



BOOKIFY PROJECT REPORT

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**MODULE:
ADVANCED JAVA**

**DATE:
24 - 02 - 2025**



INTRODUCTION

Reading has always been one of the most beneficial hobbies for people of all ages. It has become increasingly important for a person to read at least two books a year, for the sake of self-improving, and nourishing their educated side.

In order to make this process easier, this project aims to provide a user friendly platform that allow reader and authors to have a shared space alongside a personal space for each. In this web application, two types of users exist, a reader and an author. Each of them has their own personalized library where they get to organize their books and readings according to the corresponding state, and each have the possibility to interact with each other, either by book reviews, or books chat rooms.

Bookify, is a digital solution that's sole purpose is to engage readers in their reading journey more, and ease their way into getting into the world of each book.



GENERAL PRESENTATION

OBJECTIVES:

- Digital transformation support: Allow users to have digital versions of well-organized libraries.
- Simplifying client operations: A user-friendly interface to simplify the user experience, while offering them a personalized version of a library.
- Adaptability: Each library is made specifically according to the user's choices, to make the organization more convenient.

SERVICES:

- Digital transformation support: Allow users to have digital versions of well-organized libraries.
- Simplifying client operations: A user-friendly interface to simplify the user experience, while offering them a personalized version of a library.
- Adaptability: Each library is made specifically according to the user's choices, to make the organization more convenient.
- Security measures: A token is generated each time a user logs in, and is used to confirm every operation as it contains the current user's identification and role.
- Constant updates: All dashboards are updated once a new book is published or reviewed.



CONCEPTION (UML)

CATEGORIES OF USERS:

- **Reader:** is able to create an account, and login after their account is verified. He/ she can add books to three defined categories (Read, Currently Reading, and Want To Read). They can review books, and view each book's detailed information.
- **Author:** has all the functionalities a reader has, plus the ability to publish books.

MANAGEMENT RULES:

- Each author can have none or many books.
- Each book has at least one or many authors.
- A book can belong to none or many users' categories.
- Only Authors has the ability to publish books.
- A user can look up books based on their genres (Fantasy, Horror, Philosophy ...)
- Each book can have many reviews.
- Each review belong to one book.

UML CONCEPTION:

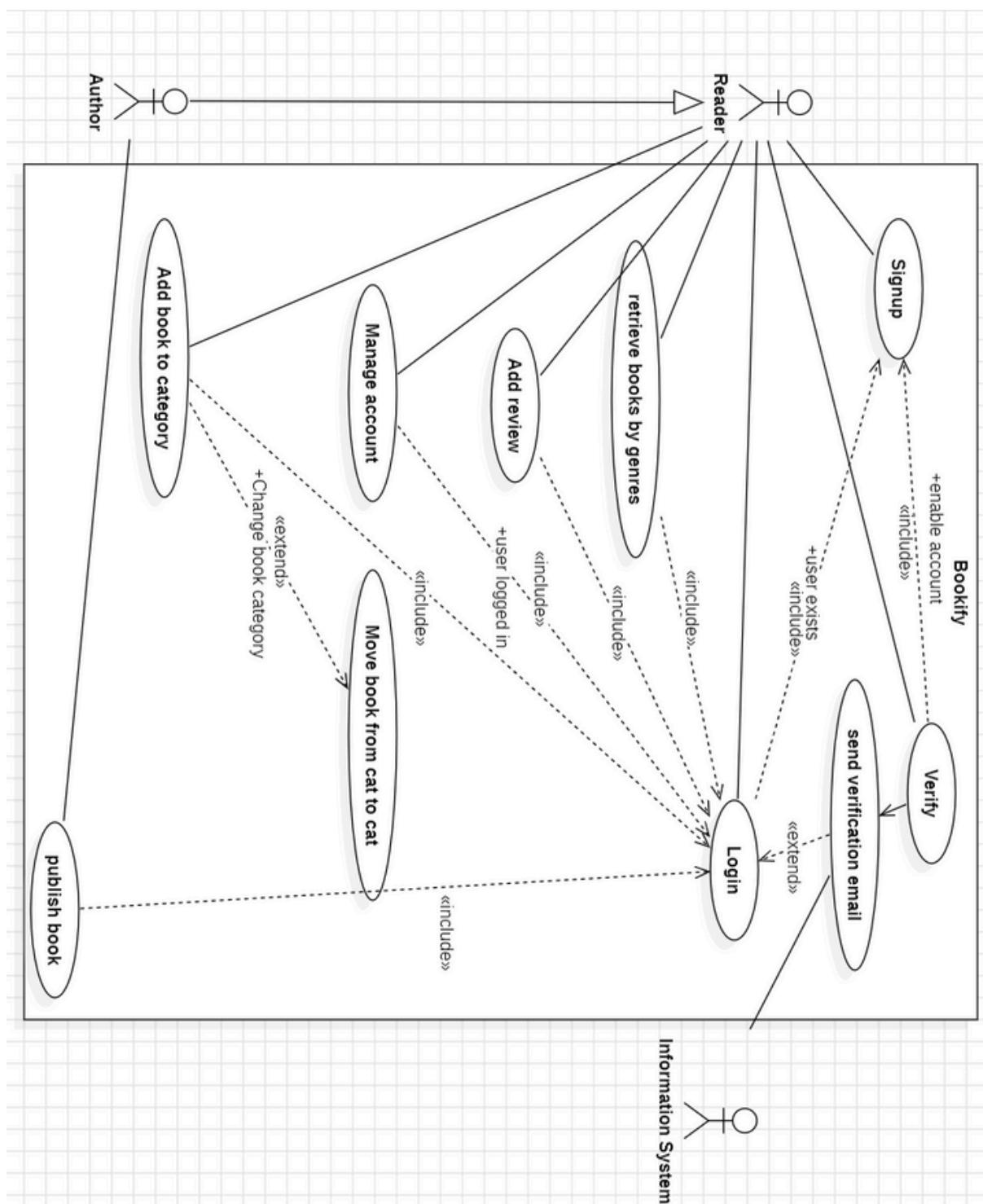
Unified Modeling Language (UML) is a standard notation for modeling real world objects as a first step in designing an object-oriented system. It eases the communication between developers and the rest of the teams that have nothing to do with programming.

While UML is not a programming language, it can provide visual representations that help software developers better understand potential outcomes or errors in programs.



CONCEPTION (UML)

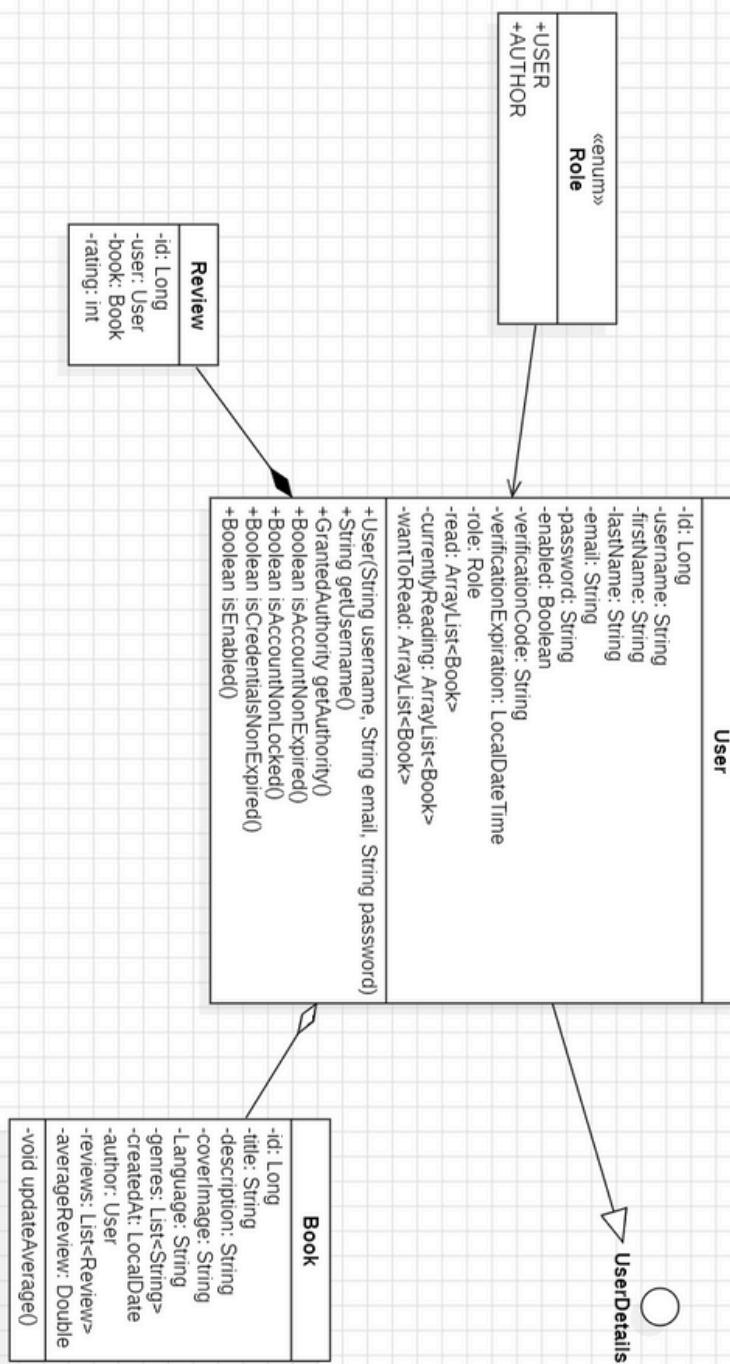
USE CASE DIAGRAM:





CONCEPTION (UML)

CLASS DIAGRAM:





DEVELOPMENT TOOLS:

SPRING BOOT:

Spring Boot is an open-source framework built on top of the Spring platform that simplifies the process of developing and deploying Java applications. It offers auto-configuration, embedded servers, and a collection of starter dependencies that eliminate the need for extensive boilerplate code and manual configuration. This means developers can focus on writing business logic rather than spending time setting up infrastructure, making Spring Boot ideal for creating micro-services and scalable, production-ready applications.



JAVA:

Java is a high-level, object-oriented programming language known for its portability, robustness, and extensive ecosystem. It was designed with the philosophy of "write once, run anywhere," meaning that compiled Java code can run on any device equipped with a Java Virtual Machine (JVM). This versatility has made Java a popular choice for building everything from web and mobile applications to large-scale enterprise systems. With a rich set of libraries and frameworks, strong community support, and continuous evolution over the years, Java remains a fundamental language in the software development world, powering a wide array of applications across various industries.



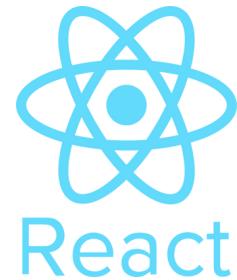


DEVELOPMENT TOOLS:

REACT

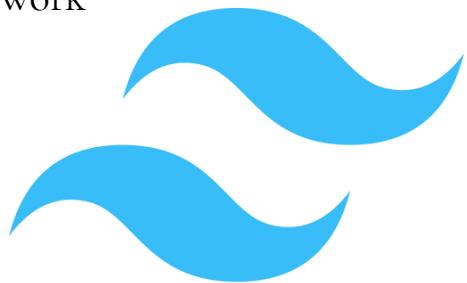
React is a popular JavaScript library for building dynamic and interactive user interfaces.

Developed by Facebook, it emphasizes a component-based architecture that allows developers to create encapsulated, reusable UI elements. This modular approach not only simplifies the development process but also makes it easier to manage the state and lifecycle of applications. With its efficient virtual DOM, React optimizes rendering by updating only the parts of the interface that have changed, resulting in fast and responsive web experiences.



TAILWINDCSS:

Tailwind CSS is a modern, utility-first CSS framework that enables rapid, custom UI development by using a comprehensive set of pre-defined utility classes. Rather than relying on traditional component-based frameworks, Tailwind offers low-level building blocks that let you apply precise styling directly within your HTML. This approach provides granular control over design elements, allowing for highly customizable and responsive interfaces while keeping the CSS footprint minimal. Tailwind's extensive configuration options and responsive design utilities streamline the development process, making it easier to maintain consistency and iterate on designs quickly.





DEVELOPMENT TOOLS:

POSTGRESQL:

PostgreSQL is a robust, open-source relational database management system renowned for its advanced features and strict adherence to SQL standards. It offers comprehensive support for complex queries, ACID-compliant transactions, and multi-version concurrency control (MVCC), ensuring data integrity and reliability. With its extensible architecture, PostgreSQL allows developers to define custom functions, data types, and operators, making it highly adaptable to a wide range of applications—from small-scale projects to large enterprise systems. Its active community and continuous enhancements keep PostgreSQL at the forefront of modern database technology.



POSTMAN

Postman is a comprehensive API development and testing platform that streamlines the process of creating, testing, and monitoring APIs. It provides an intuitive interface for constructing requests, inspecting responses, and managing API collections, making it easier for developers and testers to collaborate. With features like automated testing, environment variables, and seamless integration with continuous integration pipelines, Postman enables teams to efficiently validate API functionality and performance throughout the development lifecycle.





WEB APPLICATION INTERFACES:

SIGNUP PAGE:

The following figure displays a registration form that allows users and authors to create their accounts. Then a verification code is sent to confirm the user's email.

FIRST NAME

LAST NAME

USERNAME

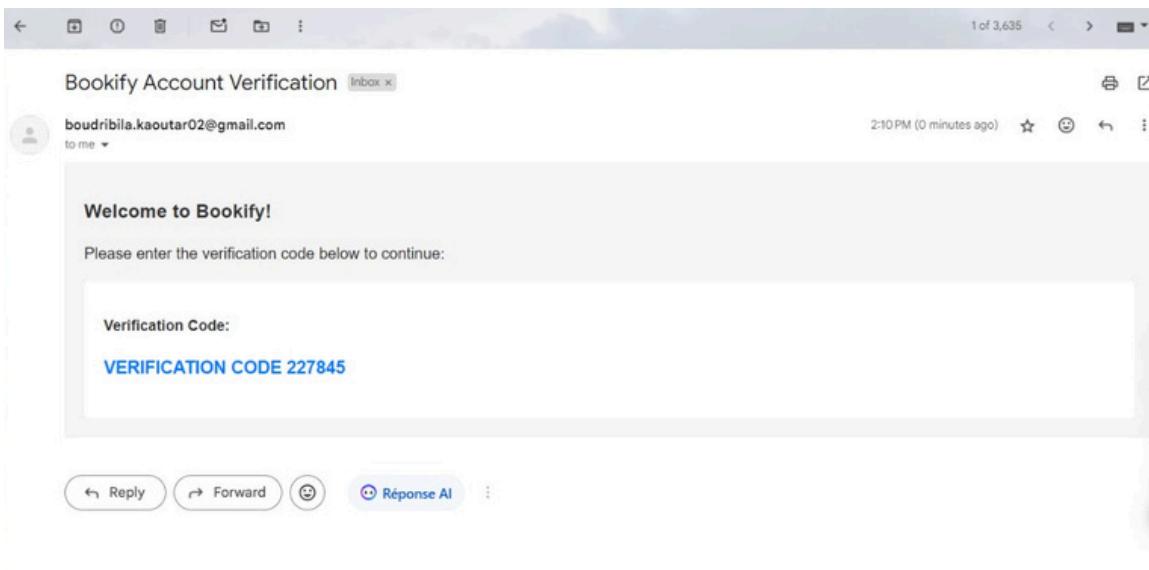
USER

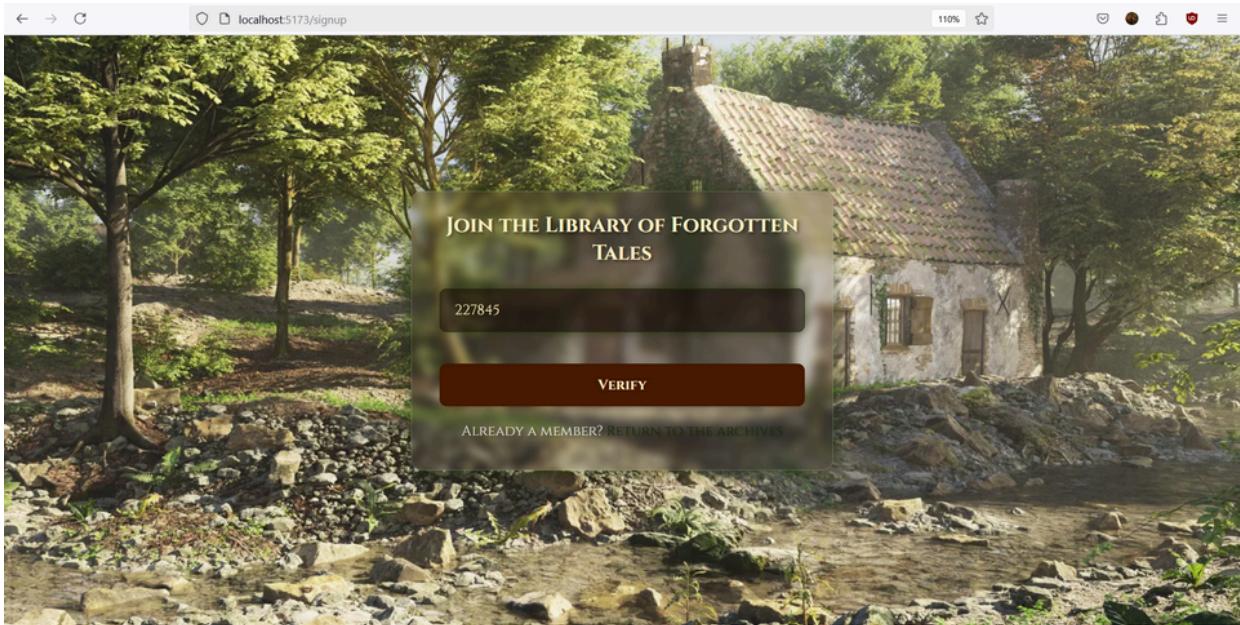
EMAIL

PASSWORD

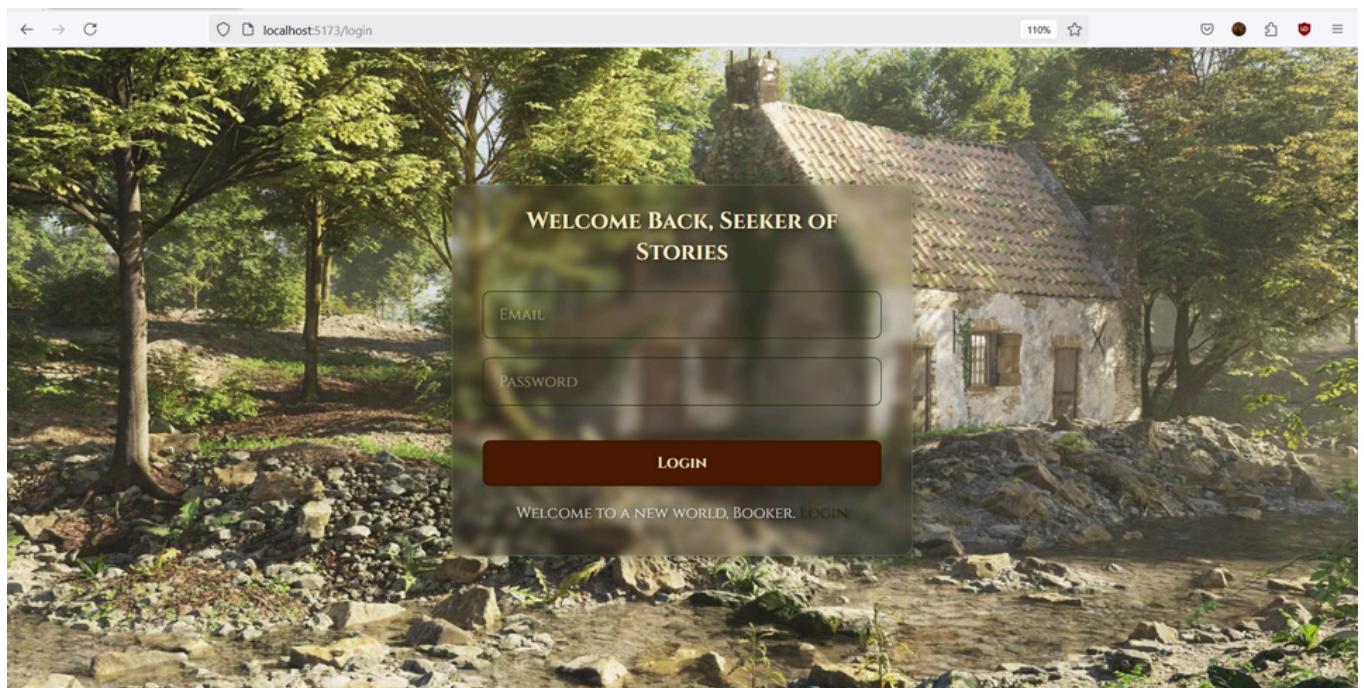
SIGN UP

ALREADY A MEMBER? RETURN TO THE ARCHIVES





After entering a valid verification code, the user will be directed to the login page to authenticate.





localhost:5173/dashboard

110% ⭐

WELCOME TO YOUR MAGICAL LIBRARY ✨

LIBRARY DASHBOARD

MY LIBRARY

- Want to Read
- Currently Reading
- Read
- Publish New Book

GENERAL

- Explore
- Profile

FOURTH WING BY REBECCA YARROS

POWERLESS BY LAUREN ROBERTS

A COURT OF THORNS AND ROSES BY SARAH J. MAAS

ONE DARK WINDOW BY KAMI GARCIA

The user is greeted with this dashboard the moment he enters the web application.

LIBRARY DASHBOARD

MY LIBRARY

- Want to Read
- Currently Reading
- Read
- Publish New Book

GENERAL

- Explore
- Profile

Logout

FOURTH WING BY REBECCA YARROS

"The most brutally addictive fantasy I've read in a decade!"
—NYT BESTSELLING AUTHOR TRACY WOLF

MAIDEN. MONSTER. MARTYR.

FLY OR DIE

ONE DARK WINDOW

A BOOK ABOUT DRAGONS AND HUMANS. A DRAGON WITHOUT ITS RIDER IS TRAGEDY. A RIDER WITHOUT THEIR DRAGON IS DEAD.

Want to Read Buy on Amazon

Back to Library

When one of the books is clicked, a new page with detailed information about it appear. with a button to allow the user to add this book to whichever category they wish to add this book to.



As example, if the users chooses to add this book to the 'Currently Reading' category, then all they need to do is choose the option and then they can view the selection inside this category, if they click on the corresponding button from the dashboard.

localhost:5173/dashboard/WantToRead

Book Cover	Title	Description
	FOURTH WING	A BOOK ABOUT DRAGONS AND HUMANS. A DRAGON WITHOUT ITS RIDER IS TRAGEDY. A RIDER WITHOUT THEIR DRAGON IS DEAD.
	POWERLESS	SHE HAS THE HOBBIES OF BOTH A GRANDMOTHER AND A CHILD: KNITTING, LASER TAG, HAMMOCKING, WORD SEARCHES, AND COLORING
	ONE DARK WINDOW	DZAIKHESO

This page contains all the books that the user has set in this category



PUBLISH A NEW BOOK

BOOK TITLE

COVER IMAGE URL

BOOK DESCRIPTION

SELECT GENRES:

FANTASY ROMANCE THRILLER SCIENCE FICTION
 MYSTERY NON-FICTION

ENGLISH

PUBLISH BOOK

VIEW PUBLISHED BOOKS

BACK TO DASHBOARD

And finally, this step is made for authors only. If they click the 'Publish Book' button from the dashboard, they get this form that they need to fill. And then the book is automatically added to the public collections of books, and displayed to all the users in the web app



CONCLUSION:

This web application serves as linking tool that gathers all the people who have a reading passion. It makes it easier for authors to make a name for themselves, and for the users to organize their reading habit, as well as give review to books which can only be done if the book is under the 'Read' category.

With the many tools used for the purpose of making this web application, it was simpler to handle many complicated tasks, and focus of the important parts of it. And it can still go under a lot of development before it can be considered a decent-enough-product for the public. A lot of work and enhancements can be performed on this project, such as adding chat rooms for each books, and allowing users to follow their favorite authors, as well as including digital formats of the book in question to centralize this system, and make it more user-friendly.