

# **BookMark**

Technical report on an Android application



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# Introduction

BookMark is an application which allows its users to track their personal reading goal. The idea is to have visual representation of reading progress and to keep track of read books. Users can create their bookshelves (collection of books); search for titles, authors and genre; comment and rate books.

In this technical report will be covered competitor analysis which includes ranking and reviews of competitor application, user research with set of questions, results and analysis of those responses. Based on those information Personas will be created, as a representation to various groups found during the research, for each persona there is scenario.

At last, there will be Navigation map of application and Prototype (created using Justinmind)

Finally, there is overview of the development of the applications, with detailed instructions.

# Design

## Competitor analysis, reviews and ranking

Applications that are considered are *Goodreads: Book Reviews* and *TBR – Bookshelf*. Both applications are listed among 5 Best Reading Apps for Book Tracking and Book Reviews<sup>1</sup>. Of these two, the *Goodreads* is more popular, has most similar features to what BookMark is supposed to represent and also has more ratings and users.

The data collection process involved aggregating comments and reviews from various platforms, including app stores, forums, and social media platforms.

### Reviews

The data collected during the search of comments and reviews provided valuable insights into user experiences, sentiments, and preferences. The analysis of the collected data uncovered several noteworthy findings, providing a comprehensive understanding of users' perceptions and feedback regarding the specific mobile applications under examination.

Here are some key observations from the data:

#### Advantages

Based on the reviews and feedback from users, several *advantages* of the reviewed applications were identified. Users noticed *large range of books*, offering a diverse selection to cater to different interests and preferences. Additionally, users highlighted the ability to *write reviews and evaluate books*, enabling them to share their thoughts and opinions with the community. Another appreciated feature was the ability to *keep track of their books*, allowing users to easily manage their reading lists and track their progress. Users found the platforms *challenging and inspiring*, with features that encouraged them to explore new genres and authors. Overall, these findings demonstrate the positive impact of the applications on users' reading experiences.

#### Suggestions

Based on the reviews of users, several *suggestions* for improvements were highlighted regarding the reviewed applications. The most frequently suggested enhancement was to enable *0.5 ratings*, allowing users to provide more detailed feedback and reflect their precise evaluation of a book (e.g., 3.5 stars). Users also expressed a desire for a *modern interface*, stating that the current designs appeared outdated and in need of a visual refresh. Another commonly mentioned issue was the *complexity* encountered while searching for books, as users found themselves presented with multiple editions, which could be confusing. Additionally, users mentioned that the *small buttons* in the interface increased the likelihood of making mistakes during book selection. A notable recommendation from users was the addition of an option to *remove books from their shelves*, providing greater control and flexibility in managing their collections. These findings highlight specific areas where the application can be improved to enhance user experience, streamline book searches, and introduce features that align with users' preferences and needs.

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<sup>1</sup> <https://www.parcel2go.com/content-hub/goodreads-and-other-book-tracking-apps>

## Ranking

By examining the rankings of mobile applications on Google Play and the App Store, we aim to provide valuable insights for development of our own application.

### Goodreads: Book Reviews

No.7 in Top Chart (Books category) on AppStore<sup>2</sup>

8.2k ratings with 4.6 ★ on AppStore

136k reviews with 3.1 ★ on Play Store

### TBR – Bookshelf

No.33 in Top Chart (Books category) on AppStore

Unlike the Goodreads, TBR has visual representation of books that are read, represented as real-life shelves, but as for the other properties, it is much simpler and limited.

## User research

User Research phase is a crucial step in understanding the main requirements of the app's potential users. A conscious effort was made to target individuals who closely resembled the hypothetical prototype of the typical user.

To gain clearer insights and refine our understanding, a survey was conducted involving a sample of 10 individuals. This survey aimed to gather feedback through a series of questions. The primary objectives were to obtain valuable input on how to implement new functions within the application and to gather information for creating the user profile. By engaging participants in this survey, we aimed to gather diverse perspectives and gather actionable suggestions that would contribute to improving the application's functionality and user experience.

The survey includes 4 sets of questions, which are: General demographic questions about the subject, Reading habits, Technical skills (knowledge of operating mobile applications) and Questions related to the application.

### The questions

The following questions were presented to the users:

General demographic questions about the subject

- [1] Age?
- [2] Gender?
- [3] Occupation?
- [4] Primary language?
- [5] Level of proficiency in English?

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<sup>2</sup> Top Chart includes applications for reading, not only for tracking progress/managing books

## Reading habits

- [1] Are you an active reader? *yes/no*
- [2] Do you have a reading goal? *yes/no*
- [3] Do you find it difficult to keep up with your goal? *yes/no*
- [4] Select possible reasons for tracking your reading goal and using the application:
  - ~ *Set and achieve a reading goal to read more books for pleasure*
  - ~ *Discover new authors and genres*
  - ~ *Stay motivated to read regularly*
  - ~ *Stay engaged with technology and learn new digital skills*
  - ~ *Develop a daily reading habit*
  - ~ *Read books from different genres to broaden my horizons*
  - ~ *Track my reading progress and set achievable goals*
  - ~ *Other: \_\_\_\_\_*
- [5] Select some of the frustrations that are related to you:
  - ~ *Busy schedule*
  - ~ *Difficulty finding time to read for pleasure outside of work*
  - ~ *Lack of knowledge on where to find good book recommendations*
  - ~ *Limited experience with technology*
  - ~ *Difficulty navigating complex digital interfaces*
  - ~ *Lack of familiarity with e-books and digital reading*
  - ~ *Lack of motivation*
  - ~ *Other: \_\_\_\_\_*

## Technical skills (knowledge of operating mobile applications)

- [1] Do you use mobile applications on a daily basis?
- [2] Do you know how to download and install an application from the app store on your mobile device?
- [3] Are you comfortable with navigating through mobile applications using gestures and touch controls?
- [4] Are you familiar with using search features within an application?
- [5] Are you familiar with common mobile application interfaces such as menus, lists, and buttons?
- [6] Have you used any other mobile applications in the past that are similar to this one?

## Questions related to the application

- [1] Have you ever used a reading goal tracking application before or any other way of tracking progress? *yes/no*
- [2] Do you prefer to set reading goals based on the number of books or pages read or based on a specific time frame? *Number of books read/Number of pages read/Specific time frame/ All of the above*
- [3] Would you be interested in a social feature to connect with other readers in a reading goal tracking application? *yes/no*
- [4] Select features that would be useful to you: *book rating, commenting, liking comments, creating groups, other*

## Results

### General demographic questions about the subject

The age range of the survey respondents spans from 17 to 74 years, with an average age of 33 years. The survey achieved a balanced representation of both males and females within the participant group.

Among the participants, 50% identified themselves as students in terms of occupation. The remaining participants were distributed as follows: retirees, high school students, mechanical engineers, professors, and school librarians, each comprising 10% of the total.

The majority of participants, accounting for 90%, reported Serbian as their primary language, while the remaining participants indicated French as their primary language. Among the participants, 50% classified themselves as advanced or proficient English speakers, 30% as independent English speakers, and the remaining 20% as having basic English skills.

### Reading habits

The section on reading habits ensures that the participants taking this survey are relevant to the mobile application. By exploring their reading habits, we can determine if they align with the target audience of the application. Also, this section acts as an introduction for the rest of the survey.

The majority, which includes 90%, of the subjects in this survey are identified as active readers. Additionally, among the participants, 50% have set reading goals, with more than 50% of those individuals are facing challenges in maintaining their goals.

A significant portion, 60% of the respondents, stated setting and achieving a reading goal to read more books for pleasure, discovering new authors and genres developing a daily reading habit as their main reasons for tracking their reading goal and using the application. While a slightly smaller number of participants ,40% of them, expressed staying motivated to read regularly as a reason for using the application. Followed by 30% of the respondents indicating their desire to read books from different genres in order to broaden their horizons. Another response, suggested also by 30% of the participants, was to track their reading progress and set achievable goals using the application. Additionally, 20% of the respondents mentioned their interest in staying engaged with technology as a motivating factor for making use of the application.

The majority of the subjects (70%) expressed challenges in finding time to reading for pleasure outside of their work commitments, followed by 50% of subjects having busy schedule. A notable portion, 30% of the participants, identified a lack of motivation as a key issue affecting their reading habits. Lack of familiarity with e-books and digital reading is found to be frustration for 20% of participants. The least significant proportion, only 10%, stated that the frustrations they associate with are lack of knowledge on where to find good book recommendations, limited experience with technology and difficulty navigating complex digital interfaces.

### Technical skills (knowledge of operating mobile applications)

The primary objective of the section on technical skills, specifically the knowledge of operating mobile applications, is to assess the participants' proficiency and familiarity with using mobile apps. This section aims to evaluate their level of comfort, understanding, and competence in using various features and functions commonly found in mobile applications. By exploring their technical skills in this context, we can gain insights into their ability to navigate, interact with, and effectively utilize mobile applications, thereby informing potential improvements or support mechanisms to enhance the user experience.

This set of questions is measured on a scale from 1 to 5, stating the level of agreement, where 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree and 5 = Strongly Agree.

The findings reveal that 80% of participants use mobile applications on a daily basis. Additionally, 90% of the participants are knowledgeable about downloading and installing applications from the app store on their mobile devices, while 10% hold a differing opinion. Furthermore, 80% of the participants exhibit comfort in navigating through mobile applications using gestures and touch controls, and they are familiar with utilizing search features within applications. In addition to the previous findings, a significant 70% of the respondents are also familiar with common mobile application interfaces, including menus, lists, and buttons. A significant 40% of the subjects have prior experience using other mobile applications that are similar to the one being addressed. On the other hand, a mere 10% of the participants have never used such applications before.

### Questions related to the application

The following section focuses on questions related to the application and explores various considered implementations and corresponding responses. This section delves into the different aspects of the application's functionality and features, aiming to gather insights into potential improvements, alternative approaches, and the respondents' feedback on these considerations. By examining their responses and suggestions, we can gain a deeper understanding of their perspectives and preferences, which will inform future enhancements and decision-making processes related to the application.

Most of the subjects, in fact, have never tracked their reading goals in any manner. Still, a 60% of participants expressed a preference for setting reading goals based on the number of books. In contrast, only 10% indicated a preference for setting goals based on the number of pages read. In addition, it is worth mentioning that 20% of participants expressed their inclination to use a time frame as their reading goal. It is important that half of the participants expressed an interest in using the social features of the application. Among those individuals, 80% expressed a desire to rate books and write reviews, while 20% stated their preference for liking reviews. In contrast, only a negligible number of participants indicated their intention to create or join groups within the application.



## User personas

Following the analysis of the user questionnaire, we proceeded to develop the profiles of three personas that aligned with the respondents who participated in the questionnaire. By carefully considering the collected data and insights, we were able to create representative personas that accurately reflected the characteristics and behaviours of our target users.

### Persona 1



**CHARLOTTE MURPHY**

"Reading is to the mind what exercise is to the body." Joseph Addison

**Age** : 35

**Gender** : Female

**Occupation** : Librarian

**Address** : London, UK

#### ABOUT

Charlotte has been a librarian for 10 years and is passionate about reading and promoting literacy. She spends most of her days surrounded by books and loves recommending books to library patrons. Charlotte is an avid reader herself and enjoys reading a variety of genres, but she struggles to find time to read for pleasure outside of work. She wants to set a reading goal for herself and track her progress, but she's not sure where to start.

#### GOALS

- Set and achieve a reading goal to read more books for pleasure
- Discover new authors and genres
- Read books from different genres to broaden my horizons

#### FRUSTRATIONS

- Busy schedule
- Difficulty finding time to read for pleasure outside of work

#### TECHNOLOGY SKILLS

Downloading application

Navigating through application

Internet

#### READING GOAL

Active reader

Tracks reading goal

Difficulty tracking goal

#### FAVOURITE BOOK



**The Alchemist**  
Paulo Coelho

## Persona 2



**EMMA MERCIER**

"You can never get a cup of tea  
large enough or a book long  
enough to suit me."  
C.S. Lewis

**Age** : 20  
**Gender** : Female  
**Occupation** : Student  
**Address** : Paris, France

### ABOUT

Emma, a college student in her sophomore year, has a passion for reading and has been an active reader since she was young. While majoring in French Literature, she experiences a lack of motivation rather than a lack of time when it comes to balancing her coursework with her personal reading goals. She aspires to restore her motivation and find ways to stay inspired in her reading journey.

### GOALS

- Stay motivated to read regularly
- Develop a daily reading habit
- Track my reading progress and set achievable goals

### FRUSTRATIONS

- Lack of knowledge on where to find good book recommendations
- Busy schedule
- Lack of motivation

### TECHNOLOGY SKILLS

Downloading application



Navigating through application



Internet



### READING GOAL

Active reader



Tracks reading goal



Difficulty tracking goal



### FAVOURITE BOOK



**The Song of Achilles**  
Madeline Miller

## Persona 3



**MATTEO BIANCHI**

"The purpose of life is to contribute in some way to making things better."  
Robert F. Kennedy

**Age** : 65  
**Gender** : Male  
**Occupation** : Retired  
**Address** : Florence, Italy

### ABOUT

Matteo recently retired from his job as a college professor. He has always been an passionate reader and wants to continue reading in his retirement. However, he finds it challenging to keep track of the books he has read and to discover new books and authors to read. Matteo has limited experience with technology, but he has a basic understanding of how to use a smartphone.

### GOALS

- Stay motivated to read regularly
- Stay engaged with technology and learn new digital skills
- Develop a daily reading habit

### FRUSTRATIONS

- Limited experience with technology
- Lack of knowledge on where to find good book recommendations
- Difficulty navigating complex digital interfaces

### TECHNOLOGY SKILLS

Downloading application



Navigating through application



Internet



### READING GOAL

Active reader



Tracks reading goal



Difficulty tracking goal



### FAVOURITE BOOK



**To Kill A Mocking Bird**  
Harper Lee

## Scenarios

### Scenario 1

Charlotte had always loved reading and spent most of her days surrounded by books at the library. However, she found it difficult to find time to read for pleasure outside of work, and it had been months since she had finished a book. Charlotte knew she needed to make a change and set a reading goal for herself.

One day, a colleague at work recommended a reading goal application that had helped her set and achieve her reading goals. Charlotte was intrigued and decided to give it a try. She downloaded the app on her phone and started exploring the features.

The app had different reading challenges to choose from, such as reading a certain number of books in a month or reading books from different genres. Charlotte decided to set a goal of reading one book a month for the next six months. The app also had a personalized book recommendation feature, where Charlotte could input her reading preferences and get suggestions for new books to read. She was excited to discover new authors and genres she had never explored before.

As Charlotte started reading regularly, she began to feel more motivated and engaged in the books she was reading. She also discovered a social feature on the app, where she could connect with other readers and share her progress and thoughts on the books she was reading.

Thanks to the reading goal application, Charlotte was able to set and achieve her reading goals, expand her reading horizons, and stay motivated to read regularly.

### Scenario 2

Emma was a college student who loved to read in her free time. However, with a busy class schedule, studying for exams, and working a part-time job, she found it hard to make time for reading. Emma wanted to set a goal to read more books this semester, but she wasn't sure where to start.

One day, Emma was scrolling through social media and saw an ad for a reading goal application. Intrigued, she decided to download the app and see if it could help her achieve her reading goals.

The app had various books and authors to choose from. Emma decided to set a goal of reading at least five books for the rest of the second semester.

The app also had a feature where she could track her reading progress, which was helpful in motivating her to read more. Emma found it satisfying to see her progress increase as she completed more books.

Another feature of the app was writing reviews where she could discuss books with other users of the app. Emma loved connecting with other readers and sharing her thoughts on the books she was reading.

Thanks to the reading goal application, Emma was able to stay on track with her reading goals, find new books to read, and connect with other readers. She was also able to balance her busy schedule and make time for the hobby she loved.

### Scenario 3

Matteo had recently retired from his job and was looking for ways to keep his mind sharp and stay active. He had always been an avid reader, but with more free time on his hands, he wanted to set a goal to read more books and expand his reading horizons.

One day, Matteo's granddaughter visited him and noticed that he was reading a book. She recommended a reading goal application to him, which she used to track her own reading progress. Matteo was initially hesitant, as he wasn't very tech-savvy, but his granddaughter helped him download and set up the app on his tablet.

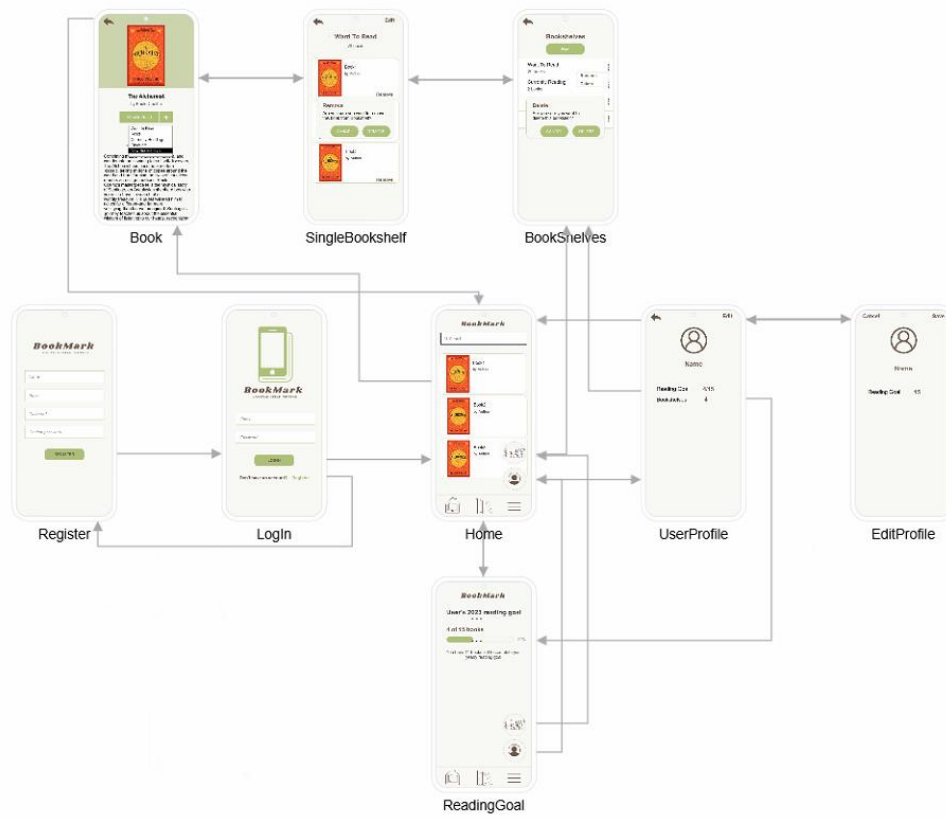
The app had various reading challenges to choose from, such as reading a certain number of books in a month or reading books from different genres. Matteo decided to set a goal of reading at least one new book every week.

The app was user-friendly and easy for Matteo to navigate. It had a feature where he could search for books by title, author, or genre, which made it easy for him to find new books to read. He also appreciated the personalized book recommendations the app provided based on his reading history.

The app's tracking feature was especially helpful for Matteo, as he could keep track of the books he had read and the ones he wanted to read next. The app also had a social feature where he could connect with other readers and view book ratings.

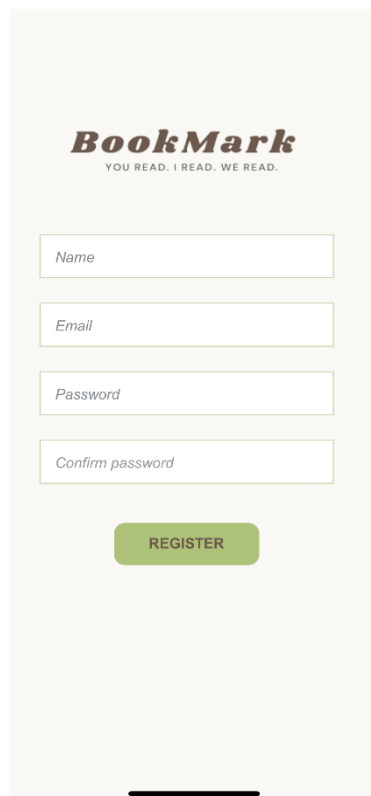
Thanks to the reading goal application, Matteo successfully established and accomplished his reading goals, while also exploring new books and authors. He enjoyed the challenge of setting new goals and the satisfaction of reaching them, which kept him motivated to continue reading and learning.

## Navigation map - before development



## Prototype

In next views would be presented prototype, made using Justinmind.



**BookMark**  
YOU READ. I READ. WE READ.

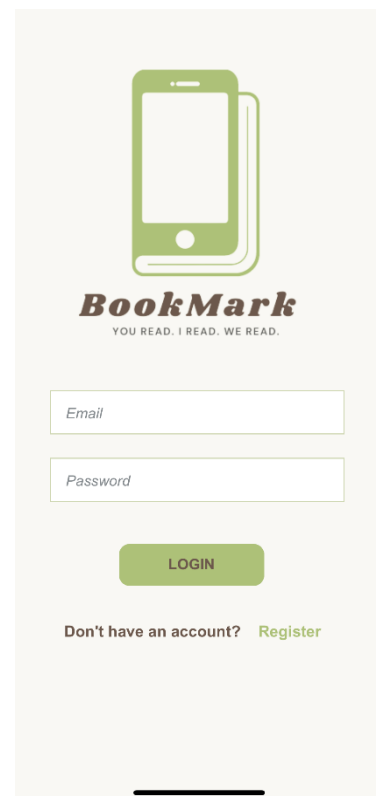
Name


Email

Password

Confirm password

REGISTER





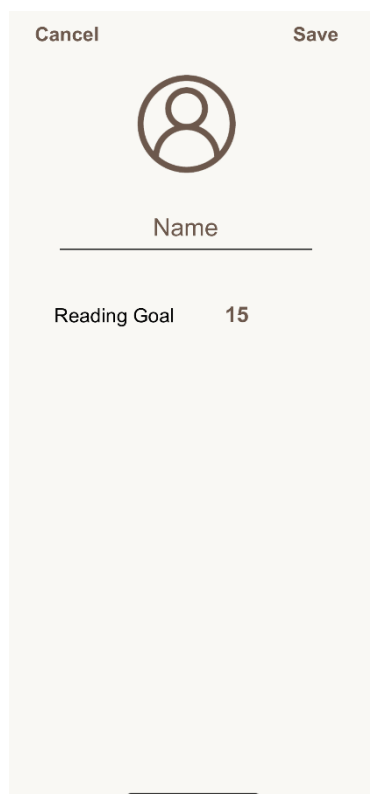
**BookMark**  
YOU READ. I READ. WE READ.

Email


Password

LOGIN

Don't have an account? [Register](#)

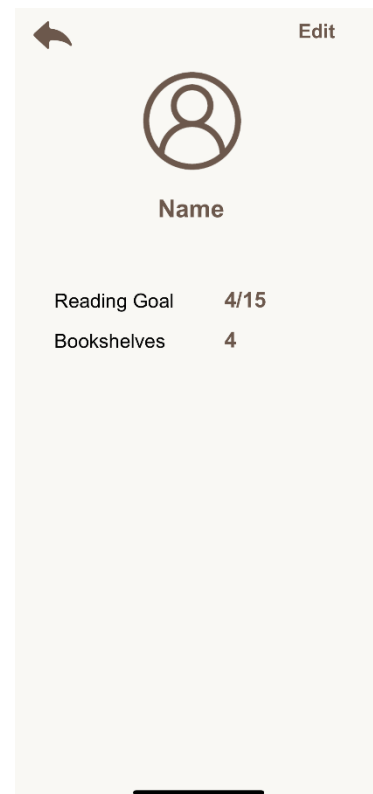



Cancel Save




Name

Reading Goal 15



 Edit

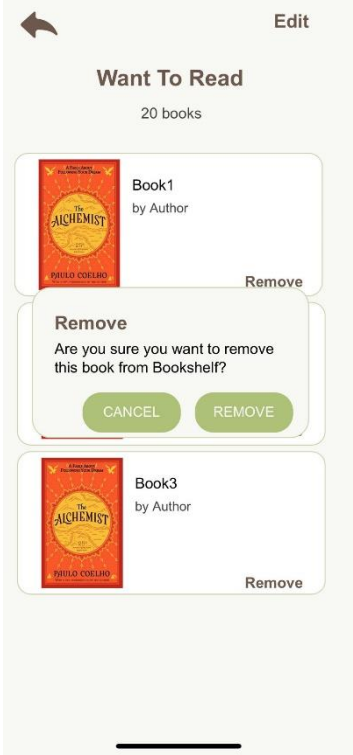
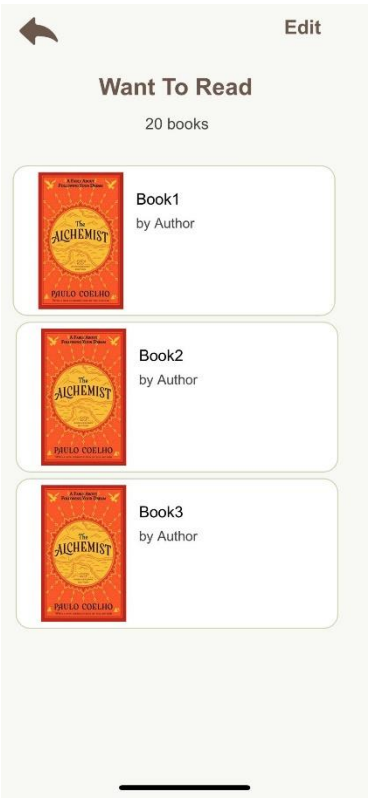
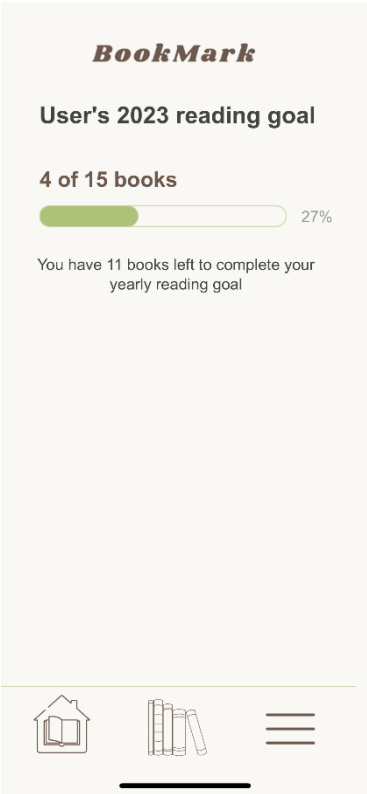
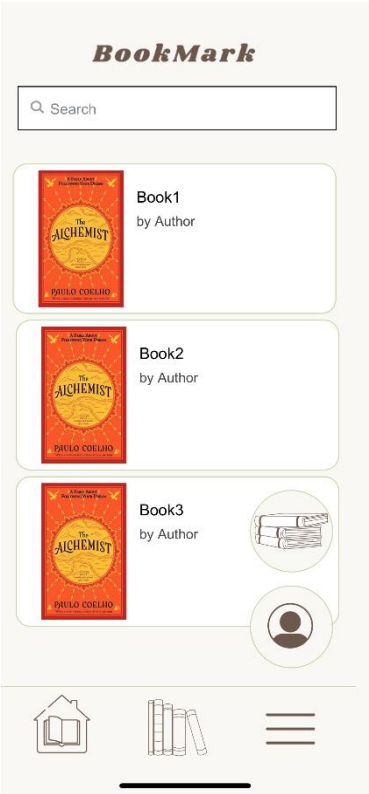


Name

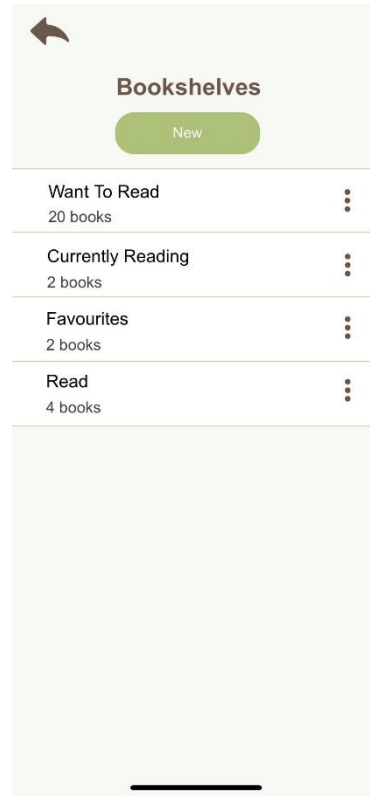
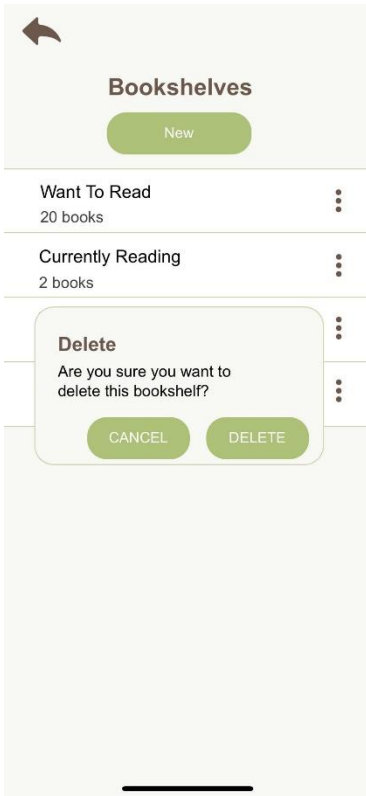
Reading Goal 4/15

Bookshelves 4







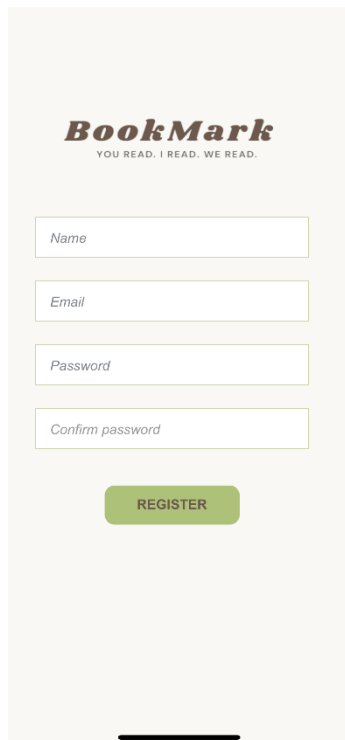


# Development

During the development of the application, few changes occurred. For example books are removed from shelves by swiping, screens for the first time users are made.

## Changes during development

While during the prototyping stage, Cancel button was overlooked for returning from Register to Login page.

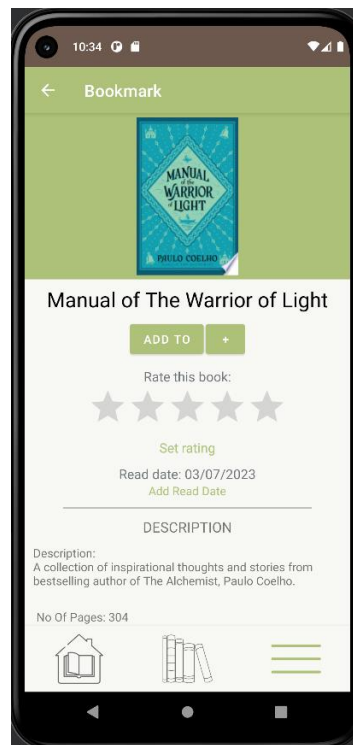


The desktop version of the registration form features the 'BookMark' logo at the top, followed by four input fields labeled 'Name', 'Email', 'Password', and 'Confirm password'. A green 'REGISTER' button is positioned below the fields. The form is set against a light beige background.

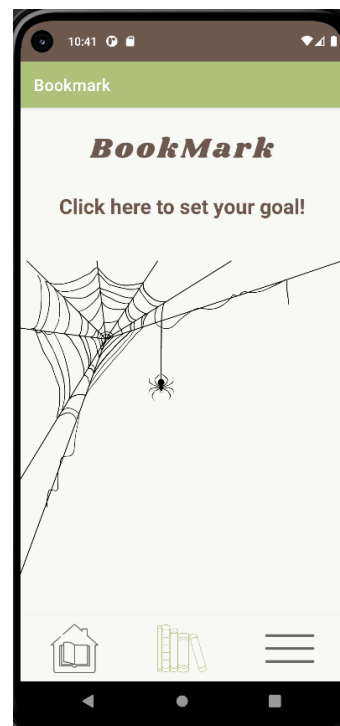
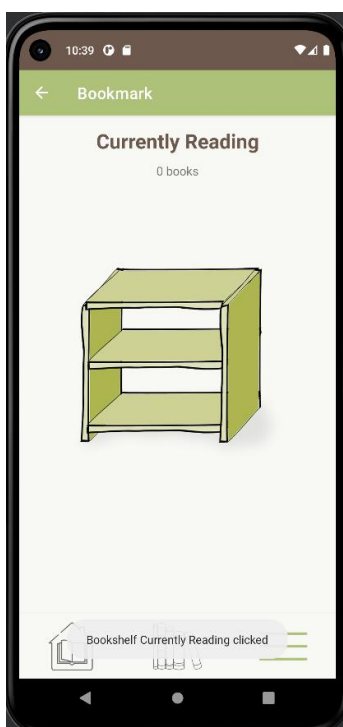


The mobile version of the registration form is displayed on a smartphone screen. It includes the 'BookMark' logo and four input fields with icons: a person icon for 'Name', an '@' icon for 'Email', a key icon for 'Password', and a key icon for 'Confirm password'. A green 'REGISTER' button and a red 'Cancel' link are located at the bottom. The screen has a status bar at the top showing the time as 10:26 and a green header bar with the word 'Bookmark'.

For the purposes of reading goal tracking and selecting which user should be able to rate the book and add the read date, there are two different screens for books that are in bookshelf “Read”.



Two screens are added, for the users that are registering for the first time, one for empty bookshelf indicating that user needs to add books to be able to see them in that specific bookshelf and one for setting the reading goal for the first time.



## Final application

In next part, final application and its functionalities would be explained.

### LogIn and Register

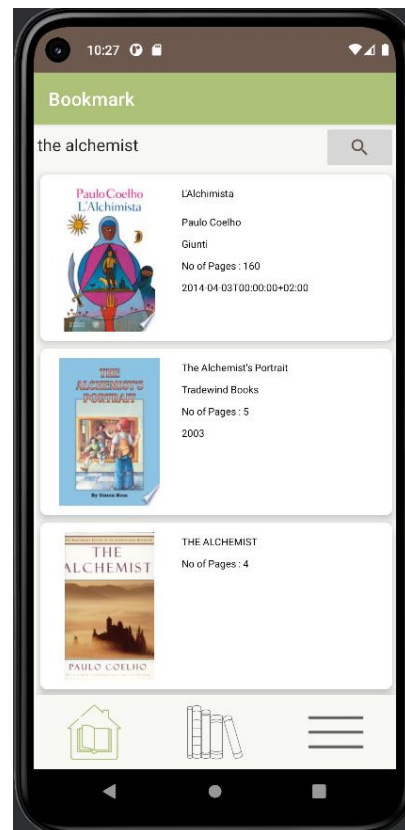
When first opening the application user is presented with LogIn screen. If the user is already registered it can access the application by entering email and password. While, if the user is not registered, they have option Register which leads to Register screen where name, email, password and confirmation of password are needed. By selecting the button Register user is redirected to LogIn page where they access application by logging in. If they mistakenly entered Register screen, they can go back by selecting Cancel. After the registration user no longer needs to LogIn, until they SignOut.



## Home and search

When user is logged in, they are presented with main page, home screen. By navigating through the bottom menu they can enter reading goal and more options (user and bookshelves).

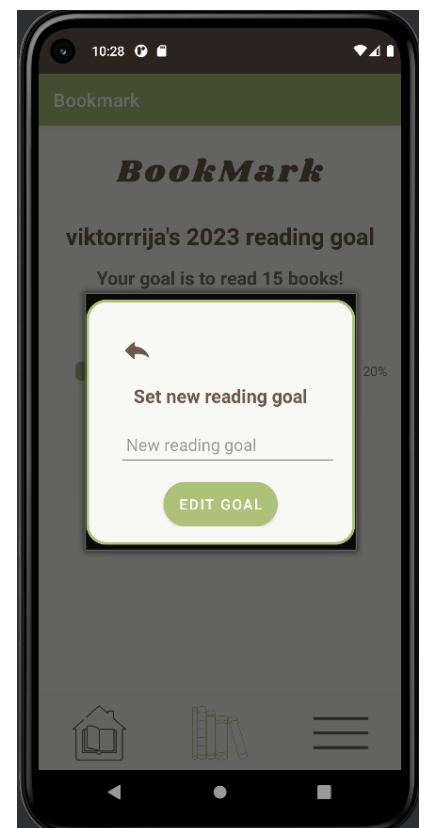
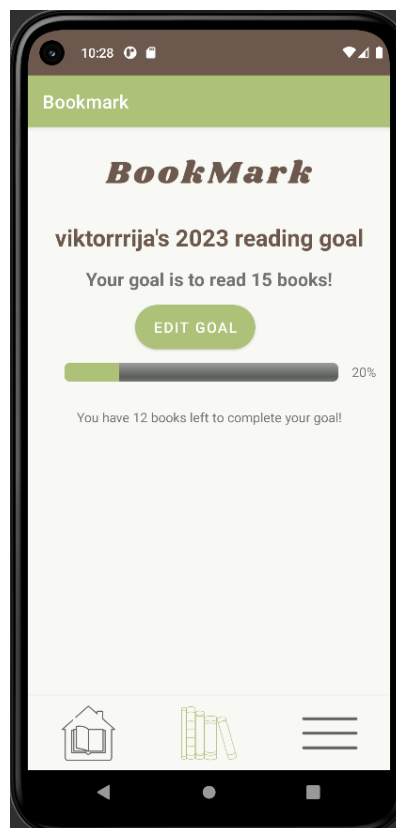
While the screen is initially empty user can search books by entering title or author. When the search button is clicked, home screen is filled with books found by search.



## Reading goal

When the user is entering application for the first time, they do not have set reading goal. By clicking on “Click here to set your goal!”, a new dialog for setting goal is opened (like the one for edit goal). When the user sets the goal, the first page is never shown again (until the year is changed), instead they have data about their reading goal (reading goal, how many books they have left and percentage of goal completed)

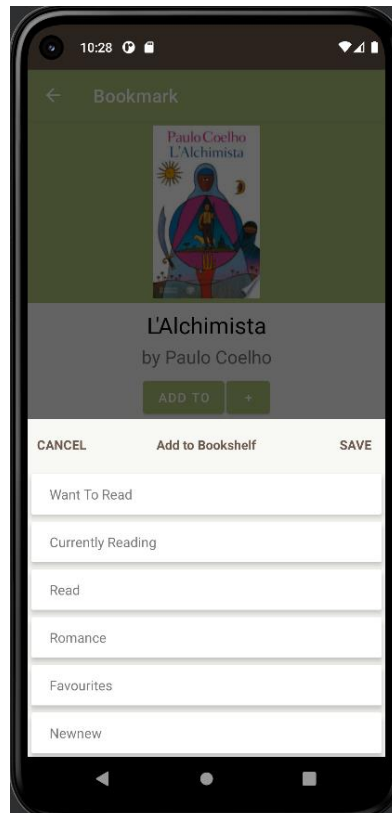
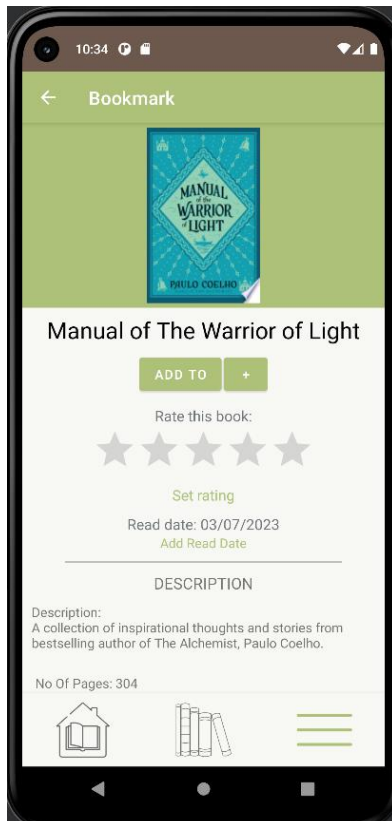
When user wants to edit the goal, they can do that by selecting Edit Goal button. Dialog for changing goal opens, and they can cancel or save the goal.



## Book

Initially, there was only one representing screen for books, but during development was decided to separate read books from other, and to give the users opportunity to rate and add read date only after having the book in the bookshelf “Read”.

Both screens have Add button (+), which opens a dialog where all the bookshelves are, so the user can put them in the shelf buy saving or can cancel.

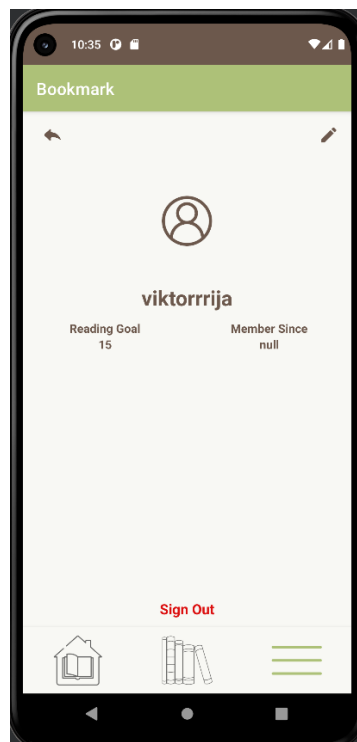
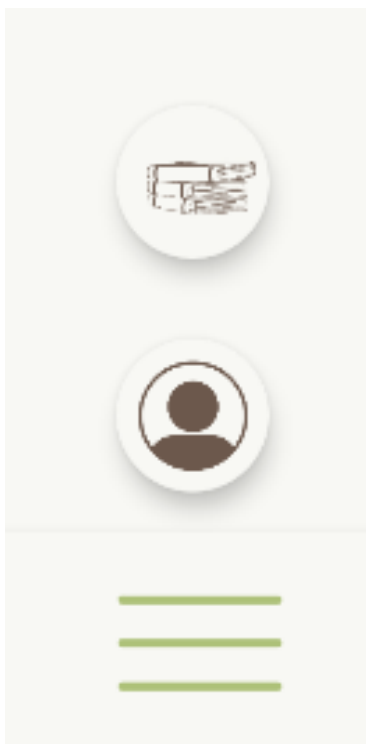


## User

User can access to the profile by the more button which contains two floating buttons, not visible at first.

On the user page there are displayed name, reading goal and date since the user is the member. Using back button they can go back to previous screen, while using the edit button leads to edit user screen, where user can change their name or cancel.

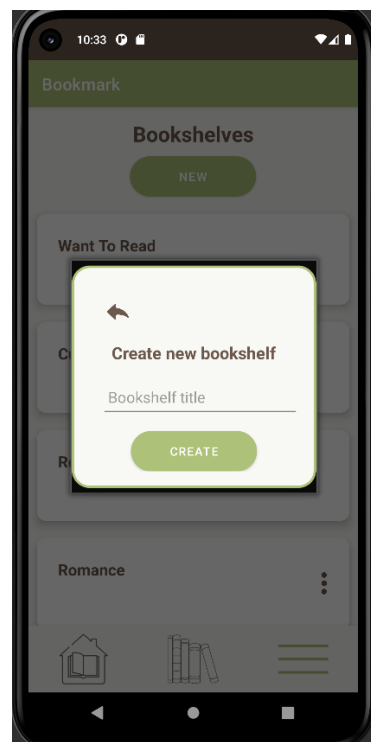
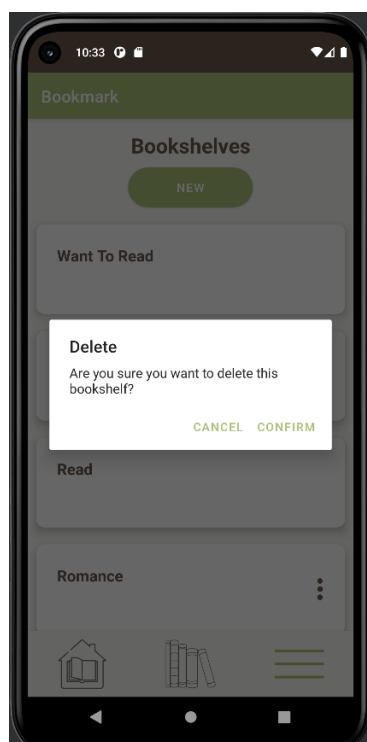
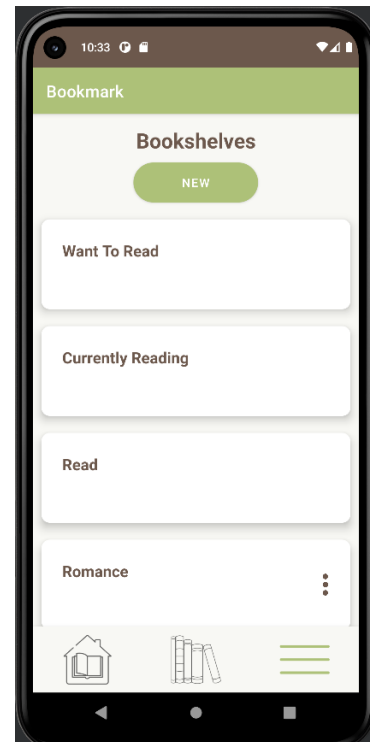
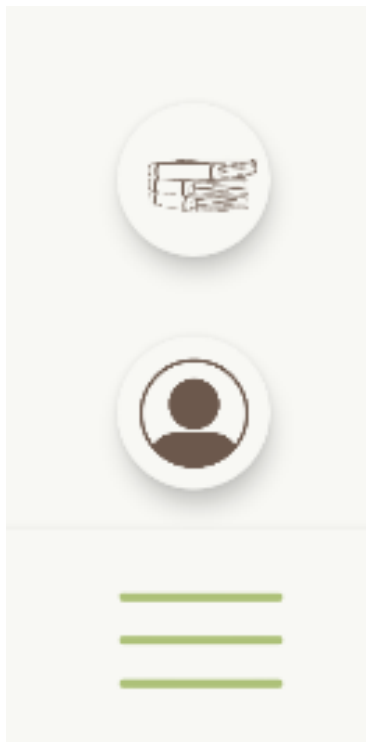
At the bottom of user profile there is sign out button which leads back to log in page and deletes saved log in data, used every time when app was initialized.





## Bookshelves

User can see all the bookshelves by entering more button than bookshelves button. Bookshelves “Want To Read”, “Currently Reading” and “Read” are default bookshelves which are created for every user when they first register. They are mandatory and cannot be deleted, unlike the other Bookshelves, which are added manually by the user, selecting the button New.



## Single bookshelves

By clicking the bookshelf user is redirected to single bookshelf where if there are no books an icon is displayed indicating that books need to be added to be shown. If there are books user can delete them from bookshelf by swiping or enter the book by clicking.

Number of books and bookshelf title are displayed.

