PROJECT PROPOSAL

Team: AssemblyGang

Project: ReadRecommend

Name: Michael Wang
Student ID: z5016071
Email: z5016071@ad.unsw.edu.au
Role: Scrum Master/Full-stack Developer

Name: Michael Papantoniou
Student ID: z5164398
Email: z5164398@ad.unsw.edu.au
Role: Full-Stack Developer

Name: Tim Huang
Student ID: z5020441
Email: z5020441@ad.unsw.edu.au
Role: Full-stack Developer

Name: Farhan Ghazi
Student ID: z5199861
Email: z5199861@ad.unsw.edu.au
Role: Full-stack Developer

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Project Background

PROBLEM IDENTIFICATION

ReadRecommend is an online book cataloguing platform that provides users with the ability to receive book recommendations, manage their own personal book collections and leave reviews and ratings for books they have read. Besides having the standard functionality that any online literary portal has, ReadRecommend aims to solve many of the recurring problems that plague other such platforms in the same problem domain.

With so many books being published but few readers knowing about them, ReadRecommend aims to solve this issue with a personalised recommendation system which provides suggestions based on a user's reading preferences. The recommender system will also be customisable by users themselves, allowing them to combine multiple recommendation modes to fine-tune the suggestions provided. Even though readers have access to platforms that allow them to foster discussions by reviewing and rating books, we argue that this is simply not enough to help other readers decide if they want to read a book. This is because not all reviews are helpful or even valid. ReadRecommend aims to resolve this issue by allowing its readers to *rank* reviews. Not only will readers be able to rate and review books, but they will also be able to '*upvote*' book reviews. Upvoted reviews are displayed to prospective readers first so that they spend less time sifting through reviews to help them decide. Additionally, besides keeping physical copies, it is difficult for readers to keep track of all the books they have read or want to read. ReadRecommend's custom 'collections' functionality is developed with exactly that in mind. Users have the option to create named 'collections' to which they can add any number of books and sort them based on multiple filters (alphabetically, by author etc). This allows users to maintain their books in a manner which they prefer whilst keeping everything organised. Lastly, a common issue many users face on such platforms is a poor user experience. Avid readers access such platforms on a regular basis and having to deal with a clunky interface or faulty functionality have caused many of them to abandon them. ReadRecommend aims to deliver an optimal user experience that both satisfies the client while meeting their requirements.

We now elaborate on some other competing platforms present in the same problem domain and their drawbacks. ReadRecommend acknowledges the usefulness of these platforms and draws inspiration from them with the aim of building a solution that addresses their key problems.

EXISTING SOLUTIONS AND THEIR DRAWBACKS

Regarded as the largest literary social network, Goodreads is one of the few online reading communities that exist today. It is meant to be a gathering place for readers of all ages and tastes where readers can share their views and participate in open discussion. However, in recent times, the website has been subject to criticism.

Some key drawbacks include:
- *unappealing user interface* design: the website design and layout is very old (compared to current websites) and has not been updated in a while making the overall user experience poor
- *the websites search functionality is faulty*: the search engine does not consider partial matches. Furthermore, even when provided with the exact search query, the

results returned contain irrelevant books often having the target book at the end of the response

- *certain core functionality is not well advertised to users*: majority of users on the platform were completely unaware that they could create custom shelves.
- *users are unable to 'hide' their custom shelves*: this is a major privacy breach as users have complained that they are unable to assess their books without them being subjected to opinions of other users on the platform, since they are all publicly accessible.
- *the cataloguing system does not allow users to mark books as 'Unfinished'*: instead users have to explicitly create a separate 'Did Not Finish' bookshelf for themselves.
- *their book recommendations are unsatisfactory:* many users have criticized their recommendation algorithm as being 'redundant' since the suggestions do not actually cater to an individual user's preferences
- *complete absence of ranking amongst reviews:* users can only sort reviews by date and are unable to filter out reviews that have been backed by other readers. This translates to a poor user experience as more time is spent reading reviews instead of books

User Stories & Sprints

PRODUCT BACKLOG

All Epic Stories in full detail can be found in **Appendix A**. All User Stories in full detail can be found in **Appendix B**.

Backlog 72 issues			Create sprint	•••
📗 As a user, I want to be able to order any accessible collection by the book's title alp	Collection (Ordering/Se...	READ-57	↑	1
📗 As a user, I want to be able to toggle the ordering of any accessible collection by t	Collection (Ordering/Se...	READ-61	↑	2
📗 As a user, I want to be able to search through a collection, so that I can identify s	Collection (Ordering/Se...	READ-120	↑	2
📗 As a user, I want to be able to order any accessible collection by recently added, sc	Collection (Ordering/Se...	READ-58	↑	1
📗 As a user, I want to be able to order any accessible collection by highest rated, so t	Collection (Ordering/Se...	READ-59	↑	1
📗 As a user, I want to be able to order any accessible collection by the author's name	Collection (Ordering/Se...	READ-60	↑	1
📗 As a user, I want to be able to view a description of every collection accessed, so th	Collection (Access/View)	READ-50	↑	1
📗 As a user, I want to be able to access another user's collections, so that I can gain inspiration for	Other Users	READ-51	↑	3
📗 As a user, I want to be able to view a list of books in a collection, so that I can find k	Collection (Access/View)	READ-53	↑	2
📗 As a user, I want to be able to view each book's title, author, genre, average rating a	Collection (Access/View)	READ-74	↑	1
📗 As a user, I want to be able to add a review for any book, so that I gain satisfaction from helping oth	Reviews	READ-76	↑	2
📗 As a user, I want to be able to edit a review I have already written, so that i can fix any mistakes in m	Reviews	READ-77	↑	1
📗 As a user, I want to be able to view other users' reviews, so that I can see if I would like this book.	Reviews	READ-78	↑	2
📗 As a user, I want to provide a rating when I write a review, so that my opinions can be reflected in a	Reviews	READ-79	↑	1
📗 As a user, I want to be able to access one of my collections, so that I can view the b	Collection (Access/View)	READ-46	↑	2
📗 As a user, I want to be able to rename one of my 'named' collections, so that the na	Collection (Modification)	READ-47	↑	1
📗 As a user, I want to be able to toggle each of my collections between public and pr	Collection (Modification)	READ-55	↓	1
📗 As a user, I want to be able to add a description to my collections, so that I get a be	Collection (Modification)	READ-48	↑	1
📗 As a user, I want to be able to modify my collection's description, so that I can ensu	Collection (Modification)	READ-49	↑	1
📗 As a user, I want to be able to own a "finished" book collection, so that I can track	Collections List (Add/R...	READ-39	↓	2
📗 As a user, I want to be able to own a "main" book collection, so that I have a centr	Collections List (Add/R...	READ-37	↑	2
📗 As a user, I want to be able to create additional 'named' book collections, so that I	Collections List (Add/R...	READ-38	↑	2
📗 As a user, I want to be able to rate any book that I have not rated, so I can share my opinion of the b	Ratings	READ-64	↑	1
📗 As a user, I want to be able to view the average public rating on a book, so that I know whether it is	Ratings	READ-66	↑	1
📗 As a user, I want to see detailed information (title, author, genre, publisher, year of publicatio	Books (Details)	READ-68	↑	2
📗 As a user, I want to see a synopsis of a book on the page dedicated to it, so that I can find ou	Books (Details)	READ-69	↑	1
📗 As a user, I want to see a list of reviews and accompanying ratings on the page dedicated to	Books (Details)	READ-70	↑	2
📗 As a user, I want to know how many others have read a book on the page dedicated to it, so	Books (Details)	READ-71	↑	2
📗 As a user, I want to be able to mark a book as read on the page dedicated to it, so that I have	Books (Details)	READ-72	↑	1
📗 As a user, I want to be able to update any rating for a book I have read at any time, so that I can sha	Ratings	READ-65	↑	1
📗 As a user, I want to be able to browse through a list of all available books on the plat	Books (Browse/Search)	READ-41	↑	3
📗 As a user, I want to be able to perform a general search for books, so that I'll be able	Books (Browse/Search)	READ-22	↑	2
📗 As a user, I want to be able to search for books by name, so that I'll be able to find bc	Books (Browse/Search)	READ-23	↑	1
📗 As a user, I want to be able to search for books by the author, so that I'll be able to fi	Books (Browse/Search)	READ-24	↑	1

🔖 As a user, I want to be able to see a list of the 10 most recent books I have added to e	Collections List (View)	READ-44	↑	2
🔖 As a user, I want to be able to order my list of collections alphabetically, so that my	Collections List (Orderi...	READ-29	↑	1
🔖 As a user, I want to be able to order my list of collections by the number of books	Collections List (Orderi...	READ-30	↑	1
🔖 As a user, I want to be able to add books to my collections, so that I can track bool	Collection (Add/Remov...	READ-34	↑	2
🔖 As a user, I want to be able to delete books from my collections, so that I can rem	Collection (Add/Remov...	READ-35	↑	1
🔖 As a user, I want to be able to order my list of collections by date created, so that	Collections List (Orderi...	READ-31	↑	1
🔖 As a user, I want to be able to toggle the ordering of my list of collections alphabe	Collections List (Orderi...	READ-32	↑	1
🔖 As a user, I want to be able to search for books by category, so that I'll be able to find	Books (Browse/Search)	READ-25	↑	2
🔖 As a user, I want to be able to toggle between a general search and an advanced sea	Books (Browse/Search)	READ-26	↑	2
🔖 As a user, I want to be able to set a personal reading goal for each month, so that I am motivated	Motivation	READ-93	↑	2
🔖 As a user, I want to be able to see a list of the top 20 users by number of books read, so that I am	Motivation	READ-94	↑	2
🔖 As a user, I want to be able to see a list of the count of books I have read in each of the past mor	Motivation	READ-95	↑	2
🔖 As a user, I want to receive a list of results after entering my search, so that I can inter	Books (Browse/Search)	READ-27	↑	2
🔖 As a user, I want to be able to change my password, so that I can improve my account security.	Account	READ-18	↑	1
🔖 As a user, I want to be able to change my email, so that my account details are up to date.	Account	READ-19	↑	1
🔖 As a user, I want to be able to login to my existing account using my facebook account, so that I can a	Login	READ-11	↓	2
🔖 As a user, I want to be able to login to my existing account using my google account, so that I can acc	Login	READ-12	↓	2
🔖 As a user, I want to be able to recover my password, so that I can access my account if I forget my pas	Login	READ-14	↑	2
🔖 As a user, I want to have the option to remember my login details, so that I can access my collections f	Login	READ-15	↓	1
🔖 As a potential user, I want to receive a verification email after creating an account, to ensure that	Registration	READ-6	↑	2
🔖 As a potential user, I want to be able to create an account using my google account, so that I can	Registration	READ-7	↓	2
🔖 As a potential user, I want to be able to create an account using my facebook account, so that I c	Registration	READ-8	↓	2
🔖 As a user, I want to be able to delete a 'named' collection, so that my collections re	Collections List (Add/R...	READ-40	↑	2
🔖 As a user, I want to be able to filter out any books from search results that are under	Books (Browse/Search)	READ-63	↑	2
🔖 As a user, I want to be able to order any accessible collection by total read count, s	Collection (Ordering/Se...	READ-73	↑	2
🔖 As a user, I want to select a book and see 10 similar books based on my selected recomm	Recommendations	READ-82	↑	3
🔖 As a user, I want to be suggested more books to read based on my past reading history,	Recommendations	READ-81	↑	2
🔖 As a user, I want to be able to see the creator of the collection, so that I can identify	Collection (Access/View)	READ-91	↑	1
🔖 As a user, I want to have one new random book suggested to me each day, so that I can	Recommendations	READ-83	↓	1
🔖 As a user, I want to see the current week's top 10 books being read on aggregate, so that	Recommendations	READ-84	↓	2
🔖 As a user, I want to be recommended books with good average rating as a mode, so that	Recommendations	READ-85	↑	2
🔖 As a user, I want to be recommended books by authors whose works I've enjoyed before	Recommendations	READ-86	↑	2
🔖 As a user, I want to be recommended books by the genres I most enjoy as a mode, so tha	Recommendations	READ-87	↑	2
🔖 As a user, I want to be recommended books that are common to other user's collections	Recommendations	READ-88	↑	3
🔖 As a user, I want to be able to "upvote" / "downvote" reviews written by other users, so that I can pr	Reviews	READ-89	↓	1
🔖 As a user, I want to be able to toggle between different recommendation modes when se	Recommendations	READ-90	↑	2
🔖 As a user, I want to be able to browse a curated list feed of public collections from other users,	Other Users	READ-114	↑	3
🔖 As a user, I want to be able to clone another user's public collection in the form of a new perso	Other Users	READ-115	↑	1

SPRINT DATES

Sprint	Start Date	End Date	Notes (for end of sprint)
Sprint 1	Friday, 19 June 2020 11:00am (Week 3)	Friday, 26 June 2020 11:00am (Week 4)	-
Sprint 2	Friday, 26 June 2020 11:00am (Week 4)	Friday, 3 July 2020 11:00am (Week 5)	Demo A
Sprint 3	Friday, 3 July 2020 11:00am (Week 5)	Friday, 10 July 2020 11:00am (Week 6)	-
Sprint 4	Friday, 10 July 2020 11:00am (Week 6)	Friday, 17 July 2020 11:00am (Week 7)	Retrospective A
Sprint 5	Friday, 17 July 2020 11:00am (Week 7)	Friday, 24 July 2020 11:00am (Week 8)	Demo B
Sprint 6	Friday, 24 July 2020 11:00am (Week 8)	Friday, 31 July 2020 11:00am (Week 9)	Retrospective B
Sprint 7	Friday, 31 July 2020 11:00am (Week 9)	Friday, 7 August 2020 11:00am (Week 10)	Final Demo

Sprint Goal: Complete Project Proposal, design ER diagram, Implement parts of login, account, visit, registration and collections list (view) related user stories.

READ Sprint 1 8 issues   17 4 0   Plan sprint ⌄   •••

Complete Project Proposal, design ER diagram, Implement parts of login, account, visit, registration and collections list (view) related user stories.
19/Jun/20 11:00 AM • 26/Jun/20 11:00 AM

📗 As a user, I want to visit the ReadRecommend platform, so that I can manage my collection.	Visit	READ-3	↑	3
📗 As a potential user, I want to visit the ReadRecommend platform, so that I can decide if I want to use the platform for reviewing books.	Visit	READ-2	↑	3
📗 As a user, I want to be able to login to my existing account using my email, so that I can access everything I had previously done.	Login	READ-10	↑	4
📗 As a user, I want to be able to logout of my account, so that I can prevent unauthorised access.	Login	READ-13	↑	2
📗 As a user, I want to be able to view the personal details on my profile page, so that I can verify my details are correct.	Account	READ-17	↑	2
📗 As a user, I want to be able to change my name, so that my account details are up to date.	Account	READ-20	↑	2
📗 As a user, I want to be able to view a list of my collections, so that I can see an overview of my book collections.	Collections List (View)	READ-43	↑	2
📗 As a potential user, I want to be able to create an account using my email, so that I can create a book collection.	Registration	READ-5	↑	3

EPIC: **Account**
- As a user, I want to be able to access my account information.

READ-17	
As a user, I want to be able to view the personal details on my profile page, so that I can verify my details are correct.	
Story Points	3
Priority	High

READ-20	
As a user, I want to be able to change my name, so that my account details are up to date.	
Story Points	2
Priority	High

EPIC: **Collections List (View)**
- As a user, I want to be able to view my list of collections.

READ-43	
As a user, I want to be able to view a list of my collections, so that I can see an overview of my book collections.	
Story Points	2
Priority	High

EPIC: **Login**
- As a user, I want to be able to login to ReadRecommend.

READ-10

As a user, I want to be able to login to my existing account using my email, so that I can access everything I had previously done.

Story Points	4
Priority	Highest

READ-11

As a user, I want to be able to login to my existing account using my facebook account, so that I can access everything I had previously done.

Story Points	2
Priority	Lowest

READ-12

As a user, I want to be able to login to my existing account using my google account, so that I can access everything I had previously done.

Story Points	2
Priority	Lowest

READ-13

As a user, I want to be able to logout of my account, so that I can prevent unauthorised access.

Story Points	2
Priority	Highest

EPIC: **Registration**
- As a potential user, I want to be able to register for a ReadRecommend Account.

READ-5

As a potential user, I want to be able to create an account using my email, so that I can create a book collection.

Story Points	3
Priority	High

EPIC: **Visit**
- As a person, I want to be able to visit the ReadRecommend platform.

READ-2

As a potential user, I want to visit the ReadRecommend platform, so that I can decide if I want to use the platform for reviewing books.

Story Points	3
Priority	Highest

READ-3
As a user, I want to visit the ReadRecommend platform, so that I can manage my collection.

Story Points	3
Priority	Highest

PROJECT OBJECTIVES SATISFACTION

Project Objective	User Stories	Explanation
Users must be able to keep track of books they have read in one of many easily identifiable book collections on their account.	READ-37: As a user, I want to be able to own a "main" book collection, so that I have a centralised reading list. READ-38: As a user, I want to be able to create additional 'named' book collections, so that I have more specialised reading lists. READ-39: As a user, I want to be able to own a "finished" book collection, so that I can track the books I finished reading. READ-72: As a user, I want to be able to mark a book as read on the page dedicated to it, so that I have a reference to what books I have finished in case I forget. READ-43: As a user, I want to be able to view a list of my collections, so that I can see an overview of my book collections.	READ-43 allows a user to view a list of their collections. Furthermore, the user owns a "main" book collection (READ-37) and a "finished" book collection (READ-39) that tracks books the user has marked as read (READ-72). Users are further able to track books through additional "named" book collections (READ-38) that they can flexibly name and customise.
Users must be able to look through any such collection (their own and that of other users).	READ-46: As a user, I want to be able to access one of my collections, so that I can view the books in that collection. READ-51: As a user, I want to be able to access another user's public collections, so that I can gain inspiration for new books to read. READ-53: As a user, I want to be able to view a list of books in a collection, so that I can find books to read.	READ-46 allows users to access any of their own collections. READ-51 allows users to access another users collection, provided it is set to public. Accessing a collection, allows a user to view the books in that collection (READ-53).

Users must be able to write reviews for a given book, including leaving a rating out of 5.	READ-76: As a user, I want to be able to add a review for any book, so that I gain satisfaction from helping others on their reading decisions. READ-79: As a user, I want to provide a rating when I write a review, so that my opinions can be reflected in a rating.	READ-76 provides functionality for users to add a review to a book and READ-79 allows users to additionally provide a rating when writing a review.
Users must be able to view the full details of any book, (including all reviews), in any book collection. This full details view must also display multiple aggregate statistics, including the book's average rating.	READ-68: As a user, I want to see detailed information (title, author, genre, publisher, year of publication, summary, average rating) on a book on the page dedicated to it, so that I know if it is the book I'm looking for. READ-69: As a user, I want to see a synopsis of a book on the page dedicated to it, so that I can find out whether it suits my tastes. READ-70: As a user, I want to see a list of reviews and accompanying ratings on the page dedicated to it, so that I know the general opinion of it without needing to browse further. READ-71: As a user, I want to know how many others have read a book on the page dedicated to it, so that I know how popular the book is. READ-74: As a user, I want to be able to view each book's title, author, genre, average rating and total read account, so that I can decide if I want to read the book.	READ-68 allows users to view detailed information on a book. This profile page can be accessed from a collection (READ-74). Users are also able to view a synopsis of the book to further aid decision making (READ-69), as well as the reviews and ratings for the book (READ-70). READ-71 provides an additional statistic, which is the aggregate read count of the book.
Users must be able to easily search for books by name, author, or most recently added books to their collections.	READ-120: As a user, I want to be able to search through a collection, so that I can identify specific books I want to read in my collection quickly. READ-58: As a user, I want to be able to order any accessible collection by recently added, so that I can skim through the collection more easily. READ-26: As a user, I want to be able to toggle between a general search and an advanced search that lets me filter by name, by author and by category, so that I can narrow my search and get better results.	READ-120 allows users to perform a search through a collection. Furthermore, they are able to order any collection by recently added (READ-58), as well as toggle to an advanced search that allows filtering by name, author and category (READ-26).

Users must be able to filter out books from search results that are under a given average rating.	READ-63: As a user, I want to be able to filter out any books from search results that are under a user-provided average rating, so that I can ignore books that are poorly written.	READ-63 allows users to filter out books below a user-provided average rating from search results.
Users, given a specified book, must be able to select from multiple recommendation modes to be recommended a book.	READ-82: As a user, I want to select a book and see 10 similar books based on my selected recommendation mode, so that I might find other books I enjoy. READ-90: As a user, I want to be able to toggle between different recommendation modes when selecting a book, so that I get to see similar books based on my current goal. READ-85: As a user, I want to be recommended books with good average rating as a mode, so that I may see the best rated books being enjoyed by others. READ-86: As a user, I want to be recommended books by authors whose works I've enjoyed before as a mode, so that I may see more of the author's books. READ-87: As a user, I want to be recommended books by the genres I most enjoy as a mode, so that I may see more books of my favourite genres. READ-88: As a user, I want to be recommended books that are common to other user's collections as a mode, so that I can enjoy what is popular.	READ-82 allows users to specify a book, and receive 10 similar books based on the recommendation mode they selected. Users are also able to toggle between the various recommendation modes as per READ-90. Recommendation modes supported include recommendations based on average rating (READ-85), recommendations based on frequent authors (READ-86), recommendations based on similar genres (READ-87) and lastly, recommendations based on books popular in other users' collections (READ-88).

NOVEL FUNCTIONALITY

Our platform aims to extend existing systems by adding some novel functionality. As we alluded to earlier in the 'Background' section, one of the limitations with existing platforms is that reviews are not rated in any way, so users have no way have knowing what the popular qualitative opinion on a book is. We aim to give users the opportunity to make good reviews more visible with an upvote and downvote system for reviews, covered in the user story: "READ-89: As a user, I want to be able to "upvote" / "downvote" reviews written by other users, so that I can provide additional feedback."

Existing systems also do not allow the option for the reader to make their collections private which some users may want to do in case of privacy concerns. Our platform aims to allow

users to retain data privacy by adding a setting which allows them to either make their collection private or public. This is covered in the user story: "READ-55: As a user, I want to be able to toggle each of my collections between public and private, so that another user unable to access a collection that is private to me."

Finally, our biggest extension comes in the form of a personalised recommender system. Existing systems currently use a basic heuristic to recommend new books. We think that users want a comprehensive recommendation system that allows them to choose multiple modes of recommendation to find new books, such as seeing the most popular books in real time. This is covered in the epic story "READ-80: As a user, I would like to receive suggestions on books I should read." This includes all user stories from READ-81 all the way to READ-90.

Storyboards

STORYBOARD A

Storyboard A covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:

- READ-45 **Collection (Access/View)**
- READ-33 **Collection (Add/Remove Books)**
- READ-54 **Collection (Modification)**
- READ-56 **Collection (Ordering/Search)**
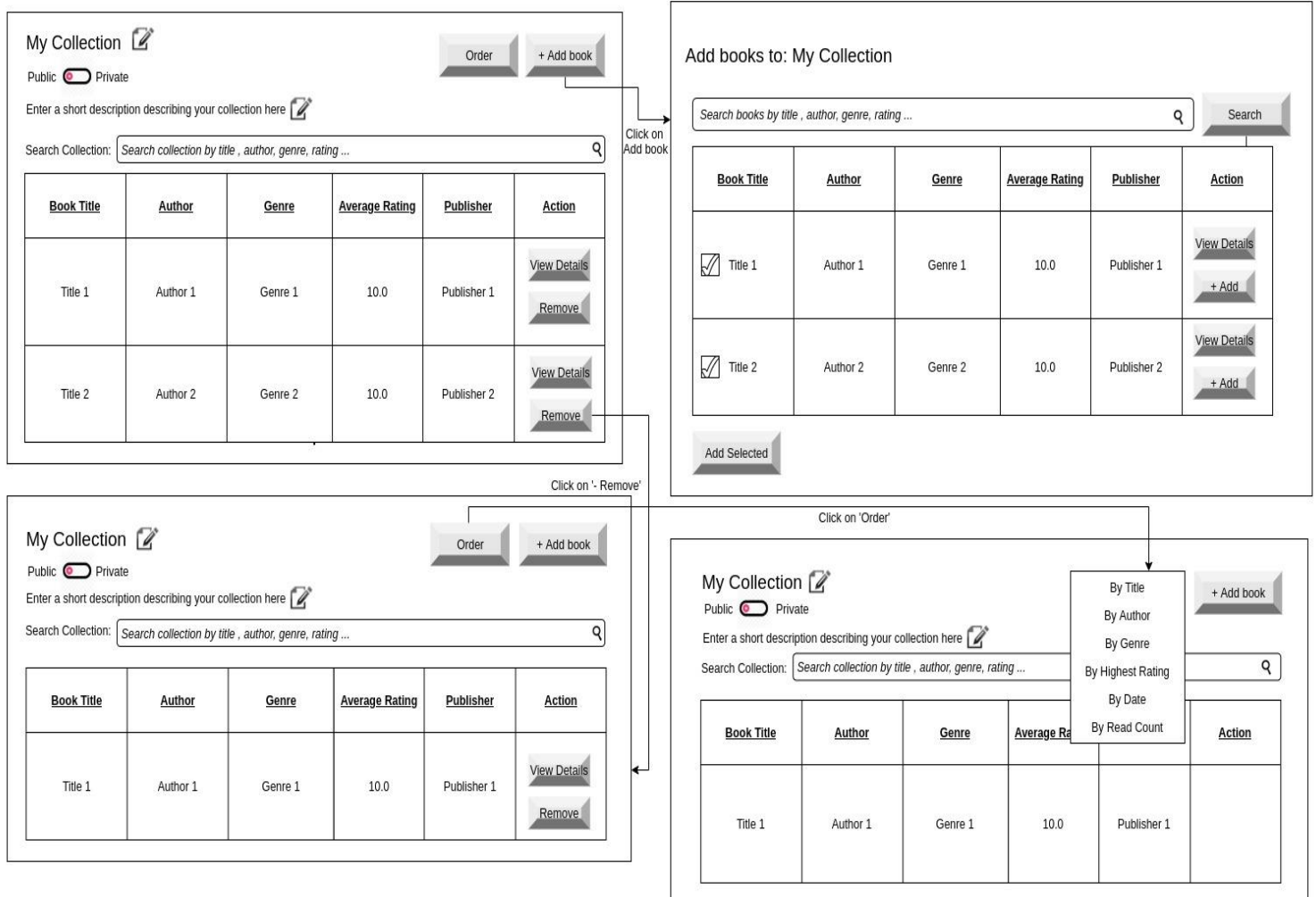
STORYBOARD B

Storyboard B covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:

- READ-67 **Books (Details)**
- READ-62 **Ratings**
- READ-75 **Reviews**

STORYBOARD C

Storyboard C covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:

- READ-16 **Account**
- READ-92 **Motivation**

STORYBOARD D

Storyboard D covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:

- READ-1 **Visit**
- READ-4 **Registration**
- READ-9 **Login**

STORYBOARD E

Storyboard E covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:

- READ-28 **Ordering**
- READ-36 **Add/Remove Collections**
- READ-42 **View**

STORYBOARD F

Storyboard F covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:
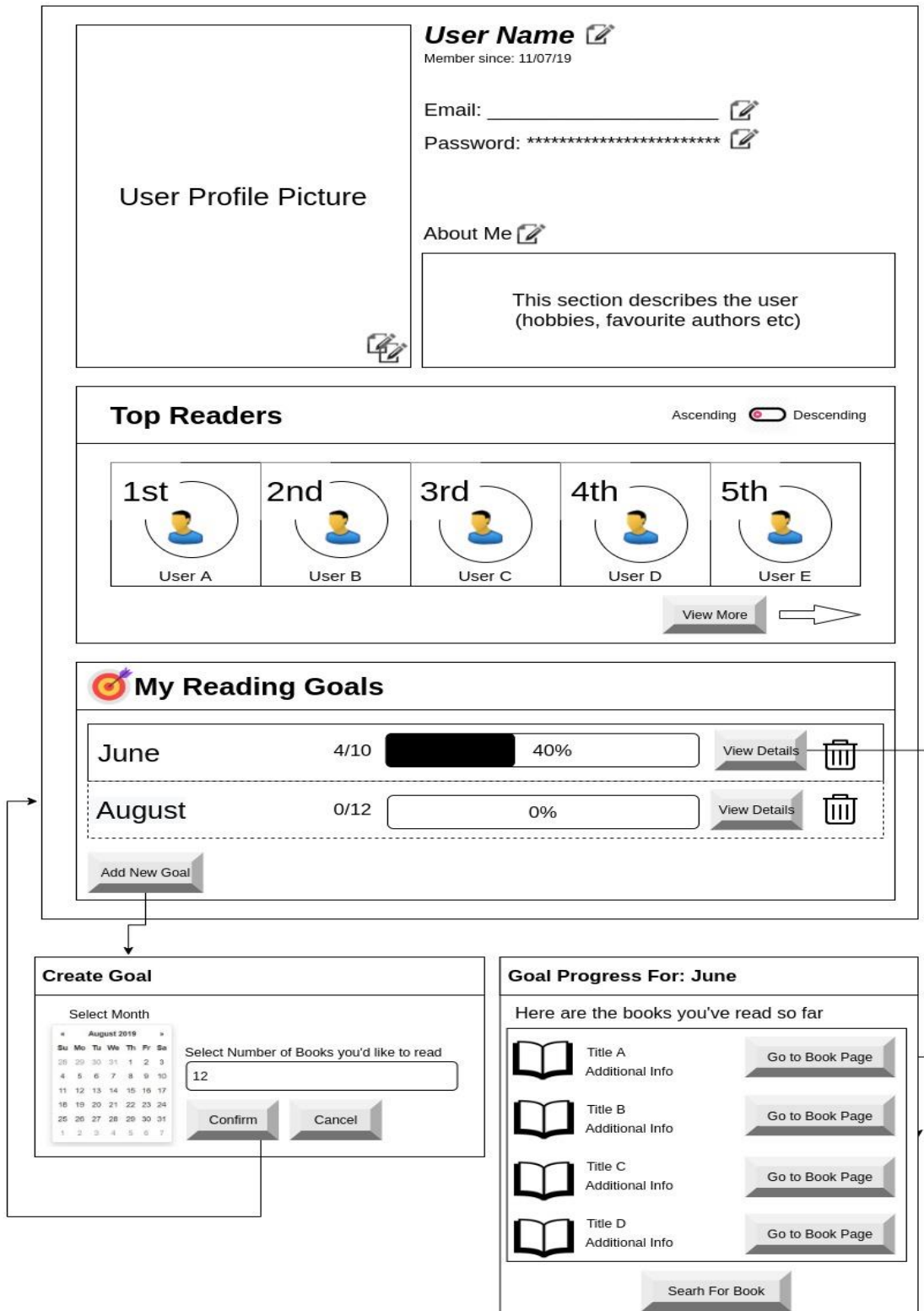
- READ-80 **Recommendations**

STORYBOARD G

Storyboard G covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:
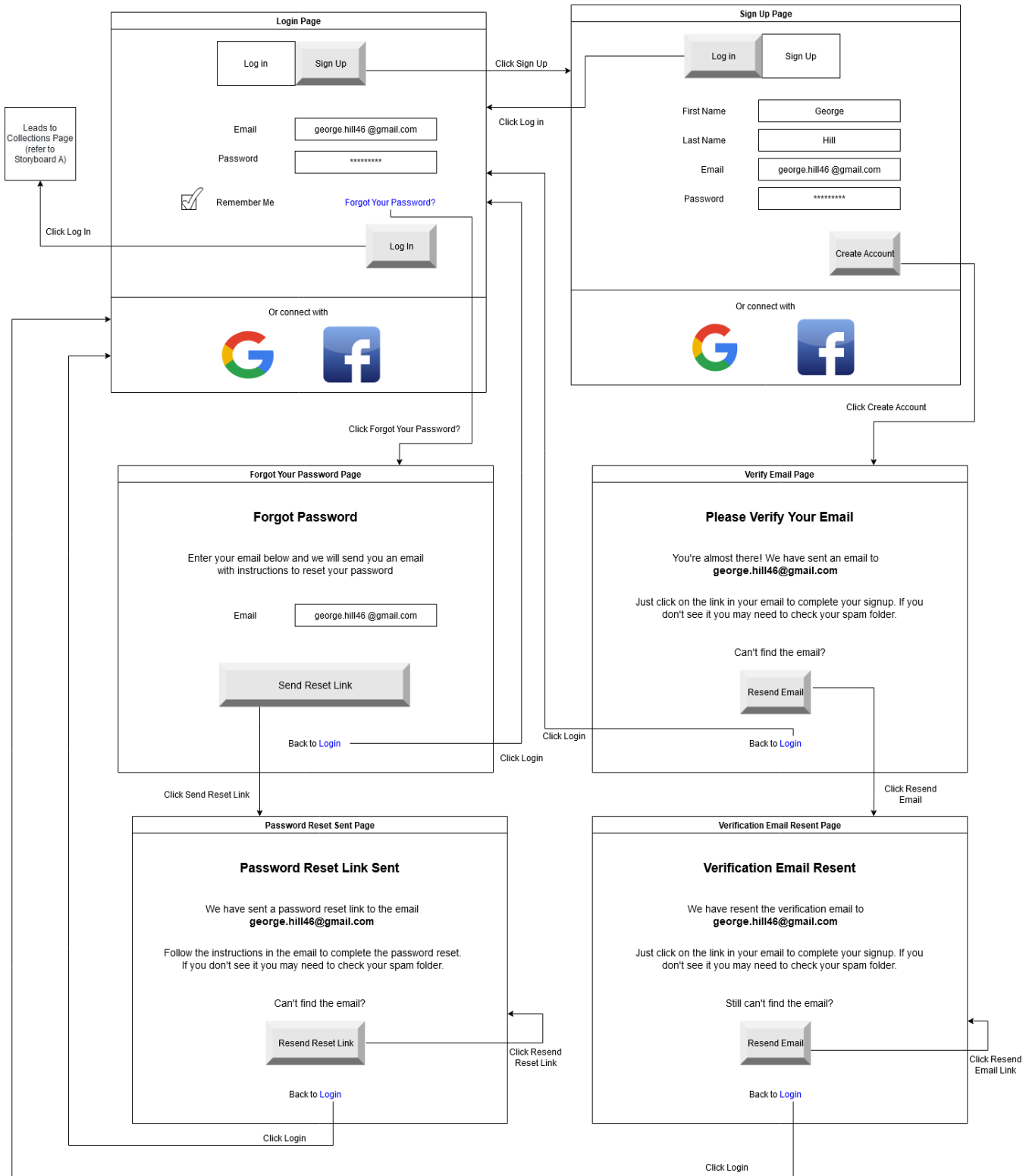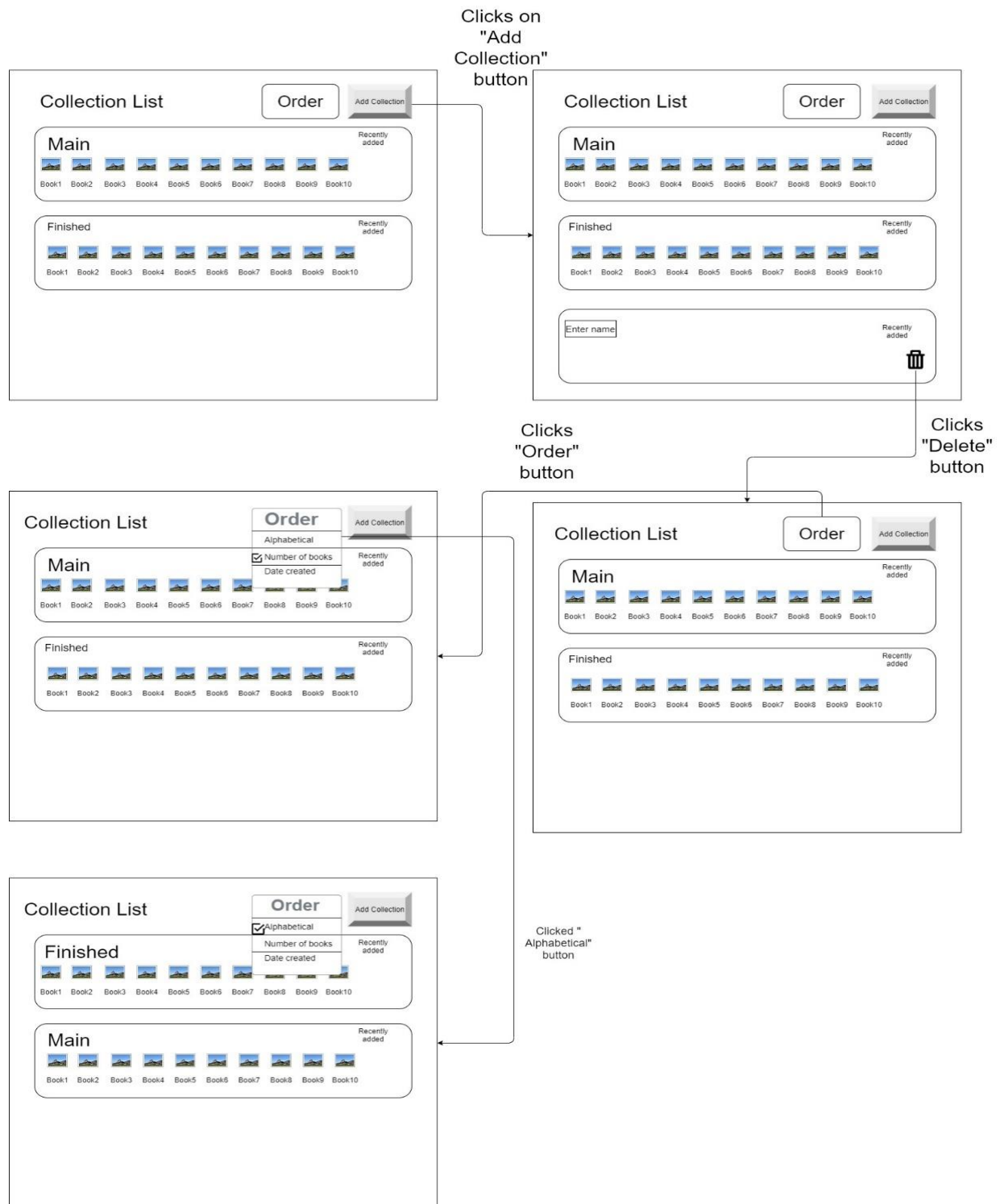
- READ-21 **Book (Browse/Search)**
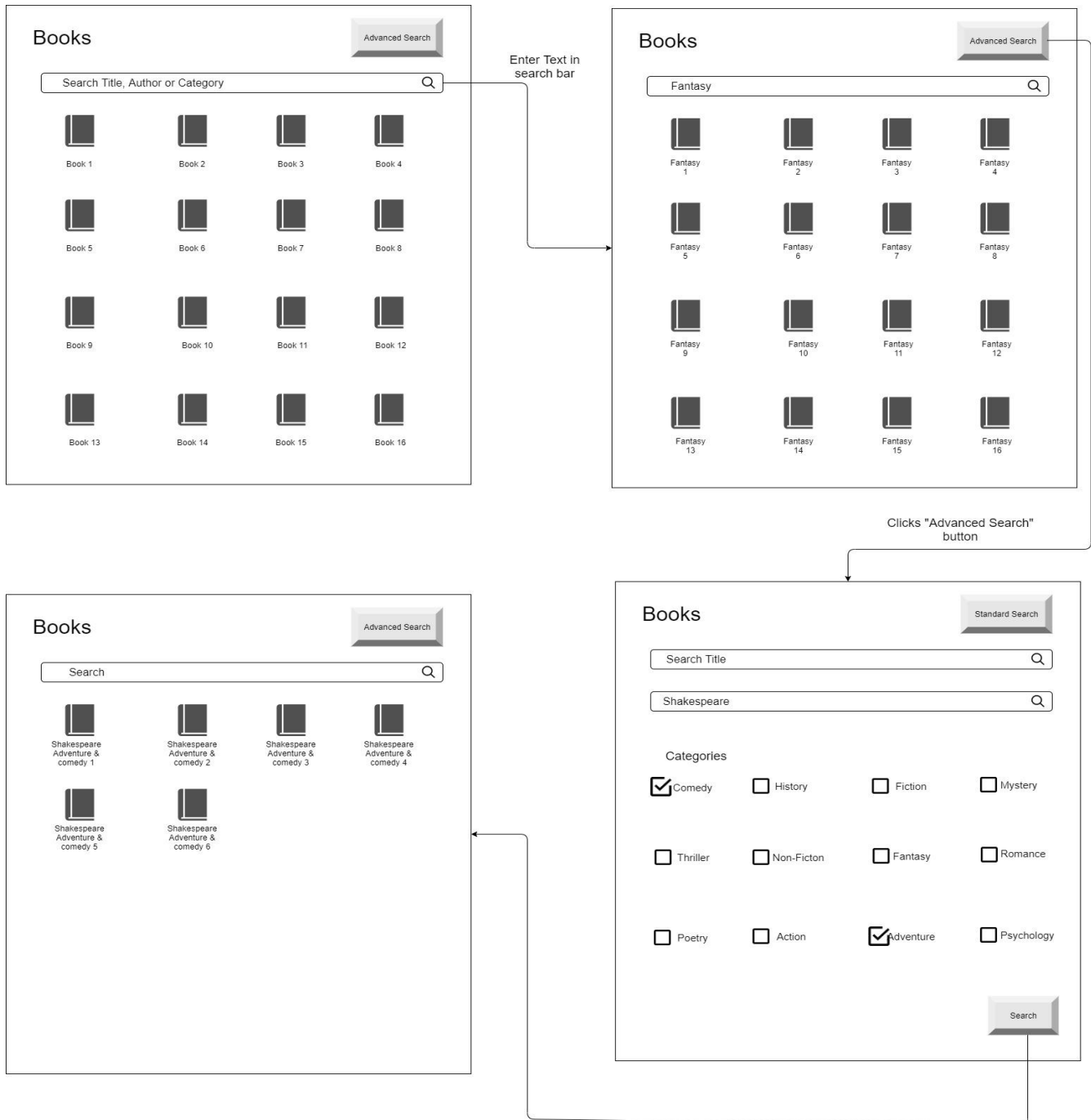
Storyboard H covers the following epic stories (and thus all related user stories). Please refer to **Appendix A** for more details:

- READ-113 **Other Users**
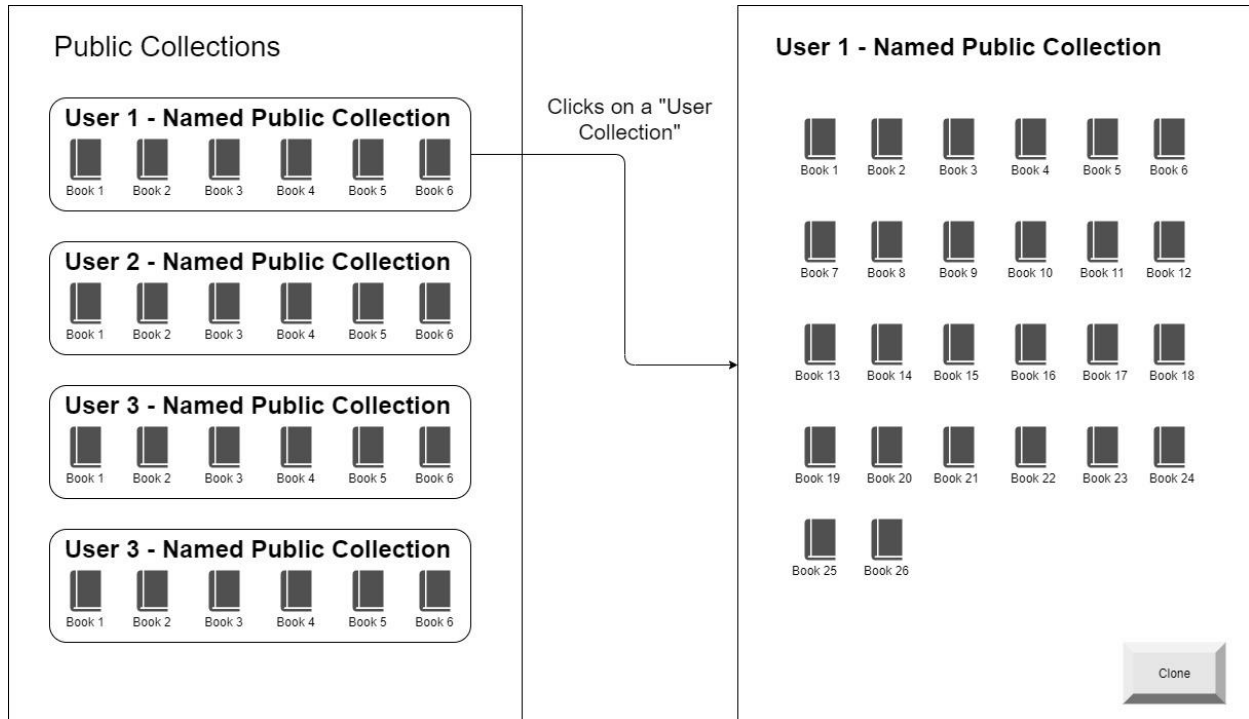
System Architecture

Figure: Software Architecture Layers

Presentation Layer	
	React JS (User Interface)
Business Layer	
	Django Web Framework
Core API Layer	
	Django REST Framework
API's as a Service Layer	
	Mailjet, Rainforest API
Data Layer	
	PostgreSQL Database Engine

Figure: System Architecture

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TECHNOLOGY STACK

Django (Backend Web Framework + RESTful API Service)

Django is a high-level Python web framework that enables rapid development of secure and maintainable websites. It is free and open source. Our primary reason for choosing Django as our backend is because it provides a lot of key functionality "out-of-the-box", saving us time from having to implement certain features ourselves. Given Django's enormous community support and great documentation, we are hopeful that the process of 'onboarding' our team members will be much easier which will in turn will greatly increase our sprint velocity.

React JS (Frontend Web Framework)

React is a JavaScript library used to build reusable UI components. It makes the process of making interactive UI's much simpler by abstracting away th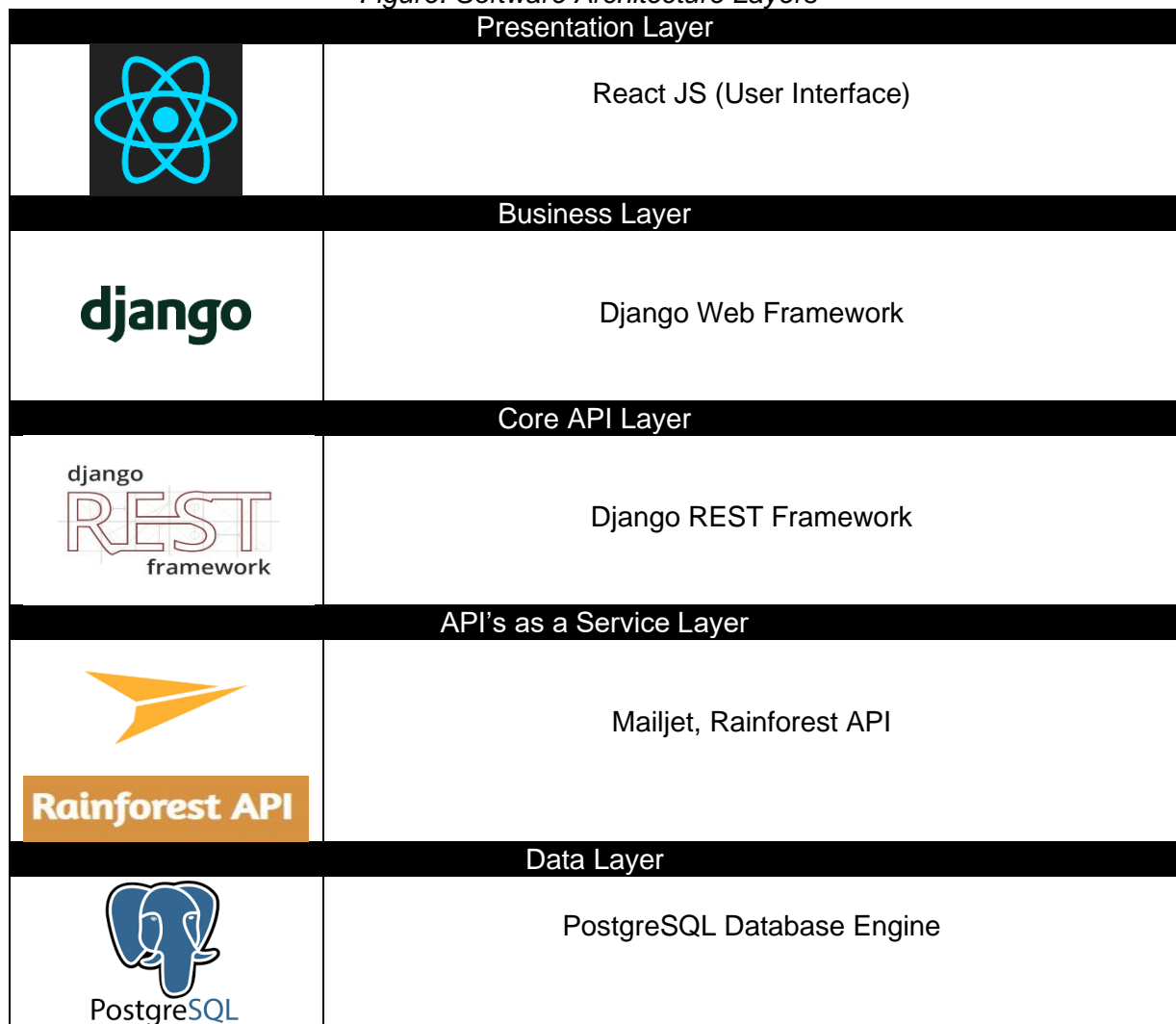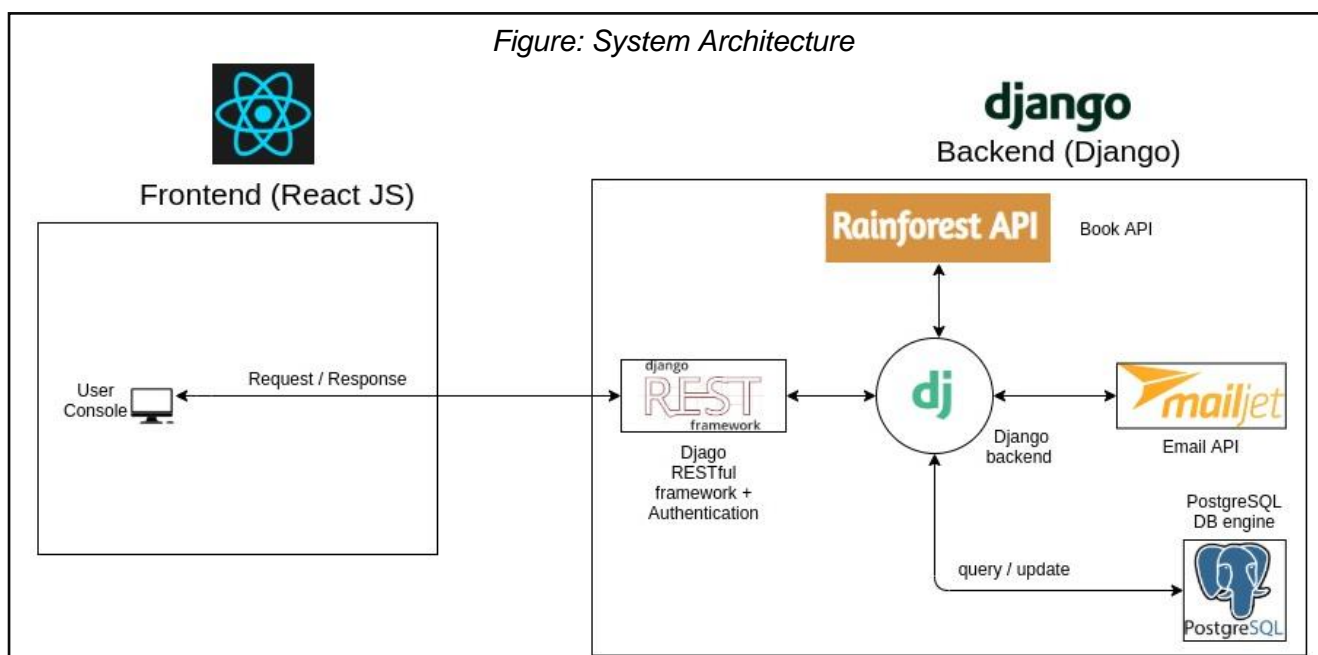e DOM. This greatly increases development speed which is one of the reasons why our team opted for React. Also, getting up to speed with React has not been difficult thanks to its great documentation and online support. With a team that has mostly backend developers, we hope React will make our lives much easier when working on the frontend.

PostgreSQL (Database Engine)

PostgreSQL is a powerful, open source object-relational database system with over 30 years of active development that has earned it a strong reputation for reliability, feature robustness, and performance. We intend to use a well-defined PostgreSQL database to store and track our data (collections, books, reviews etc) which can in turn be manipulated (perform CRUD operations) by our Django backend.

Mailjet API (Email API)

We intend to use Mailjet's Email REST API to handle functionality such as account verification, account password reset and more. The free tier plan we opt to use even allows custom email template creation. It's seamless integration with Django should allow us to get set up and ready fairly quickly.

Rainforest API (Book Data API)

To populate our model data, we intend to use a service called Rainforest API. Rainforest API is a real-time product data API developed by Amazon. It lets users access Amazon product data on the fly. Doing so means that there is no need for us to create a custom web scraper on our own, saving us valuable development time.

Appendix A (Epic Stories)

READ-16 **Account**
- As a user, I want to be able to access my account information.

READ-21 **Books (Browse/Search)**
- As a user, I want to be able to browse all books, search for specific books and filter out books below a certain rating.

READ-67 **Books (Details)**
- As a user, I want to be able to view the details of any book on a page dedicated to it.

READ-45 **Collection (Access/View)**
- As a user, I want to be able to access my collections, view a list of books in a collection and view every accessible collection's description.

READ-33 **Collection (Add/Remove Books)**
- As a user, I want to be able to add or remove books to/from my collections.

READ-54 **Collection (Modification)**
- As a user, I want to be able to set the privacy of my collection, rename a "named" collection I created and add or modify the description of my collections.

READ-56 **Collection (Ordering/Search)**
- As a user, I want to be able to search a collection as well as order the books in a collection.

READ-36 **Collections List (Add/Remove Collections)**
- As a user, I want a "main" collection, a "finished" collection and the ability to add or remove additional "named" collections.

READ-28 **Collections List (Ordering)**
- As a user, I want to be able to order my list of collections.

READ-42 **Collections List (View)**
- As a user, I want to be able to view my list of collections.

READ-9 **Login**
- As a user, I want to be able to login to ReadRecommend.

READ-92 **Motivation**
- As a user, I want to be able to set personal reading goals as well as see a list of users who have read the most books this month.

READ-113 **Other Users**
- As a user, I want to be able to access another user's public collections, browse a curated list feed of public collections from other users, and clone another user's public collection in the form of a new personal "named" collection for myself.

READ-62 **Ratings**
- As a user I want to be able to rate books I have read.

READ-80 **Recommendations**

- As a user, I would like to receive suggestions on books I should read.

READ-4 **Registration**
- As a potential user, I want to be able to register for a ReadRecommend Account.

READ-75 **Reviews**
- As a user, I want to be able to create and manage my reviews as well as view other users' reviews.

READ-1 **Visit**
- As a person, I want to be able to visit the ReadRecommend platform.

Appendix B (User Stories)

*EPIC: **Account***

READ-17	
As a user, I want to be able to view the personal details on my profile page, so that I can verify my details are correct.	
Story Points	3
Priority	High

READ-18	
As a user, I want to be able to change my password, so that I can improve my account security.	
Story Points	1
Priority	Highest

READ-19	
As a user, I want to be able to change my email, so that my account details are up to date.	
Story Points	1
Priority	Highest

READ-20	
As a user, I want to be able to change my name, so that my account details are up to date.	
Story Points	2
Priority	High

*EPIC: **Books (Browse/Search)***

READ-22	
As a user, I want to be able to perform a general search for books, so that I'll be able to find books that I want to read.	
Story Points	2
Priority	High

READ-23	
As a user, I want to be able to search for books by name, so that I'll be able to find books that I want to read.	
Story Points	1
Priority	High

READ-24	
As a user, I want to be able to search for books by the author, so that I'll be able to find books that I want to read.	
Story Points	1
Priority	High

READ-25	
As a user, I want to be able to search for books by category, so that I'll be able to find books that I want to read.	
Story Points	2
Priority	High

READ-26	
As a user, I want to be able to toggle between a general search and an advanced search that lets me filter by name, by author and by category, so that I can narrow my search and get better results.	
Story Points	2
Priority	High

READ-27	
As a user, I want to receive a list of results after entering my search, so that I can interpret which books interest me.	
Story Points	2
Priority	Highest

READ-41	
As a user, I want to be able to browse through a list of all available books on the platform, so that I have an overview of all the books in the system.	
Story Points	3
Priority	Highest

READ-63	
As a user, I want to be able to filter out any books from search results that are under a user-provided average rating, so that I can ignore books that are poorly written.	
Story Points	2
Priority	Highest

*EPIC: **Books (Details)***

READ-68
As a user, I want to see detailed information (title, author, genre, publisher, year of publication, summary, average rating) on a book on the page dedicated to it, so that I know if it is the book I'm looking for.

Story Points	2
Priority	High

READ-69
As a user, I want to see a synopsis of a book on the page dedicated to it, so that I can find out whether it suits my tastes.

Story Points	1
Priority	Medium

READ-70
As a user, I want to see a list of reviews and accompanying ratings on the page dedicated to it, so that I know the general opinion of it without needing to browse further.

Story Points	2
Priority	Highest

READ-71
As a user, I want to know how many others have read a book on the page dedicated to it, so that I know how popular the book is.

Story Points	1
Priority	Highest

READ-72
As a user, I want to be able to mark a book as read on the page dedicated to it, so that I have a reference to what books I have finished in case I forget.

Story Points	1
Priority	High

*EPIC: **Collection (Access/View)***

READ-46
As a user, I want to be able to access one of my collections, so that I can view the books in that collection.

Story Points	2
Priority	Highest

READ-50	
As a user, I want to be able to view a description of every collection accessed, so that I get a better understanding of the collection.	
Story Points	1
Priority	High

READ-53	
As a user, I want to be able to view a list of books in a collection, so that I can find books to read.	
Story Points	2
Priority	Highest

READ-74	
As a user, I want to be able to view each book's title, author, genre, average rating and total read account, so that I can decide if I want to read the book.	
Story Points	1
Priority	Medium

READ-91	
As a user, I want to be able to see the creator of the collection, so that I can identify which users makes good collections.	
Story Points	1
Priority	Highest

*EPIC: **Collection (Add/Remove Books)***

READ-34	
As a user, I want to be able to add books to my collections, so that I can track books I want to read in the future.	
Story Points	2
Priority	Highest

READ-35	
As a user, I want to be able to delete books from my collections, so that I can remove books I finished.	
Story Points	1
Priority	Highest

*EPIC: **Collection (Modification)***

READ-47	
As a user, I want to be able to rename one of my 'named' collections, so that the name better represents the books in the collection.	
Story Points	1
Priority	High

READ-48	
As a user, I want to be able to add a description to my collections, so that I get a better understanding of each collection.	
Story Points	1
Priority	Medium

READ-49	
As a user, I want to be able to modify my collection's description, so that I can ensure the description reflects the collection.	
Story Points	1
Priority	Medium

READ-55	
As a user, I want to be able to toggle each of my collections between public and private, so that another user unable to access a collection that is private to me.	
Story Points	1
Priority	Low

*EPIC: **Collection (Ordering/Search)***

READ-57	
As a user, I want to be able to order any accessible collection by the book's title alphabetically, so that I can skim through the collection more easily.	
Story Points	1
Priority	High

READ-58	
As a user, I want to be able to order any accessible collection by recently added, so that I can skim through the collection more easily.	
Story Points	1
Priority	Highest

READ-59
As a user, I want to be able to order any accessible collection by highest rated, so that I can skim through the collection more easily.

Story Points	1
Priority	High

READ-60
As a user, I want to be able to order any accessible collection by the author's name alphabetically, so that I can skim through the collection more easily.

Story Points	1
Priority	High

READ-61
As a user, I want to be able to toggle the ordering of any accessible collection by the book's title alphabetically, by the author's name alphabetically, by recently added and by highest rated, so that I can navigate through a collection more easily.

Story Points	2
Priority	High

READ-73
As a user, I want to be able to order any accessible collection by total read count, so that I can skim through the collection more easily.

Story Points	2
Priority	High

READ-120
As a user, I want to be able to search through a collection, so that I can identify specific books I want to read in my collection quickly.

Story Points	2
Priority	Highest

EPIC: *Collections List (Add/Remove Collections)*

READ-37
As a user, I want to be able to own a "main" book collection, so that I have a centralised reading list.

Story Points	2
Priority	Highest

READ-38

As a user, I want to be able to create additional 'named' book collections, so that I have more specialised reading lists.	
Story Points	2
Priority	Highest

READ-39	
As a user, I want to be able to own a "finished" book collection, so that I can track the books I finished reading.	
Story Points	2
Priority	Low

READ-40	
As a user, I want to be able to delete a 'named' collection, so that my collections reflect current interests.	
Story Points	2
Priority	Highest

EPIC: **Collections List (Ordering)**

READ-29	
As a user, I want to be able to order my list of collections alphabetically, so that my list is organised neatly.	
Story Points	1
Priority	Medium

READ-30	
As a user, I want to be able to order my list of collections by the number of books in each collection, so that my list is organised neatly.	
Story Points	1
Priority	Medium

READ-31	
As a user, I want to be able to order my list of collections by date created, so that my list is organised neatly.	
Story Points	1
Priority	Medium

READ-32	

As a user, I want to be able to toggle the ordering of my list of collections alphabetically, by number of books in each collection and by date created, so that I can navigate through more lists of collections more easily.	
Story Points	1
Priority	Medium

EPIC: *Collections List (View)*

READ-43	
As a user, I want to be able to view a list of my collections, so that I can see an overview of my book collections.	
Story Points	2
Priority	High

READ-44	
As a user, I want to be able to see a list of the 10 most recent books I have added to each of my collections in the collection list, so that I get a better insight into each collection.	
Story Points	2
Priority	Highest

EPIC: *Login*

READ-10	
As a user, I want to be able to login to my existing account using my email, so that I can access everything I had previously done.	
Story Points	4
Priority	Highest

READ-11	
As a user, I want to be able to login to my existing account using my facebook account, so that I can access everything I had previously done.	
Story Points	2
Priority	Lowest

READ-12	
As a user, I want to be able to login to my existing account using my google account, so that I can access everything I had previously done.	
Story Points	2
Priority	Lowest

READ-13	
As a user, I want to be able to logout of my account, so that I can prevent unauthorised access.	
Story Points	2
Priority	Highest

READ-14	
As a user, I want to be able to recover my password, so that I can access my account if I forget my password.	
Story Points	2
Priority	High

READ-15	
As a user, I want to have the option to remember my login details, so that I can access my collections faster.	
Story Points	1
Priority	Low

*EPIC: **Motivation***

READ-93	
As a user, I want to be able to set a personal reading goal for each month, so that I am motivated to read more.	
Story Points	2
Priority	Highest

READ-94	
As a user, I want to be able to see a list of the top 20 users by number of books read, so that I am motivated to read more.	
Story Points	2
Priority	High

READ-95	
As a user, I want to be able to see a list of the count of books I have read in each of the past months since I signed up and the associated reading goal for that month, so that I can track my reading progress.	
Story Points	2
Priority	Medium

READ-51	
As a user, I want to be able to access another user's public collections, so that I can gain inspiration for new books to read.	
Story Points	3
Priority	Highest

READ-114	
As a user, I want to be able to browse a curated list feed of public collections from other users, so that I can gain inspiration from other people's collections.	
Story Points	3
Priority	Highest

READ-115	
As a user, I want to be able to clone another user's public collection in the form of a new personal "named" collection for myself, so that I can easily save a collection that I like.	
Story Points	1
Priority	High

*EPIC: **Ratings***

READ-64	
As a user, I want to be able to rate any book that I have not rated, so I can share my opinion of the book in a quick manner.	
Story Points	1
Priority	Highest

READ-65	
As a user, I want to be able to update any rating for a book I have read at any time, so that I can share my new opinion of a book if I have changed my mind on it	
Story Points	1
Priority	Highest

READ-66	
As a user, I want to be able to view the average public rating on a book, so that I know whether it is worth reading or not.	
Story Points	1
Priority	High

READ-81	
As a user, I want to be suggested more books to read based on my past reading history, so that I am able to discover new titles and authors that suit my tastes.	
Story Points	2
Priority	High

READ-82	
As a user, I want to select a book and see 10 similar books based on my selected recommendation mode, so that I might find other books I enjoy.	
Story Points	3
Priority	Highest

READ-83	
As a user, I want to have one new random book suggested to me each day, so that I can discover new books I haven't heard of.	
Story Points	1
Priority	Low

READ-84	
As a user, I want to see the current week's top 10 books being read on aggregate, so that I may see the popular and current books being enjoyed by others.	
Story Points	2
Priority	Low

READ-85	
As a user, I want to be recommended books with good average rating as a mode, so that I may see the best rated books being enjoyed by others.	
Story Points	2
Priority	Highest

READ-86	
As a user, I want to be recommended books by authors whose works I've enjoyed before as a mode, so that I may see more of the author's books.	
Story Points	2
Priority	Highest

READ-87	

As a user, I want to be recommended books by the genres I most enjoy as a mode, so that I may see more books of my favourite genres.

Story Points	2
Priority	Highest

READ-88

As a user, I want to be recommended books that are common to other user's collections as a mode, so that I can enjoy what is popular.

Story Points	3
Priority	Highest

READ-90

As a user, I want to be able to toggle between different recommendation modes when selecting a book, so that I get to see similar books based on my current goal.

Story Points	2
Priority	Highest

EPIC: *Registration*

READ-5

As a potential user, I want to be able to create an account using my email, so that I can create a book collection.

Story Points	3
Priority	High

READ-6

As a potential user, I want to receive a verification email after creating an account, to ensure that my email was entered correctly.

Story Points	2
Priority	Medium

READ-7

As a potential user, I want to be able to create an account using my google account, so that I can create a book collection.

Story Points	2
Priority	Low

READ-8

As a potential user, I want to be able to create an account using my facebook account, so that I can create a book collection.

Story Points	2
Priority	Low

EPIC: *Reviews*

READ-76	
As a user, I want to be able to add a review for any book, so that I gain satisfaction from helping others on their reading decisions.	
Story Points	2
Priority	Highest

READ-77	
As a user, I want to be able to edit a review I have already written, so that i can fix any mistakes in my review.	
Story Points	1
Priority	Medium

READ-78	
As a user, I want to be able to view other users' reviews, so that I can see if I would like this book.	
Story Points	2
Priority	Highest

READ-79	
As a user, I want to provide a rating when I write a review, so that my opinions can be reflected in a rating.	
Story Points	1
Priority	Highest

READ-89	
As a user, I want to be able to "upvote" / "downvote" reviews written by other users, so that I can provide additional feedback.	
Story Points	1
Priority	Low

EPIC: *Visit*

READ-2	
As a potential user, I want to visit the ReadRecommend platform, so that I can decide if I want to use the platform for reviewing books.	

Story Points	3
Priority	Highest

READ-3	
As a user, I want to visit the ReadRecommend platform, so that I can manage my collection.	
Story Points	3
Priority	Highest