book

Description ⓘ

Write a short summary for your book

Category ⓘ

Select a category

Series ⓘ

Choose standalone or select one of your series below.



Standalone Book
Not part of a series



Neon City Files
3 books

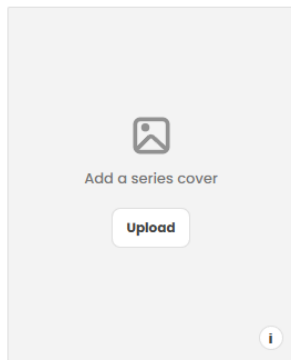
Tags ⓘ

Add a tag and press Enter



Books are created as drafts first. You can publish them after creation.

Create Book →



Create Series

Series Name

Untitled Series

Description ⓘ

Create Series →

Books in This Series

Save the series first to manage books.

Add Book to Series

MY PROFILE



Orion Vale
Orion Vale

Edit Profile

JOINED

4/4/2026

EMAIL

orionvale@bookfinder.de
mo

PUBLISHED BOOKS

5

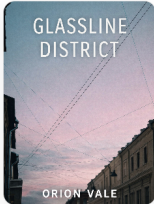
This is how your public author profile will appear to other users.

Bio

Sci-fi writer focused on surveillance cities, rogue signals, and collapsing systems.

Books Created by This Author

5 published books.





MY PROFILE

Orion Vale

Orion Vale

JOINED

4/4/2026

EMAIL

orionvale@bookfinder.demo

PUBLISHED BOOKS

5

This is how your public author profile will appear to other users.

Bio

Sci-fi writer focused on surveillance cities, rogue signals, and collapsing systems.

Edit Profile

First name

Orion



Last name

Vale

Bio

Sci-fi writer focused on surveillance cities, rogue signals, and collapsing systems.

Save Changes

Cancel

[← Back to Book](#)

THE LAST FIREWALL

The Breach

Chapter 1 of 3

CHAPTER

[Previous Chapter](#)

Chapter 1: The Breach

[Next Chapter](#)

[Previous Pages](#)

Pages 1-2 of 4

[Next Pages](#)

You are reading the public preview.

By the time the alarms started, Kael Mercer had already seen the impossible. The first warning flashed across the south wall of the control chamber in silent red text. UNAUTHORIZED ACCESS DETECTED SECTOR NINE / INNER GRID Then the lights dimmed. Kael pushed back from the console and stared at the stream of code racing down the glass display. He had spent six years inside Helix Tower, the tallest structure in Neon City, monitoring the urban defense lattice that separated the protected districts from the dead zones outside. He knew the system's habits better than most people knew their own pulse. This was not a routine breach. This was something else. "Tell me that's a false echo," said Mara Chen from the neighboring station. Kael didn't answer right away. His fingers moved quickly over the interface, opening shield logs, verification trees, port maps. Every layer he checked showed the same result: somebody—or something—had slipped through three of the city's core security walls without triggering a single standard trace. "That's not a false echo," he said at last. Mara stood and crossed to his terminal. The reflected code painted itself across her face in strips of blue and crimson. "No one gets through the inner grid." "They just did." She leaned closer. "How?" Kael highlighted a fragment buried in the traffic stream. At first glance, it looked like ordinary maintenance code, the kind that passed through the system every hour. But the structure beneath it was wrong—too elegant, too intentional. Hidden inside the patch was a secondary architecture, invisible unless you

knew how to look for asymmetry. "It's wearing our own credentials," Kael said. Mara went still. "Internal?" "Looks like it." The room around them had erupted into motion. Supervisors barked orders. Security drones dropped from ceiling ports and hummed across the chamber like steel insects. Across the glass wall, the skyline of Neon City burned in electric blues and violet rain. Kael's screen changed again. A message appeared in the center of the terminal. YOU BUILT THE DOOR. WE ONLY OPENED IT. Mara swore under her breath. "Who sent that?" Kael scanned for source data. Nothing. No visible routing chain, no origin key, not even a phantom signature. Whoever had inserted the message knew the system deeply enough to leave the words hanging inside it like a taunt. "Kael." It was Director Soren. He stood at the top of the command steps, tall and immaculate in a charcoal coat, one hand clasped behind his back as if the room were not falling into panic around him. Director Soren never raised his voice. He didn't need to. "Walk with me," he said. Kael exchanged a glance with Mara, then followed. They moved into the observation corridor overlooking the tower's lower server vaults. The glass beneath their feet glowed faintly, carrying power into levels so deep most employees never saw them. "You were on breach watch," Soren said. "What did you find?" Kael considered his answer carefully. "Whoever entered the grid used internal pathways." Soren's expression did not change. "Meaning?" "Meaning someone with access helped them." Or built the access in the

BOOK DETAILS

PUBLISHED

The Last Firewall

By Orion Vale



AUTHOR

Orion Vale

PUBLISHED

4/22/2024

SERIES

Standalone

VOLUME

Standalone / N/A

CHAPTERS

3

REVIEWS

4

Start Reading

Read Preview

Go to Table of Contents

Genres

Thriller

Cyberpunk

Science Fiction

Hashtags

#sciencefiction

#last

#firewall

#neoncityfiles

Description

The Last Firewall is a science fiction novel that follows a character pushed into difficult choices, hidden truths, and a situation that keeps getting harder to escape.

Table of Contents

3 chapters available

CHAPTER 1 The Breach

MARKDOWN Preview available

Read Preview

CHAPTER 2 Ghost Architecture

MARKDOWN

Login to Read

CHAPTER 3 Behind the Wall

MARKDOWN

Login to Read

Reviews

★★★★★ 5.0 4 reviews

Showing 4 of 4 reviews.

Want to leave a review?

Log in to rate this book and share your thoughts.

Want to rate this book?

Log in to leave a review and share your thoughts with other readers.

Log In

Sign Up

Selene Hart

Apr 17, 2026

★★★★★

this is cool

IrishEngineer13

Apr 10, 2026

★★★★★

Awesome read!

Jasper Cross

Apr 4, 2026

★★★★★

The Last Firewall: This one was easy to get into and hard to put down.

Theo Rowan

Apr 4, 2026

★★★★★

The Last Firewall: Really enjoyed the pacing and atmosphere.

Appendix C - Sprint Review Reports

Sprint 1

SPRINT PLANNING MEETING 1 (1/12/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 7:00PM

End time: 7:30PM

After discussion, the velocity of the team was estimated to be 20.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story #1:

- As a developer, I want to work on researching and developing an accurate system of communication to ensure all information is constantly shared and readily available.
- Task:
 - Create a discord server so information can be appropriately shared and distributed.
 - Create a WhatsApp so the team can easily communicate with the other.
 - Develop a Google Doc so all documents are shared.
 - Make a GitHub to allow all code to be easily transferred.
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story #2:

- As a developer, I want to further my understanding of databasing, and gain information on Spring Database.
- Task:
 - To watch
https://youtube.com/playlist?list=PL5Y4hrqdSffuBjo_KhgbADuRJRWIVoZKS&si=QFDaOk1IYIBcytSs
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea

- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I would like to learn more about the project and create a mindset on what is exactly needed to complete the starting development of it.
- Task
 - To relearn / understand Java, JavaScript, html, and any coding languages needed for the project.
 - To make a simple layout with paper as to what the project will look like.
- Estimate: 7 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I would like to gather any old or past documents from Capstone 1 and Software Engineering to make correct documents and future plans.
- Task
 - To relearn / learn Papyrus for the correct associated graphs
 - To gather every document needed so that way an understanding of the final goal can be estimated.
- Estimate: 3 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 2

SPRINT PLANNING MEETING (1/26/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 8:30PM

End time: 9:00PM

After discussion, the velocity of the team was estimated to be 21.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story #1:

- As a developer, I want to work on researching and developing an accurate system of communication to ensure all information is constantly shared and readily available.
- Task:
 - Create a discord server so information can be appropriately shared and distributed.
 - Create a WhatsApp so the team can easily communicate with the other.
 - Develop a Google Doc so all documents are shared.
 - Make a GitHub to allow all code to be easily transferred.
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story #2:

- As a developer, I want to create diagrams needed to display what exactly is needed for the program to function.
- Task:
 - Create a Use Case Diagram (Zachary) .
 - Create a Class Diagram. (Christopher, Mia)
 - Create an ERD Diagram (Christopher).
 - Create a Sequence Diagram. (Mariah, David)
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop the code for a log in and log out.
- Task:
 - Create a log in for Book Finder.
 - Create a log out for Book Finder.
 - Create 'Register Accounts' for Book Finder.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the database for users and admins.
- Task:
 - Develop a basic database for users.
 - Develop a basic database for admins.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop a correct approach to find what is needed for user stories.
- Task:
 - Define what is going to be the most important features to be created.
 - Define the features that are not as important.
 - Define the features that are not important.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 3

SPRINT PLANNING MEETING 3 (2/9/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 8:30PM

End time: 9:00PM

After discussion, the velocity of the team was estimated to be 26.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story #1:

- As a developer, I want to develop the web browser for logging in and logging out
- Task:
 - Create the web browser for logging in.
 - Create the web browser for logging out.
 - Create the web browser for creating an account.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story #2:

- As a developer, I want to code the database for storing user made books.
- Task:
 - Separate the preexisting database for users into users and books.
 - Develop the database to store different books and divide them by chapters.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop the main home page for the website.
- Task:
 - Create a web browser for when a user enters into the website's domain.
 - Ensure the ability to log in and log out websites also function properly.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to fully integrate the databases with the website.
- Task:
 - Allow the website to work with the front end code and the back end databases.
 - Have a functioning ability to create an account through the website and it submits it to the database.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to upload books into the website.
- Task:
 - Create a button within the website that allows the user to click and upload a book.
 - The button allows the user to add the book to the database where it is saved.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 4

SPRINT PLANNING MEETING 4 (3/2/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 8:30PM

End time: 9:00PM

After discussion, the velocity of the team was estimated to be 31.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to develop the main home page for the website.
- Task:
 - Create a web browser for when a user enters into the website's domain.
 - Ensure the ability to log in and log out websites also function properly.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to develop the ability to upload books into the website.
- Task:
 - Create a button within the website that allows the user to click and upload a book.
 - The button allows the user to add the book to the database where it is saved.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez

- Christopher Vivas

User Story # 3

- As a developer, I want to develop services and controllers that assist with the databases.
- Task:
 - Create a Book Controller.
 - Create a Service Controller.
 - Create a Chapter Controller.
 - Create a Book Service.
 - Create a Series Service.
 - Create a Chapter Service.
- Estimate: 7 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the ability for users to report, view, and save books.
- Task:
 - A button that allows the user to report a book if it is against community guidelines, informing an admin to read it over.
 - A button that allows a user to view the book and scroll through it as they please.
 - A button that allows a user to save a book into different folders or categories for their own personal self.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to search and filter through different books.
- Task:
 - Create a way to filter books depending on their hashtags, reviews, genre, name, and authors.
 - Have the ability to search books within the main home page.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 6

- As a developer, I want to develop the ability to add people as friends.
- Task:
 - Develop a way for people to be able to follow their favorite authors.
 - Develop the ability for people to follow each other and get informed when they publish another book or part of a book.
- Estimate: 3 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 5

SPRINT PLANNING MEETING 5 (3/16/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 6:00PM

End time: 7:00PM

After discussion, the velocity of the team was estimated to be 27.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to develop the full front end functionality for users if they wish to read.
- Task:

- Create the web browser to have the ability to click books and open them up for the user to read.
- Create the web browser to have the option to view, like, and review books.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to develop the ability to publish books into the website by url.
- Task:
 - Create a way so that the user can upload books with a url, so that when another user wishes to read they can simply do so.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop a bucket that holds all of the URL's for published books.
- Task:
 - Create a bucket within the code that graves the url that the author wants, that displays the book.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the ability for users to visualize and see the main page without the need of logging in.
- Task:

- Create a way so that users can see the main page and books without having to log in.
- Allow users to read the first chapter of any book for free before having to sign up.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to search for books based on their tags.
- Task:
 - Create a way to filter books depending on their hashtags.
- Estimate: 4 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 6

- As a developer, I want to develop the ability for admins to read reports.
- Task:
 - Develop a way for the admin role to be able to read the reports that the users submit.
- Estimate: 2 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 6

SPRINT PLANNING MEETING 6 (3/30/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 6:00PM

End time: 6:30PM

After discussion, the velocity of the team was estimated to be 26.

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to develop the final front end functionality for users if they wish to read.
- Task:
 - Allow users without an account to view the first chapters of books.
 - Developed a smooth and constructed interface for the final project.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to develop the ability to allow individuals to save the location of where the reader read up to.
- Task:
 - Create a way so that the user can stop reading wherever and it gets that position saved into the website.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a developer, I want to develop a settings menu that allows the user to customize and edit their account.

- Task:
 - Create a settings section within the main menu that allows a user to edit their name, password, profile, biography, and other information.
- Estimate: 5 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop the ability for admin's to be able to remove books if they are against community guidelines.
- Task:
 - Create a way so that the admin can read and review all reports based on a novel.
 - Allow the admin to delete and remove the book from being displayed on the website, but not removing it from the database all together.
- Estimate: 6 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to develop the ability to allow a user to have a favorites book section.
- Task:
 - Allow the user to have a section within their account that allows them to have one favorite book, that is exclusively on the website.
- Estimate: 3 hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

Sprint 7

SPRINT PLANNING MEETING 7 (4/13/26)

Attendees: Mia Mader, David Martinez, Mariah Harris, Christopher Vivas, Zachary Shea

Start time: 6:00PM

End time: 7:00PM

After discussion, the velocity of the team was estimated to be [INSERT].

The product owner chose the following user stories to be done during the next sprint. They are ordered based on their priority.

User Story # 1

- As a developer, I want to ensure all code is up to correct measure and running smoothly without issue.
- Task:
 - Locate any bugs within the program and remove them.
- Estimate: 5 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 2

- As a developer, I want to complete the final deliverable document.
- Task:
 - Record all videos needed.
 - Ensure all teammates can make it in person to the presentation.
 - Ensure all code is completed.
 - Finish all meeting minutes and sprints.
- Estimate: 8 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 3

- As a team member, I want to communicate with the team and ensure we are all prepared for the presentation.
- Task:
 - Run through multiple example presentations to make sure we are all informed of the background, as well as the coding.
 - Knowledge of difficult questions to combat any that may come at us during the presentation.
- Estimate: 6 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 4

- As a developer, I want to develop a system that allows users to report and hide stories that they find unfit or inappropriate for the website.
- Task:
 - Add a reporting system that ensures all users can report books that do not follow guidelines.
 - Have a blue effect on books that users reported for themselves.
- Estimate: 5 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader
- Mariah Harris
- David Martinez
- Christopher Vivas

User Story # 5

- As a developer, I want to make a friend system within the website to allow user connectivity.
- Task:
 - Develop a friend system that will allow users to communicate with each other based on their favorite books and novels.
- Estimate: 4 Hours

The team members indicated their willingness to work on the following user stories:

- Zachary Shea
- Mia Mader

- Mariah Harris
- David Martinez
- Christopher Vivas

Appendix D - User Manuals, Installation/Maintenance Document, Shortcomings/Wishlist Document and other documents

Shortcomings/Wishlist Document and other documents are either as videos, or already within the .ZIP file. The Installation Guide is provided additionally within the document just as reference.

Installation Guide — BookFinder



Project: BookFinder

Team:
Zachary Shea
Christopher Vivas
David Martinez
Mia Mader
Mariah Harris

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Prerequisites

Before you begin, make sure you have the following installed:

- **Java 17+**
- **Maven 3.8+**
- **PostgreSQL 8+**
- **Git**
- **IntelliJ IDEA or another Java-compatible IDE**
- **Docker Desktop**
- **A modern web browser such as Google Chrome**
- **Internet access for connecting to external services when needed**

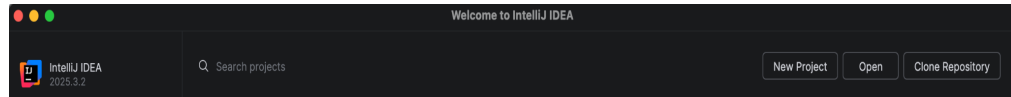
The backend project uses Maven Wrapper, so a separate Maven installation is not strictly required.

The local development database is provided through Docker Compose using PostgreSQL 16

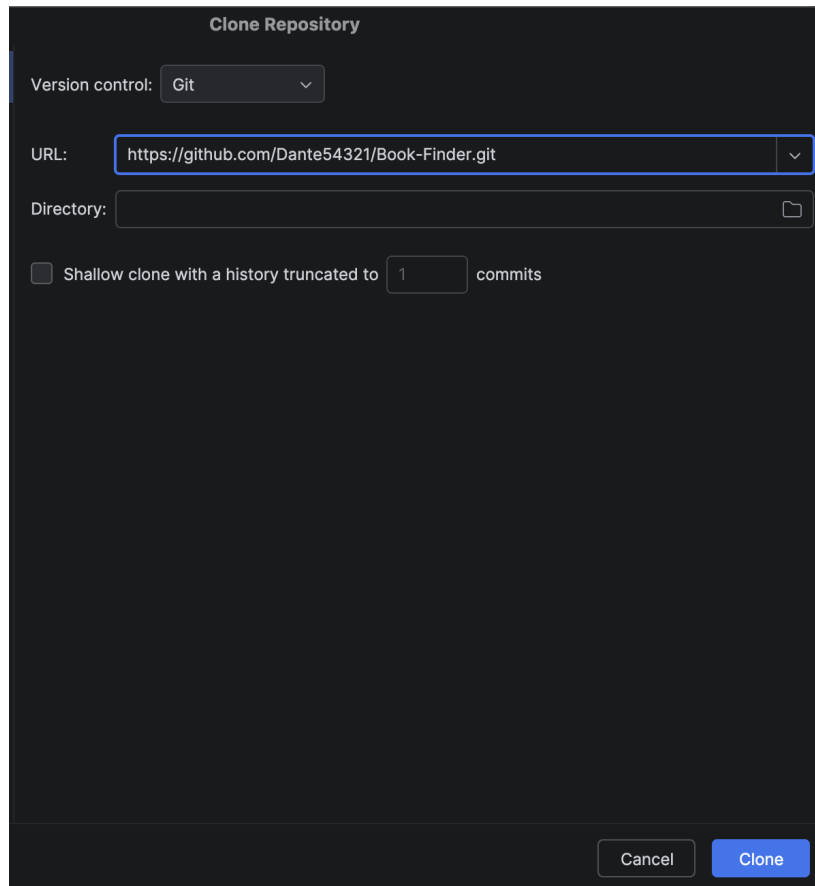
Step-by-Step Setup Instructions

1. Clone the repository:

- a. Open up IntelliJ click on Clone Repository:



- b. In the git window, paste the URL: <https://github.com/Dante54321/Book-Finder.git>

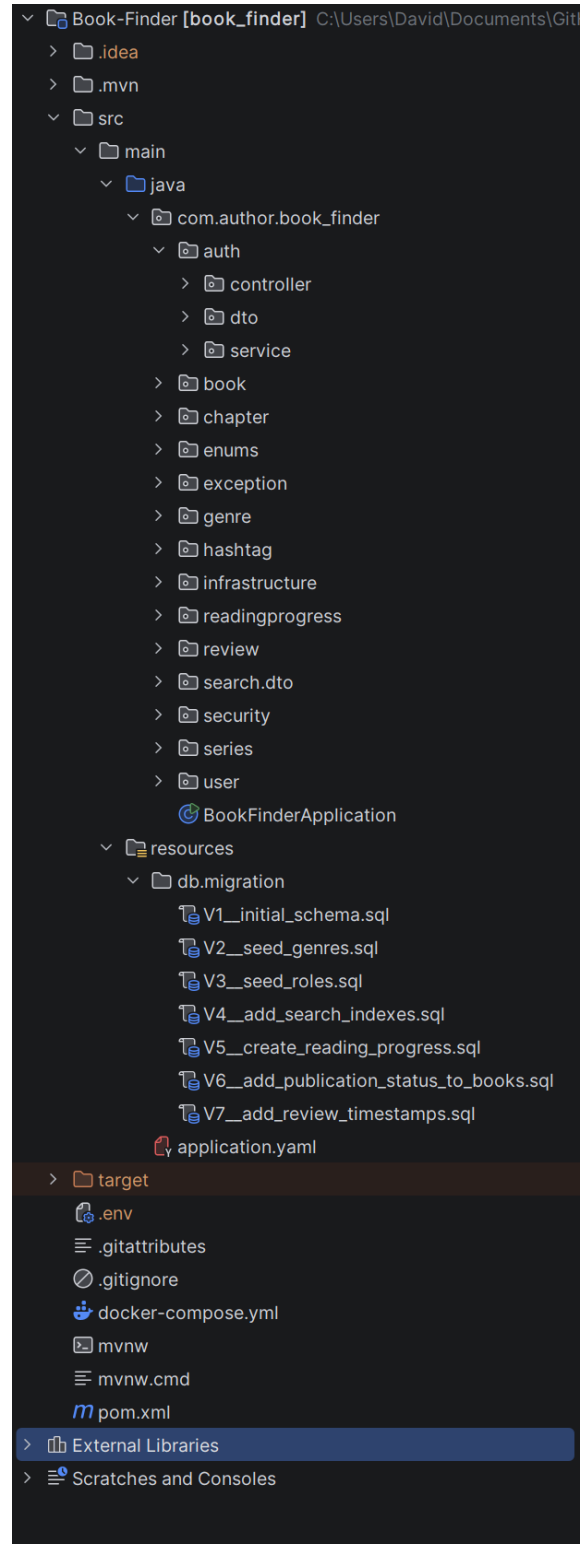


- c. You can also clone the repo using the terminal and the following commands:
- git clone <https://github.com/Dante54321/Book-Finder.git>
 - cd Book-Finder

2. Open the backend project

The backend contains:

- The Spring Boot application
- Flyway
- Migration scripts
- Database integration
- Authentication logic
- AWS S3 file handling

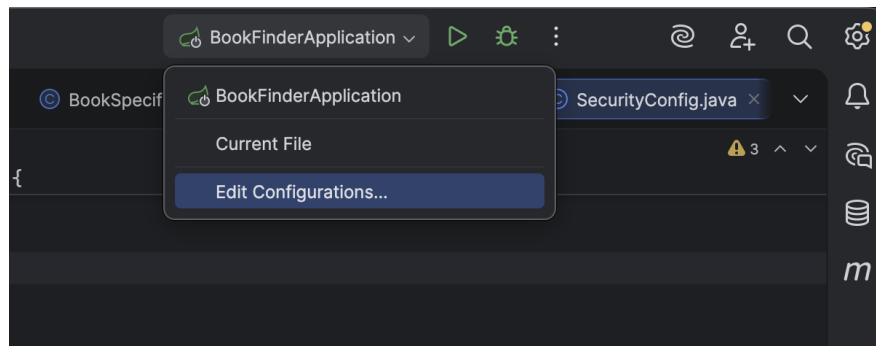


3. Configure the backend environment variables

Before starting the backend, configure the required environment variables.

This can be done in two ways:

1. Creating a .env file in the project root directory and inserting the information in the .env file example below.
2. Configuring environment variables directly in the IDE.



The backend requires values for:

- Database username and password
- JWT secret and expiration
- AWS region
- AWS S3 bucket name
- AWS access credential

Example .env file

```
DB_USERNAME=<username>
DB_PASSWORD=<password>

JWT_SECRET=<32 bit key>
JWT_EXPIRATION_MS=86400000

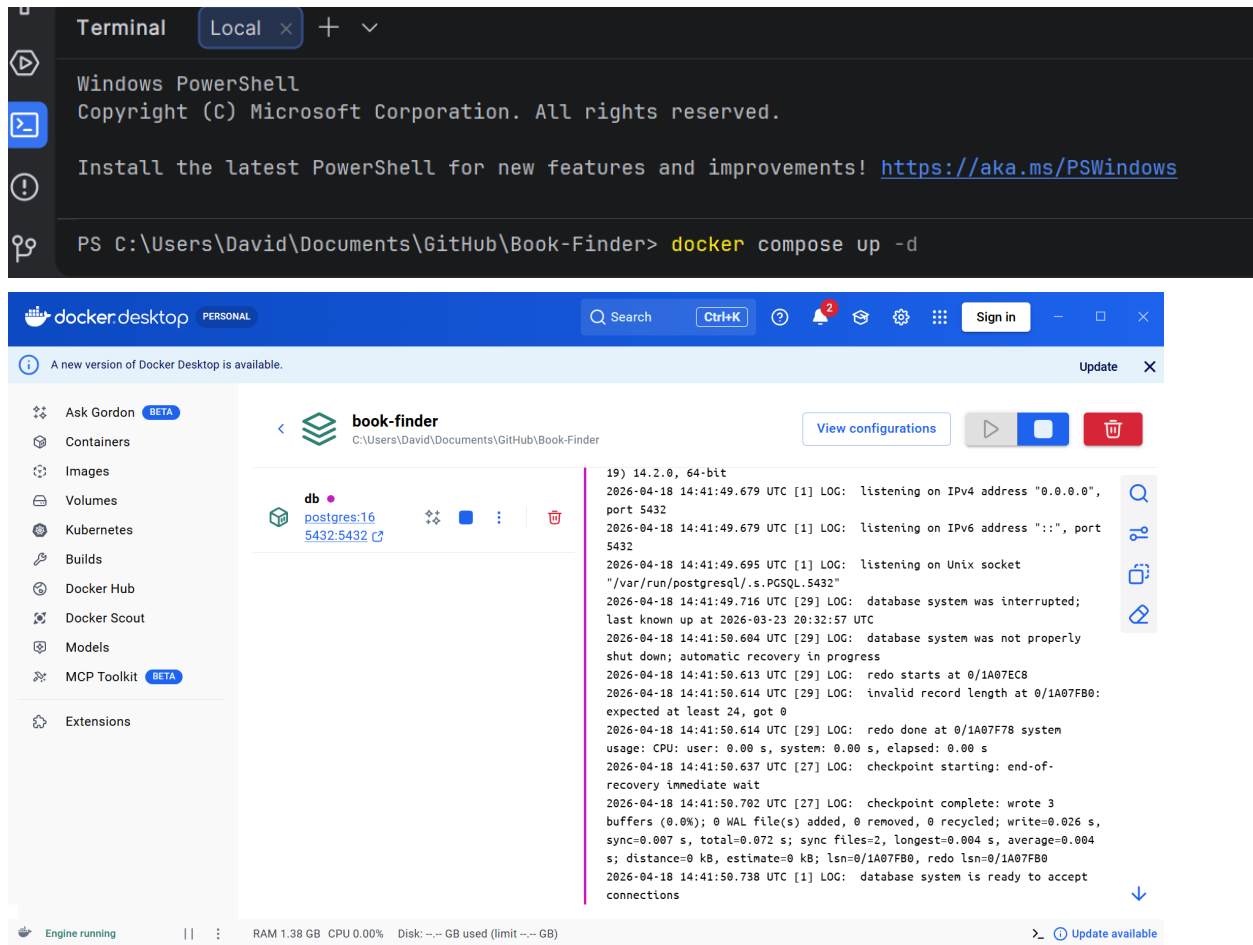
AWS_REGION=us-east-1
aws.s3.bucket=book-finder-chapter-capstone2-2026

AWS_ACCESS_KEY_ID=AKIASVML76LRRYJPXRUL
AWS_SECRET_ACCESS_KEY=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

SERVER_ERROR_INCLUDE_MESSAGE=always
SERVER_ERROR_INCLUDE_BINDING_ERRORS=always
LOGGING_LEVEL_ORG_SPRINGFRAMEWORK_WEB=DEBUG
LOGGING_LEVEL_COM_AUTHOR_BOOK_FINDER=DEBUG
```

4. Start the local PostgreSQL container using Docker Compose.

On the command line, run:



This command starts a PostgreSQL 16 container for local development. The local database is configured to run on port 5432

5. Run the backend application

- After configuring the database and environment variables, start the Spring Boot application.
- Run the main Spring Boot application class from the IDE.
- When the backend starts successfully, Flyway migration should run automatically and create the required database schema.

```
2026-04-18T10:44:24.378-04:00 INFO 10840 --- [book_finder] [main] org.hibernate.orm.core
2026-04-18T10:44:24.438-04:00 INFO 10840 --- [book_finder] [main] j.LocalContainerEntityManagerFactoryBean
2026-04-18T10:44:24.521-04:00 INFO 10840 --- [book_finder] [main] o.s.d.j.r.query.QueryEnhancerFactories
2026-04-18T10:44:24.770-04:00 WARN 10840 --- [book_finder] [main] JpaBaseConfiguration$JpaWebConfiguration
2026-04-18T10:44:24.882-04:00 DEBUG 10840 --- [book_finder] [main] .m.m.a.ExceptionHandlerExceptionHandlerResolver
2026-04-18T10:44:25.016-04:00 INFO 10840 --- [book_finder] [main] eAuthenticationProviderManagerConfigurer
2026-04-18T10:44:25.017-04:00 WARN 10840 --- [book_finder] [main] r$InitializeUserDetailsManagerConfigurer
2026-04-18T10:44:26.901-04:00 DEBUG 10840 --- [book_finder] [main] s.w.s.m.m.a.RequestMappingHandlerMapping
2026-04-18T10:44:26.935-04:00 DEBUG 10840 --- [book_finder] [main] o.s.w.s.handler.SimpleUrlHandlerMapping
2026-04-18T10:44:26.954-04:00 DEBUG 10840 --- [book_finder] [main] s.w.s.m.m.a.RequestMappingHandlerAdapter
2026-04-18T10:44:27.116-04:00 INFO 10840 --- [book_finder] [main] o.s.boot.tomcat.TomcatWebServer
2026-04-18T10:44:27.121-04:00 INFO 10840 --- [book_finder] [main] c.a.book_finder.BookFinderApplication
```

6. Prepare the frontend

The BookFinder frontend is a static website built with HTML, CSS, and JavaScript.

Repeat step 1 using the following URL: <https://github.com/miamader/Book-Finder.git>

You can choose to clone the repository directly from IntelliJ or through your command line.

Version control: Git

URL:

Directory:

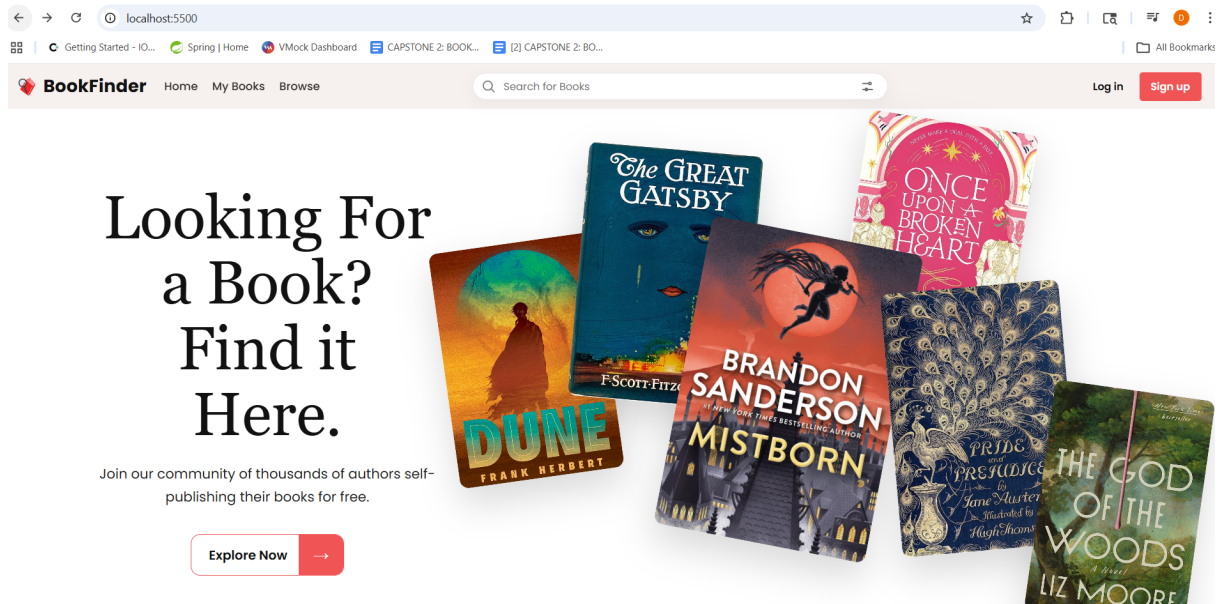
☐ Shallow clone with a history truncated to commits

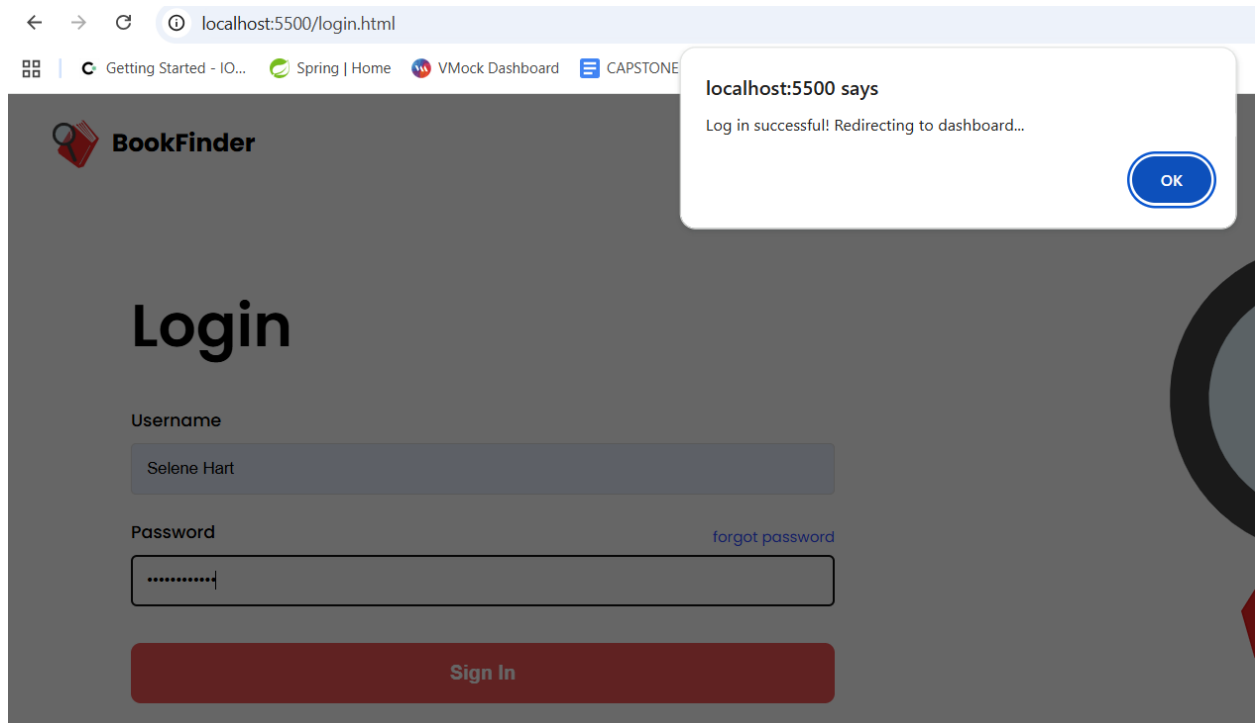
7. Launch the frontend locally

To run the frontend locally, open the frontend project folder and serve it using a static local server

For local testing, we recommend using a Python server:

- In your terminal, RUN: `python3 -m http.server 5500`
- In your web browser, visit: <http://localhost:5500>





***Important:** If you choose to run the frontend from a different origin, visit the Backend project folder. In SecurityConfig update the corsConfigurationSource() to include the frontend origin you wish to use:

```
.allowedOrigins(  
    "http://localhost:5500",  
    "https://yourname.github.io"  
)
```

Make sure the CORS configuration allows requests from the port that you are using. Right now, it is configured to allow requests from <http://localhost:5500> and from the deployed GitHub Pages domain.

8. Verify the installation

After both parts are running, verify the installation by completing the following checks:

- Is the PostgreSQL container running?
 - Check your Docker Desktop and confirm that the image container created by Docker Compose is active.
- If testing the backend, does the backend compile and run without errors?
- If testing the front-end, do pages load properly in the browser?
- Are you able to create a new user?
 - Open the login or signup page.
 - Register a test account or log in with an existing one.
- As a user, are you able to upload and download to the S3 bucket?
 - As a user, create a book and upload an image, make sure to set it as published.
 - As a user, create a chapter and upload it.
 - You should now be able to search for your newly published book, view the uploaded image, and read the uploaded chapter file.

If all of these checks pass, the system is correctly installed, and all the main application features are working as expected, you're ready to start coding. CONGRATS!!!

Environment Configuration Details

Backend framework and language

- Spring Boot 4.0.2
- Java 21
- Maven Wrapper

Database configuration

For local PostgreSQL through Docker Compose

The default local database connection is:

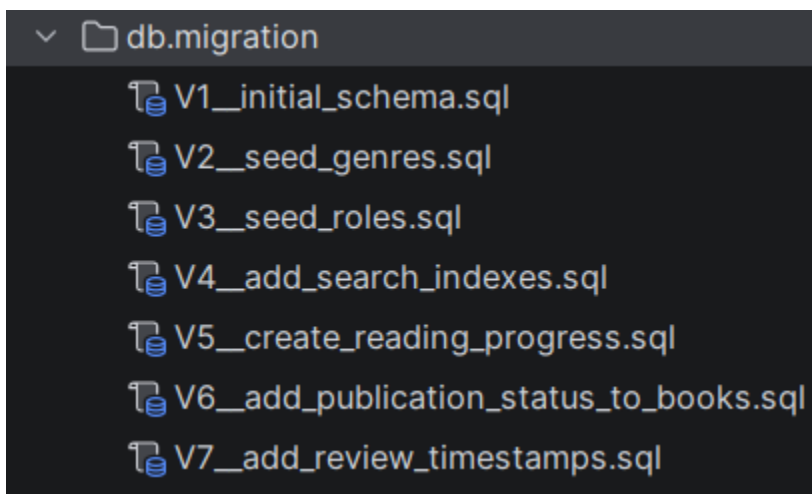
```
datasource:  
url: jdbc:postgresql://localhost:5432/bf_database  
username: ${DB_USERNAME}  
password: ${DB_PASSWORD}
```

The Docker Compose file defines:

- PostgreSQL image: postgres:16
- Database name: bf_database
- Database port: 5432

Flyway migrations

Database schema creation and updates are handled with Flyway.



These scripts are executed automatically when the backend starts. They include schema initialization, role, and genre seeds, search indexes, reading progress support, publication status support, and review timestamp support.

Main Backend configuration file

The main backend configuration file is in: *src/main/resources/application.yaml*

This file defines:

- Database connection behavior
- JPA and Hibernate settings
- Flyway configuration
- JWT settings
- AWS S3 integration
- Optional demo seed behavior

Required environment variables

```
DB_USERNAME=<username>
DB_PASSWORD=<password>

JWT_SECRET=<32 bit key>
JWT_EXPIRATION_MS=86400000

AWS_REGION=us-east-1
aws.s3.bucket=book-finder-chapter-capstone2-2026

AWS_ACCESS_KEY_ID=AKIASVML76LRRYJPXRUL
AWS_SECRET_ACCESS_KEY=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
```

DB_USERNAME: PostgreSQL for local or deployed database.

DB_PASSWORD: PostgreSQL password for the configured database user.

JWT_SECRET: Secret key to validate JSON Web Tokens.

JWT_EXPIRATION_MS: Token expiration in milliseconds.

AWS_REGION: AWS region where the bucket is hosted.

AWS_S3_BUCKET: Name of the S3 bucket used for chapter content and cover.

AWS_ACCESS_KEY_ID: AWS access key with permission to use the configured S3 bucket.

AWS_SECRET_ACCESS_KEY: Secret key associated with the AWS access key.

Frontend configuration

The frontend is a static client-side project and does not require compilation. Its behavior depends on the backend API endpoints referenced in the JavaScript files.

In production, the frontend communicates directly with the deployed backend on Railway. For full local testing, the API base must be changed to <https://localhost:8080>

CORS considerations

The backend configuration allows frontend requests from:

- <https://localhost:5500>
- The deployed GitHub Pages domain

The local frontend should be served from a local origin, such as <http://localhost:5500>. Rather than opening in a way that bypasses that original structure.

Deployment environment

The current environment deployment uses:

- Frontend: GitHub Pages
- Backend: Railway
- Database: Railway PostgreSQL
- Storage: AWS S3

This allows the application to remain accessible online even when the local development environment is not running.

Below are some images of the deployment environment, showing Book-Finder on Railway—running the backend and database—and GitHub Pages, which hosts the web frontend.

Postgres

Online

postgres-volume

Book-Finder

book-finder-production-5c8...

Online

Book-Finder

Deployments Variables Metrics Settings

book-finder-production-5c8b.up.railway.app

java@21.0.2 us-west2 1 Replica

ACTIVE

Disable demo data seeding by default Change APP_DEMO_SEED_ENABLED default fro...

2 weeks ago via GitHub

View logs

Deployment successful

HISTORY

REMOVED

Fix demo seeder usernames, emails; enable seeding Adjust DemoDataSeeder to separa...

2 weeks ago via GitHub

REMOVED

Update application.yaml

2 weeks ago via GitHub

Postgres

Online

postgres-volume

Book-Finder

book-finder-production-5c8...

Online

Postgres

Deployments Database Backups Variables Metrics Settings

Data Stats Config

Connect

SELECT * FROM flyway_schema_history

book_genres

book_hashtags

books

chapters

flyway_schema...

genres

hashtags

reading_progress

reviews

roles

series

user_roles

users

Deployments

All deployments

Environments

github-pages

github-pages deployments

Latest deployments

github-pages

Last deployed last week

<https://miamader.github.io/Book-Finder/>

Filter Filter deployments

74 deployments

Merge pull request #15 from miamader/mia-frontend

Active

Deployed to github-pages by miamader via Deploy Frontend to Pages #74

main (#15)

last week

Update dashboard.css

Deployed to github-pages by Dante54321 via Deploy Frontend to Pages #73

main

2 weeks ago

Revert "Update dashboard.css"

Deployed to github-pages by Dante54321 via Deploy Frontend to Pages #72

main

2 weeks ago

Conclusion

Following the steps outlined in this guide enables another developer or an evaluator to understand Bookfinder's technical setup, configure all its environment variables, and run the project for development or demonstration purposes. This guide also documents the key infrastructure dependencies utilized by the application and provides a clear reference for future maintenance or project continuity.

References

1. <https://www.figma.com/design/4RVtsu39zNDmn9EUxndGci/BookFinder-Mockup?node-id=0-1&p=f>
2. <https://miamader.github.io/Book-Finder/>
3. <https://docs.google.com/document/d/12W9kn211xc9j3A9DQK58k4hvBsQ47ndydBMI9X6rns8/edit?tab=t.v79sr811fcbe>
4. <https://docs.google.com/document/d/1RG79ei1I5zxIL04HMEu74pwyikIdsg8S13klqdYYLGQ/edit?usp=sharing>
5. <https://github.com/>
6. <https://github.com/miamader/Book-Finder>