



Bilkent University

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Department of Computer Engineering

**CS 353**

**Database Management Systems**

**Term Project**

**Final Report**

**BookHub**

**Project Group Members**

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**May 17, 2021**

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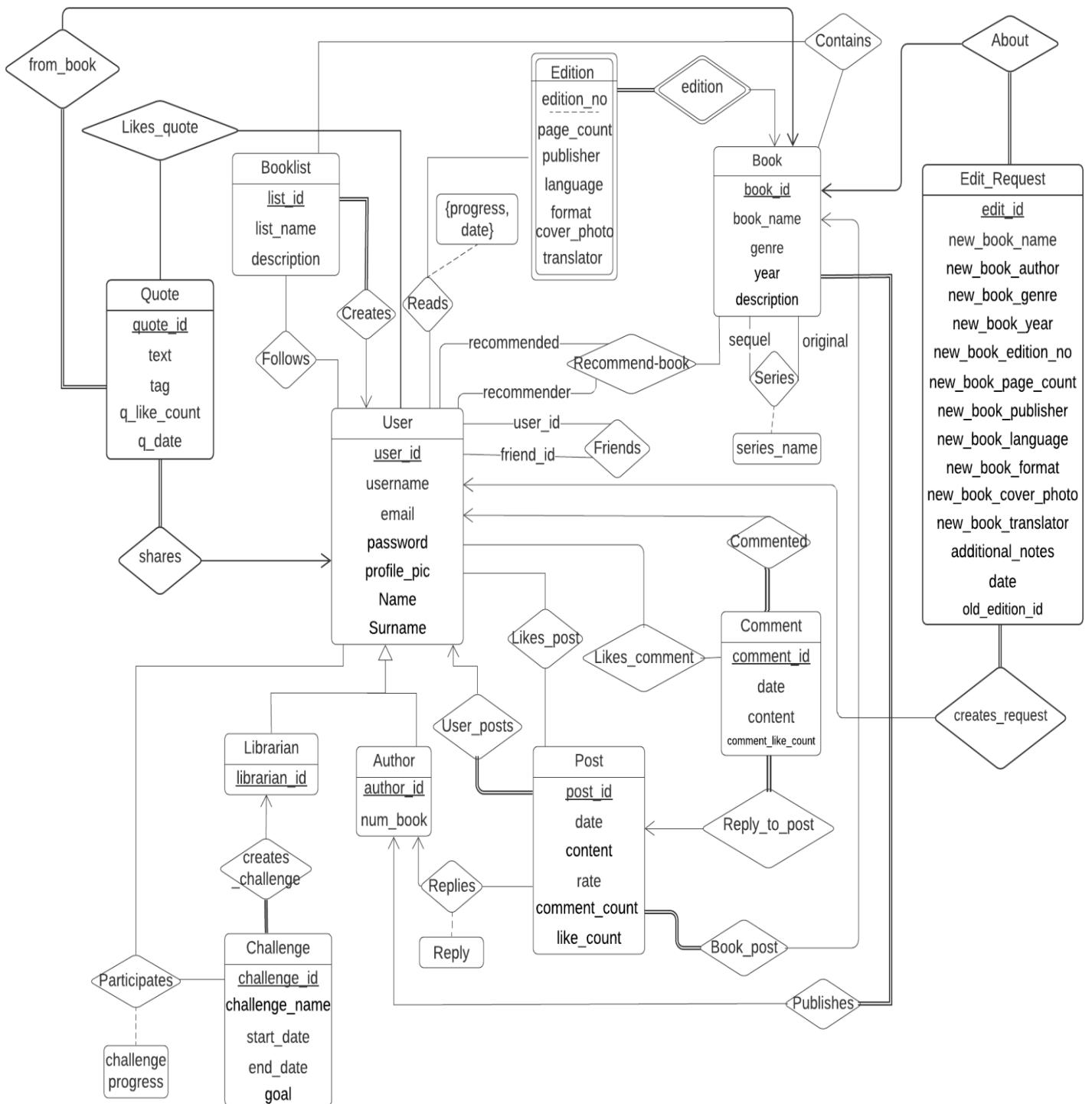
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## **1. Overview**

BookHub is a book management platform. There are three types of users in the platform which are users, authors and librarians. Users can search for books, authors, and users; track their progress on the books in the database, post reviews and quotes about them, create book lists, follow other people's book lists, add friends, recommend books to their friends and like/comment on their reviews. They also can join reading challenges that the librarians create, and request corrections upon erroneous information about books. Authors can publish books and add editions to their books. Librarians can create reading challenges and edit book information upon requests from users.

## 2. Final E/R



### **3. Final List of Tables**

#### **3.1 Quote**

##### **Relational Model**

Quote( quote\_id, text, tag, book\_id, user\_id)

**Foreign Key:** book\_id references to Book

                  user\_id references to User

**Candidate Key:** {quote\_id}

#### **3.2 Book**

##### **Relational Model**

Book( book\_id, book\_name, description, author, genre, year, author\_id)

**Foreign Key:** author\_id references to Author

**Candidate Key:** {book\_id}

#### **3.3 Edition**

##### **Relational Model**

Edition( edition\_no, book\_id, page\_count, publisher, language, format, cover\_photo, translator)

**Foreign Key:** book\_id references to Book

**Candidate Key:** {(edition\_no, book\_id)}

#### **3.4 Series**

##### **Relational Model**

series( sequel\_id, original\_id, series\_name)

**Foreign Key:** sequel\_id references to Book

                  original\_id references to Book

**Candidate Key:** {(sequel\_id, original\_id)}

### **3.5 Edit\_Request**

#### **Relational Model**

Edit\_Request( edit\_id, new\_book\_name, new\_book\_author, new\_book\_genre,  
new\_book\_year, new\_book\_edition\_no, new\_book\_page\_count, new\_book\_publisher,  
new\_book\_language, new\_book\_format, new\_book\_cover\_photo, new\_book\_translator,  
additional\_notes, user\_id, book\_id, date, old\_edition\_no)

**Foreign Key:** book\_id references to Book

(old\_edition\_no, book\_id) references to Edition

user\_id references to User

**Candidate Key:** {edit\_id}

### **3.6 Booklist**

#### **Relational Model**

Booklist (list\_id, list\_name, description, user\_id)

**Foreign Key:** user\_id references to User

**Candidate Key:** {list\_id}

### **3.7 Contains**

#### **Relational Model**

Contains (list\_id, book\_id)

**Foreign Key:** list\_id references to Booklist

book\_id references to Book

**Candidate Key:** {(list\_id, book\_id)}

### **3.8 Follows**

#### **Relational Model**

Follows (list\_id, user\_id)

**Foreign Key:** list\_id references to Booklist

user\_id references to User

**Candidate Key:** {(list\_id, user\_id)}

### **3.9 Participate**

#### **Relational Model**

Participate (challenge\_id, user\_id, challenge\_progress)

**Foreign Key:** list\_id references to Booklist

challenge\_id references to Challenge

user\_id references to User

**Candidate Key:** {(challenge\_id, user\_id)}

### **3.10 Challenge**

#### **Relational Model**

Challenge (challenge\_id, challenge\_name, start\_date, end\_date, goal, user\_id)

**Foreign Key:** user\_id references to Librarians

**Candidate Key:** {challenge\_id}

### **3.11 Post**

#### **Relational Model**

Post( post\_id, book\_id, date, content, rate, user\_id, like\_count, comment\_count )

**Foreign Key:** user\_id references to User

book\_id references to Book

**Candidate Key:** {post\_id}

### **3.12 Likes\_post**

#### **Relational Model**

Likes\_post( user\_id, post\_id)

**Foreign Key:** user\_id references to User

post\_id references to Post

**Candidate Key:** {(user\_id, post\_id)}

### **3.13 Recommend\_Book**

#### **Relational Model**

Recommend\_Booklist( book\_id, recommended\_id, recommender\_id)

**Foreign Key:** book\_id references to Book

                  recommended\_id references to User

                  recommender\_id references to User

**Candidate Key:** {(book\_id, recommended\_id, recommender\_id)}

### **3.14 Replies**

#### **Relational Model**

Replies( post\_id, user\_id, reply)

**Foreign Key:** post\_id references to Post

                  user\_id references to Author

**Candidate Key:** {post\_id}

### **3.15 Friends**

#### **Relational Model**

Friends( user\_id, friend\_id)

**Foreign Key:** user\_id references to User

                  friend\_id references to User

**Candidate Key:** {(user\_id, friend\_id)}

### **3.16 Comment**

#### **Relational Model**

Comment ( comment\_id, date, content, user\_id, post\_id )

**Foreign Key:** user\_id references to User

                  post\_id references to Post

**Candidate Key:** {comment\_id}

### **3.17 Likes\_quote**

#### **Relational Model**

Likes\_quote( user\_id, quote\_id)

**Foreign Key:** user\_id references to User

                  quote\_id references to Quote

**Candidate Key:** {(user\_id, quote\_id)}

### **3.18 Likes\_comment**

#### **Relational Model**

Likes\_comment( user\_id, comment\_id)

**Foreign Key:** user\_id references to User

                  comment\_id references to Comment

**Candidate Key:** {(user\_id, comment\_id)}

### **3.19 Reads**

#### **Relational Model**

Reads ( book\_id, user\_id, edition\_no, date, progress)

**Foreign Key:** (book\_id, edition\_no) references to Edition

                  user\_id references to User

                  book\_id references to Book

**Candidate Key:** {(book\_id, user\_id, edition\_no, date)}

### **3.20 User**

#### **Relational Model**

User ( user\_id, username, email, password, profile\_pic, name, surname)

**Candidate Key:** {user\_id}

### **3.21 Librarian**

#### **Relational Model**

Librarian ( librarian\_id )

**Foreign Key:** librarian\_id references to User

**Candidate Key:** {librarian\_id}

### **3.22 Author**

#### **Relational Model**

Author ( author\_id, num\_book )

**Foreign Key:** author\_id references to User

**Candidate Key:** {author\_id}

## **4. Implementation Details**

### **4.1 Tools and Frameworks**

In this project we have used PHP, HTML, CSS, JavaScript, Bootstrap and MySQL. In the front-end of the project HTML/CSS, JavaScript and Bootstrap have been used. In the back-end of the project PHP has been used to connect to the database and make queries. As a database, MySQL has been used. We have tested and launched the project on our localhost (local database and server) created by XAMPP for Windows, MAMP for Mac.

### **4.2 Challenges**

We, all of the team members, were not familiar with the web development tools and frameworks. We all have learned how to connect to a database, how to execute queries and show the results of the queries to the user visually. We have struggled to learn PHP and how to incorporate PHP into HTML. As a result, with the help of collaboration and hard work, we have overcome those challenges.

One of the problems we have faced was passing parameters between pages (php files). We have struggled on passing parameters. We knew how to pass parameters with POST action, but we didn't have any idea about GET action and the `$_GET` variable of php. At the end, we have learned how to pass parameters using GET. We have added parameters to the link as an extension. For example, for a specific user with username adil, we have used the user profile link as follows: `userprofile.php?uname=adil`. With this method, we easily accessed the username with `$_GET['uname']`.

### **4.3 Contributions**

Arda Akça Büyükk: Back-end: User profile, author profile, book page, librarian profile, booklist, post review, post comment, post quote, post american world, statistics, Adil'i Discord'a çağırmak, search book, login, register, search user, search author, site navbar, erroneous info request

Adil Meriç: Back-end: User profile, author profile, librarian profile, booklist, post review, post comment, like/unlike of comments and reviews, statistics, login, register, search page, scheduling group meetings, recommendations, erroneous request, team management, team leader.

Emin Adem Buran: Front-end: Homepage design, profile design, styling, design of the pages. navbar implementation, database creation. like/unlike quote, statistics.

Onur Oruç: Back-end: Everything about challenges. Challenge creation, join challenge, librarian page, challenge info, challenge details, database creation with JDBC. Series creation of a book. Book profile, edit edition and book according to erroneous request, clown.

## 5. Advanced DB Features

### 5.1 Reports

#### Top 5 most rated books

```
select book.* , ifnull(avg(rate),0) as rating  
from book left join post on book.book_id = post.book_id  
group by book.book_id  
order by rating DESC  
LIMIT 5;
```

#### Most Rated Books

Year	Title	Author	Rate
1996	Game of Thrones	George R.R. Martin	5.00
1967	Şimdiki Çocuklar Bir Harika	Aziz Nesin	4.50
1866	Crime and Punishment	Fyodor Dostoyevski	4.33
1983	Silent House	Orhan Pamuk	4.00
1945	Animal Farm	George Orwell	3.50

#### Top 5 most rated authors

```
select *  
from user, author natural join (select author_rates_book.author_id, avg(rating) as author_rate  
from author natural join  
(select author_id, ifnull(avg(rate),0) as rating  
from post  
left join book  
on book.book_id = post.book_id
```

```

        group by book.book_id) as author_rates_book

        group by author_id

        order by author_rate DESC

        LIMIT 5) as author_rates

where user.user_id = author.user_id

order by author_rate DESC;

```

### Most Rated Authors

Name	Number of Books	Rate
Aziz Nesin	1	4.50
Fyodor Dostoyevski	2	4.33
Orhan Pamuk	1	4.00
George R.R. Martin	7	3.50
George Orwell	2	2.25

### Top 5 most rated genres

```

select book.genre, ifnull(avg(rate),0) as rating

from book

left join post on book.book_id = post.book_id

group by book.genre

order by rating DESC

LIMIT 5;

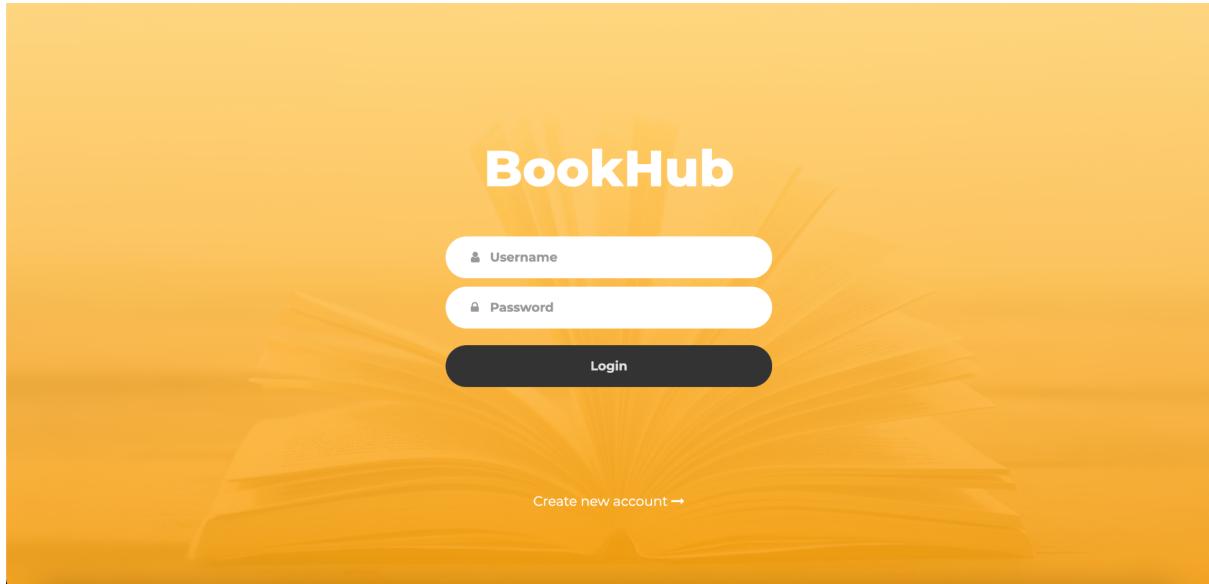
```

### Most Rated Genres

Genre	Rate
Novel	4.50
Crime	4.33
Fiction	3.67
Fantasy	3.50
Dystopia	1.00

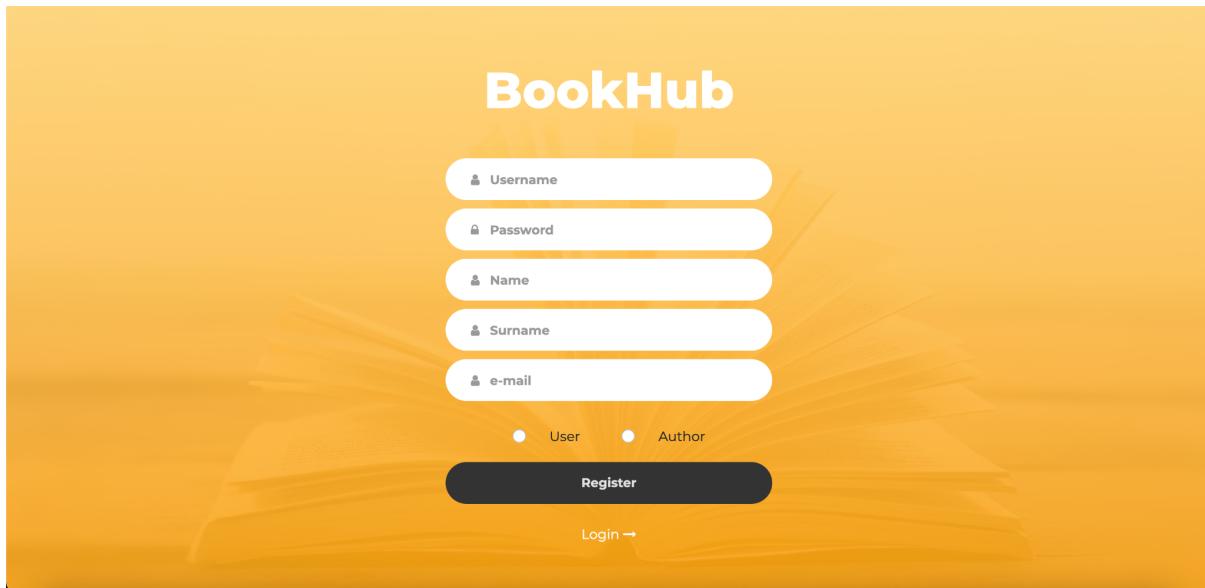
## 6. User's Manual

### 6.1 Login



This page is for regular users, authors, and librarians to log in to the system. There are two fields called username, and password. After entering the correct information, the user can enter the system by clicking the Login button. If any of the two fields are left blank, the page gives a warning indicating that the fields cannot be empty. If the information in any of the fields is wrong, the alert message “Invalid username or password!” is displayed and the user is redirected to the Login page. If the information is correct, the user is directed to the Home Page. If there is no account for the user, s/he can click the Create new account button and be directed to the Registration Page.

## 6.2 Register



This page is for people who do not have an account to register. The information needed to register is username, password, name, surname, and e-mail address. A person can register to the system as a regular user or an author by checking the boxes next to the User label or Author label. Only one of the boxes can be checked. In both cases, the information needed is the same. If the person does not change the user type (i.e., user or author), the page gives the warning “Please select one of these options!”. If one of them is selected but the information fields are empty, the page gives the warning message indicating that the fields cannot be empty. If the information supplied is correct, a new account is created. Then, the user can go back to the Login Page by clicking the Login button.

## 6.3 Challenges

The screenshot shows the 'Challenges' section of the BookHub website. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (ardaakcabuyuk), Challenges (highlighted in orange), Recommendations, and Logout. Below the navigation bar, the title 'Challenges' is centered. The first challenge listed is 'Çelinc', which has a 'Completed' status indicated by a green button. Below 'Çelinc' is a 'Reading Assignment' challenge, which has a 'Join' button.

Challenge	Status
Çelinc	Completed
Reading Assignment	Join

This page is for displaying the challenges for a regular user. The past challenges are not listed. If the challenge is not past, the user can join the challenge. For each challenge that the user has **not** joined yet, the number of books needed to be read to accomplish the challenge, the start date of the challenge, and its deadline are listed. For each challenge that the user has already joined, in addition to the information listed for the challenges that the user has not joined yet, the progress of the user in the corresponding challenge is also displayed. If the user has already joined and completed the challenge, instead of a join button, there is a Completed button indicating that the user has accomplished the challenge.

## 6.4 Book Profile

The screenshot shows the BookHub website interface for the book 'A Feast for Crows'. At the top, there is a navigation bar with links for 'Home Page', 'Search Book', 'Profile (ardaakcabuyuk)', 'Challenges', 'Recommendations', and 'Logout'. Below the navigation bar, the book title 'A Feast for Crows' is displayed in bold black text, followed by the author's name 'by George R.R. Martin'. The genre is listed as 'Fantasy' and the year as '2005'. To the right of the title, there is a 'Recommend' button. Below this information is a small thumbnail image of a person standing near a bicycle on a beach at sunset. To the right of the image is a 'Description' section which includes a detailed paragraph about the book's publication history and a five-star rating with '(0.00)' reviews. There are also 'Reviews', 'Quotes', and 'Post Quote' buttons. A table titled 'Editions' provides details for the edition number 16, including publisher (iDilMeric), page count (300), format (Book), language (TR), and a 'Erroneous Info Request' button. Below the editions table is a section titled 'Progress Steps' with a single entry for the date 2021-05-10 21:48:04, edition 16, and progress 300. Finally, there is a 'Sequel Of' section showing that the book is part of the 'A Song of Ice and Fire' series, with the title 'Game of Thrones' and author 'George R.R. Martin'.

The page above is the book profile (book page). In this page, each user type is able to access all information such as name, author, description about a specific book. Moreover, if the book belongs to a series, it shows the sequels of the book (if the book is the original book) or the original book (if the book is a sequel of another book). Edition information is also included in this page inside a table called Editions. A normal user can enter this page and add a progress to a specific edition. S/he may send an erroneous info request about a specific edition by clicking the corresponding erroneous info request button which will be explained detailly in the erroneous info screen. Moreover, he may recommend this book to a friend if the book is read by him. The author of the book may add a new edition to the book from this page.

## 6.5 Librarian Profile

The screenshot shows the BookHub website interface. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (librarian) (which is highlighted in yellow), Challenges, and Statistics. On the far right of the navigation bar is a red 'Logout' button. Below the navigation bar is a cartoon illustration of a librarian wearing glasses and holding a book, with the word 'Librarian' written below it. To the right of the illustration, the user's name 'librarian librariano\u0111lu' and their handle '@librarian' are displayed. Below this, the user's email address 'e-mail: lib@bilkent.edu.tr' is shown. Under the heading 'Erroneous Information Correction Request', there is a table with three columns: Date, User, and Book. The table contains one row with the date '2021-05-17 01:12:52', the user 'George Orwell', and the book '1984'. A green 'Details' button is located at the end of this row. Below this section is another heading 'Reading Challenges' with a 'Create' button. A table follows, listing three challenges: 'Oku bakalım: AYI' (Start Date: 13-04-2021, Deadline: 15-05-2021, Book Count: 15), 'Çelinc' (Start Date: 05-05-2021, Deadline: 21-05-2021, Book Count: 3), and 'Reading Assignment' (Start Date: 15-05-2021, Deadline: 20-05-2021, Book Count: 5). Each challenge has a green 'Details' button.

Date	User	Book
2021-05-17 01:12:52	George Orwell	1984

Title	Start Date	Deadline	Book Count
Oku bakalım: AYI	13-04-2021	15-05-2021	15
\u0111elinc	05-05-2021	21-05-2021	3
Reading Assignment	15-05-2021	20-05-2021	5

This page is for librarians to view their own profiles. At the top, the avatar of the librarian, his/her user type, name, username, and e-mail address are displayed.

There is a field for listing erroneous information correction requests made by a regular user or an author. For each request, the date on which the request has been made, the name of the user that sent the request, and the book name are listed. The librarian can see the details about the request by clicking the Details button. After s/he clicks the Details button, the librarian is directed to the page where the detailed information about the corresponding request is displayed.

There is another field for listing the challenges that the librarian created. For each challenge that the librarian has created, the title of the challenge, the challenge's start date and its deadline, and the number of books needed to be read to accomplish the challenge are listed. The librarian can see the details of a challenge (i.e., which users have joined the challenge and the number of books they have read so far) by clicking the Details button. The librarian can also create new challenges by clicking the Create button.

## 6.6 Home Page

The screenshot shows the BookHub Home Page. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, Recommendations, and Logout. Below the navigation bar are two search bars: one for "Search Authors" and one for "Search Users", both with a yellow "Search" button. The main content area is titled "Feed" and displays two user posts:

**User 1: Hami Mert Doğan (@hamimert)**

**On:** 1984  
**Review:** Like the movie, this book sucks.  
**Rating:** ★★★★☆  
🕒 2021-05-17 00:50:07  
0 likes 0 comments

**User 2: Emin Adem Buran (@eaburan)**

**On:** Crime and Punishment  
**Review:** Nice book.  
**Rating:** ★★★★☆  
🕒 2021-05-17 00:48:40

This page is the first page that every type of user encounters after logging into the system. This page consists of reviews posted by user's friends. In this page all types of users can search an author or a user using the search bars at top of the page. They may change the page by clicking links in the navbar or links inside the posts.

## 6.7 Book Reviews

The screenshot shows the BookHub website interface. At the top, there is a navigation bar with links for Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, Recommendations, and Logout. Below the navigation bar, the main content area displays a book profile for "Game of Thrones". The book's title is "Game of Thrones", it is written by "George R.R. Martin", and it was published in "1996". The genre is listed as "Fantasy". A small thumbnail image of the book cover is shown. To the right of the book details, there is a rating section showing a 5-star rating with a score of "(5.00)". Below the rating, there are buttons for "Reviews", "Quotes", and "Post Quote". Under the book details, there is a section titled "Reviews" which contains a single review posted by a user named "Onur Oruç". The review text is: "This book is fantastic! I loved it!". The review has a rating of 5 stars. At the bottom of the review card, there are buttons for "Unlike" and "Comment".

This page is for displaying the reviews about a book that is posted by a user that has finished the book. This page can be viewed by clicking the Reviews button on the book profile page. At the top of the page, the detailed information about the book is listed as on the book page. Then, for each review, there is a field about the posted review. At the top of the field, the name of the user and the username are displayed. Then, the review and rating for the book are displayed. A user can like and unlike a review by clicking the Like and Unlike buttons, respectively. Users can also write comments to reviews by typing their comments in the “Comment here...” field and then clicking the Comment button at the bottom of the review. There is a like count showing how many users liked the review before. There is also a comment count showing how many users have commented on the review before.

## 6.8 Recommend

The screenshot shows the 'Recommend' section of the BookHub application. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, Recommendations, and Logout. Below the navigation bar, the title 'Recommend' is centered. The first profile listed is 'Mert Yıldırım' (@gullerinprensi), with a yellow 'Profile' button and a green 'Recommend' button. The second profile is 'Hami Mert Doğan' (@hamimert), also with a yellow 'Profile' button and a green 'Recommend' button. The third profile is 'Elif Özer' (@prenses), with a yellow 'Profile' button and a green 'Recommend' button. The fourth profile is 'Alperen Alkan' (@amperenalakan), with a yellow 'Profile' button and a green 'Recommend' button. At the bottom of the list, there is a horizontal progress bar consisting of several colored segments (yellow, green, blue, red) followed by a 'Back' button.

This page is for the users that want to recommend a book to their friends. The user's friends are listed on the page. The user can recommend the book by clicking the recommend button. The user is also able to view his/her friend's page by clicking the profile button. This button directs the user to his/her friend's profile page. After the user recommends the book to one of his/her friends, the friend disappears from this page as s/he has already received the recommendation. If there is no friend to which the user can recommend a book, the message "No friends to recommend." is displayed and the Back button appears that redirects the user to his/her own profile page.

## 6.9 Recommendations

The screenshot shows the 'Recommendations' section of the BookHub website. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, and Recommendations (which is highlighted). A Logout button is also visible. Below the navigation bar, the title 'Recommendations' is displayed. The first recommendation is for 'Game of Thrones' by George R.R. Martin, recommended by Onur Oruç. It has a rating of 5.00 stars. The second recommendation is for '1984' by George Orwell, recommended by Hami Mert Doğan, with a rating of 1.00 stars.

**Recommendations**

**Recommended by Onur Oruç**

**Game of Thrones**

by George R.R. Martin

A Game of Thrones is the first novel in A Song of Ice and Fire, a series of fantasy novels by the American author George R. R. Martin. It was first published on August 1, 1996. The novel won the 1997 Locus Award and was nominated for both the 1997 Nebula Award and the 1997 World Fantasy Award. The novella Blood of the Dragon, comprising the Daenerys Targaryen chapters from the novel, won the 1997 Hugo Award for Best Novella. In January 2011, the novel became a New York Times Bestseller and reached No. 1 on the list in July 2011.

★★★★★ (5.00)

Show Detailed Info | Delete

**Recommended by Hami Mert Doğan**

**1984**

by George Orwell

Nineteen Eighty-Four: A Novel, often referred to as 1984, is a dystopian social science fiction novel by the English novelist George Orwell (the pen name of Eric Arthur Blair). It was published on 8 June 1949 by Secker & Warburg as Orwell's ninth and final book completed in his lifetime. Thematically, Nineteen Eighty-Four centres on the consequences of totalitarianism, mass surveillance, and repressive regimentation of persons and behaviours within society.

★★★★★ (1.00)

Show Detailed Info | Delete

This page is loaded when the user clicks the Recommendations button on the navigation bar. The page shows the recommended books to the user. For each recommendation, the friend's username that recommended the book to the user, the name of the recommended book, its description, and rate are listed. The username is not just a text. It is also a link. If the user wants to review the page of the user that recommended the book to the user, s/he can click the name of the user, and view his/her profile. The user can go to the recommended book's page to see all the information about the book by clicking the Show Detailed Info button. The user can also delete the recommendation from this page whenever s/he wants by clicking the Delete button.

## 6.10 Erroneous Information Request Review

The screenshot shows the BookHub application interface. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (librarian), Challenges, Statistics, and Logout. The main content area displays a request for changes about the book "1984" by George Orwell, Edition 1. The request details are as follows:

Requested Title	1984	Requested Edition No	1
Requested Author Name	George Orwell	Requested Publisher	Adil Meriç Yayınları
Requested Genre	Dystopia	Requested Language	TR
Requested Year	1945	Requested Page Count	300
Requested Format	Book	Requested Translator	
Additional Notes	Sorry, I entered it wrongly.		

At the bottom right, there are two buttons: "Confirm" (green) and "Reject" (red).

After a regular user or an author sends a request for changes about a book, the librarian can view the new information that the author or a user wants to replace with the old information. At the top of the page, the username that sent the erroneous information request, the name of the book, and its edition number are displayed. The information that a user is able to request changes about are title, edition no, author name of the book, publisher, genre, the language of the book, publication year, page count, format, and translator name. The librarian can also view additional notes in the Additional Notes field, if any, that the owner of the request sends to the librarian. However, this part is optional and can be blank. After reviewing the request, if the librarian approves the request, s/he clicks the Confirm button and the requested information is replaced with the old information about the book. If the librarian clicks the Reject button, the request is ignored and deleted.

## 6.11 Booklist

The screenshot shows a user's booklist on the BookHub platform. At the top, there is a navigation bar with links to 'Home Page', 'Search Book', 'Profile (ardaakcabuyuk)', 'Challenges', 'Recommendations', and a 'Logout' button. The main title of the booklist is 'Classics', and it is described as 'Book List by Arda Akça Büyük'. Below this, there is a section for the book 'Game of Thrones' by George R.R. Martin. It includes a short description: 'A Game of Thrones is the first novel in A Song of Ice and Fire, a series of fantasy novels by the American author George R. R. Martin. It was first published on August 1, 1996. The novel won the 1997 Locus Award and was nominated for both the 1997 Nebula Award and the 1997 World Fantasy Award. The novella Blood of the Dragon, comprising the Daenerys Targaryen chapters from the novel, won the 1997 Hugo Award for Best Novella. In January 2011, the novel became a New York Times Bestseller and reached No. 1 on the list in July 2011.' Below the description are the book's rating (★★★★★ (5.00)), a 'Show Detailed Info' button (yellow), and a 'Remove Book' button (red). Another book listed is '1984' by George Orwell, with a similar structure showing its rating (★★★★★ (1.00)) and buttons for detailed info and removal. The overall layout is clean and organized, typical of a digital library or personal reading list application.

This page is for displaying the book details in a user's own booklist. At the top of the page, the name of the booklist, the name of the user that created the booklist, and the description of the booklist are displayed. For each book in the booklist, book name, author name, book description, and book rate are displayed. The user can go to the book's page to see all the information about the book by clicking the Show Detailed Info button. The user can also remove the book from his/her booklist whenever s/he wants by clicking the Remove Book button. The user can also add new books to the booklist by clicking the Add Book button. When it is clicked, the user is directed to a page where s/he can search books to add the booklist.

## 6.12 Book Quotes

The screenshot shows the BookHub website interface. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, Recommendations, and Logout. Below the navigation bar, the book profile for "Game of Thrones" by George R.R. Martin is displayed. The book cover is shown, along with its genre (Fantasy) and publication year (1996). A detailed description of the book is provided, mentioning it is the first novel in "A Song of Ice and Fire" series and won several awards. To the right of the description is a five-star rating (5.00). Below the rating are buttons for Reviews, Quotes, and Post Quote. The main content area is titled "Quotes" and displays a single quote posted by a user named Onur Oruç (@onuroruc). The quote is "You know nothing, Jon Snow." It includes the posting date (2021-05-16 23:38:30), a like count (1 like), and buttons for Like and Unlike.

This page is for displaying the quotes about a book that is posted by a user. It can be viewed by clicking the Quotes button on the book profile page. At the top of the page, the detailed information about the book is listed as on the book page. Then, for each quote, there is a field about the posted quote. At the top of the field, the name of the user and its username are displayed. Then, the quote is displayed as text. A user can like and unlike a quote by clicking the Like and Unlike buttons, respectively. There is also a like count showing how many users liked the quote before.

## 6.13 Erroneous Information Request

The screenshot shows the BookHub application interface. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, Recommendations, and Logout. Below the navigation bar, the title "Erroneous Information Request" is displayed, followed by the book information: "A Feast for Crows by George R.R. Martin". The form consists of several input fields arranged in a grid:

Title	A Feast for Crows	Edition No	16
Author	George R.R. Martin	Publisher	iDilMeric
Genre	Fantasy	Language	TR
Year	2005	Page Count	300
Format	Book	Translator	Translator
Additional Note			

At the bottom right of the form is a yellow "Request" button.

A regular user or an author can send a request for information changes about a book. At the top of the page, the name of the book is displayed. The information that a user is able to request changes about are title, edition no, author name of the book, publisher, genre, the language of the book, publication year, page count, format, and translator name. The user can also enter additional notes in the Additional Notes field that s/he wants the librarian to see. However, this part is optional and can be left blank. The user sends the request to librarians by clicking the Request button.

## 6.14 Add Book to Booklist

The screenshot shows the BookHub interface. At the top, there's a navigation bar with links for Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, and Recommendations. On the far right of the top bar are Logout and Search buttons. Below the navigation is a search bar labeled "Search Books" with a yellow "Search" button. The main content area is titled "Add Book". It displays three book entries from the "A Song of Ice and Fire" series by George R.R. Martin:

- A Dance with Dragons**  
by George R.R. Martin  
A Dance with Dragons is the fifth novel of seven planned in the epic fantasy series A Song of Ice and Fire by American author George R. R. Martin. In some areas, the paperback edition was published in two parts, titled Dreams and Dust and After the Feast. It was the only novel in the series to be published during the eight-season run of the HBO adaptation of the series, Game of Thrones, and runs to 1,040 pages with a word count of almost 415,000.  
★★★★★ (2.00)  
[Show Detailed Info](#) [Add Book](#)
- A Feast for Crows**  
by George R.R. Martin  
A Feast for Crows is the fourth of seven planned novels in the epic fantasy series A Song of Ice and Fire by American author George R. R. Martin. The novel was first published on October 17, 2005, in the United Kingdom, with a United States edition following on November 8, 2005.  
★★★★★ (0.00)  
[Show Detailed Info](#) [Add Book](#)
- A Clash of Kings**  
by George R.R. Martin

This page is for adding new books to an already created book. This page is displayed when a user clicks the Add Book button on the booklist s/he created before. At the top, there is a search field in which the user can enter the name of the book s/he wants to add to his/her booklist. After clicking the Search button, corresponding book(s) are listed on the page. For each book listed, the name of the book, its author name, its description, and the rate are displayed. The user can go to the book's page to see all the information about the book by clicking the Show Detailed Info button. The user can add a book to the booklist by clicking the Add Book button.

## 6.15 Post Review Page

The screenshot shows the 'Post Review' page for the book 'A Feast for Crows' by George R.R. Martin. At the top, the BookHub logo is visible along with navigation links for Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, and Recommendations. A 'Logout' button is also present. The main content area displays the book's title and author. Below this, a large text input field is labeled 'Review'. Underneath the review field, there is a rating section titled 'Rate Book:' followed by five stars. At the bottom of the page is a yellow 'Post Review' button.

The screenshot above shows the post review page where users can share their reviews about a published book. On the top of the page, there is information about the book on which the review will be shared. Users can rate the book by using stars at the bottom and share their thoughts about the book by adding text. After clicking the post review button, the review of a user on a book is published.

## 6.16 Edit Progress

The screenshot shows a user profile interface. At the top, there is a 'Edit Progress' pop-up window with fields for 'Page Number' and buttons for 'Cancel' and 'Add'. Below the pop-up, the user's email is listed: e-mail: ardaakcabuyuk@gmail.com. The main content area has two sections: 'Currently Reading' and 'Read'. The 'Currently Reading' section contains a table with columns: Last Update, Title, Edition, Author, Total Page Count, and Current Page. One row is shown for 'The Royal Game' by Stephen Zweig. The 'Read' section contains a table with columns: Finished Date, Title, Edition, Author, and three buttons each for 'Recommend', 'Post Review', and 'Post Quote'. Five rows are listed, corresponding to books read on various dates.

Last Update	Title	Edition	Author	Total Page Count	Current Page	Actions
2021-05-17 00:38:19	The Royal Game	6	Stephen Zweig	238	163	<a href="#">Edit Progress</a>

Finished Date	Title	Edition	Author	Actions
2021-05-10 21:48:04	A Feast for Crows	16	George R.R. Martin	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-11 23:26:37	Animal Farm	90	George Orwell	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-16 23:54:07	Silent House	21	Orhan Pamuk	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-17 00:41:25	Crime and Punishment	1	Fyodor Dostoyevski	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-17 00:32:12	Şimdiki Çocuklar Bir Harika	12	Aziz Nesin	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>

The screenshot above shows the edit progress pop-up where users can edit their progress on the book they are currently reading. When a user clicks on the cancel button or the exit button, the pop-up disappears. When a user clicks on the add button, the progress of the user on a book is added to the user profile under the table called Currently Reading.

## 6.17 Author Profile

The screenshot shows the BookHub author profile for George R.R. Martin. At the top, there's a navigation bar with links for Home Page, Search Book, Profile (georgermartin) (which is highlighted in orange), and Challenges. On the right, there's a Logout button. Below the navigation is a placeholder image for the author's photo, labeled "Author". The author's name, "George R.R. Martin", is displayed in bold, along with their Twitter handle "@georgermartin" and email address "e-mail: george@bilkent.edu.tr". A "Published Books" section follows, featuring a "Publish Book" button. A table lists his published books with columns for Year and Title, and buttons for Create Edition and List Reviews next to each entry.

Year	Title	Create Edition	List Reviews
2011	A Dance with Dragons	[Create Edition]	[List Reviews]
1996	Game of Thrones	[Create Edition]	[List Reviews]
2005	A Feast for Crows	[Create Edition]	[List Reviews]
1998	A Clash of Kings	[Create Edition]	[List Reviews]
2000	A Storm of Swords	[Create Edition]	[List Reviews]

The screenshot above is the profile of an author from the view of the author him/herself. What is listed in the author's profile is published books. An author can publish new books by clicking on the publish book button. An author can create a new edition for a book shared by him/her. Also, an author can list the reviews of a book shared by her/him by clicking the list reviews button next to the published books.

## 6.18 Post Quote

The screenshot shows the 'Post Quote' page on the BookHub website. At the top, there is a navigation bar with links for 'Home Page', 'Search Book', 'Profile (ardaakcabuyuk)', 'Challenges', 'Recommendations', and a 'Logout' button. Below the navigation bar, the title 'Post Quote' is displayed in bold. Underneath the title, the book information 'Crime and Punishment by Fyodor Dostoyevski' is shown. A detailed description of the book follows: 'Crime and Punishment is a novel by the Russian author Fyodor Dostoevsky. It was first published in the literary journal The Russian Messenger in twelve monthly installments during 1866. It was later published in a single volume. It is the second of Dostoevsky's full-length novels following his return from ten years of exile in Siberia.' Below the description are two input fields: 'Quote' and 'Tags'. A yellow 'Post Quote' button is located at the bottom of the form.

The screenshot above shows the post quote page where users can share a quote from a book. At the top of the page, there is information about the book on which the quote will be shared. Users can share a quote from this book by adding text to the quote field and tag(s) (e.g., love, nature, etc.) to the tags field. After clicking the post quote button, the quote of a user from a book is published.

## 6.19 Create Challenge

The screenshot shows the 'Create Challenge' page of the BookHub website. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (librarian), Challenges, Statistics, and Logout. The main title 'Create Challenge' is centered above a form. The form consists of four input fields: 'Goal' (with placeholder 'Goal'), 'Challenge Name' (with placeholder 'Challenge Name'), 'Start Date' (with placeholder 'gg.aa.yyyy' and a calendar icon), and 'End Date' (with placeholder 'gg.aa.yyyy' and a calendar icon). Below the form is a yellow 'Create' button.

Field	Description
Goal	Indicates the number of books to be read.
Challenge Name	The name of the challenge.
Start Date	The beginning date of the challenge.
End Date	The end date of the challenge.

The screenshot above shows the create challenge page where a librarian can create a reading challenge. The librarian can set a goal that indicates how many books should be read to complete the challenge successfully. Also, the librarian can determine the name of the challenge, start date of the challenge, and end date of the challenge. When determining the challenge dates, librarians can select a date from the resulting calendar that appears when they press the calendar icon on the right side. After clicking the create button, the challenge is published on the website.

## 6.20 Create Edition

The screenshot shows the 'Create Edition' page of the BookHub application. At the top, there is a navigation bar with the BookHub logo, 'Home Page', 'Search Book', 'Profile (georgerrmartin)', 'Challenges', and a 'Logout' button. Below the navigation bar, the title 'Create Edition' is displayed. The form consists of several input fields arranged in a grid-like structure:

Edition No Edition No	Year Year
Page Count Page Count	Translator Translator
Publisher Publisher	Language Language
Format Format	

At the bottom right of the form area is a yellow 'Create' button.

The screenshot above shows the create edition page where authors can create an edition of a book published by him/her. An author can create an edition by adding some information such as edition no, year, page count, translator, publisher, language, and format. After clicking on the create button, the new edition is published.

## 6.21 Review Page

The screenshot shows a review page for the book "Game of Thrones" on the BookHub platform. The review is posted by a user named Onur Oruç (@onuroruc). The review text reads: "This book is fantastic! I loved it!" It has a rating of 5 stars. The review was shared on May 16, 2021, at 23:37:52. There are 4 likes and 3 comments. A comment section is available for users to add their own thoughts. Below the review, there are two comments from other users: George R.R. Martin (@georgerrmartin) replying to the original poster, and George Orwell (@georgeorwell) adding his own comment.

**Review**

Onur Oruç  
@onuroruc

On:  
**Game of Thrones**

Review:  
This book is fantastic! I loved it!

Rating:

2021-05-16 23:37:52

4 likes 3 comments

Comment here...

Like Comment

**Comments**

Author reply  
George R.R. Martin  
@georgerrmartin

Thank you, my dear...

2021-05-16 23:50:10

Comment  
George Orwell  
@georgeorwell

I wish I was alive and read that book

The screenshot above shows a review and comments and likes from that review. The content of the review includes scoring related to the book, thoughts related to the book, and the date when the review was shared. Among the comments on the review, the author of the book on which the review is made is seen at the top, if any. A user can comment on this review, like the review, and like the comments made to the review.

## 6.22 Create Booklist

The screenshot shows a modal window titled 'Create Booklist'. It has fields for 'List Name' and 'Description'. Below the modal is a table titled 'Owned Book Lists' showing two entries: 'Classics' (7 books) and 'Komünist' (4 books). At the bottom are 'Create' and 'Cancel' buttons, and a large 'Create' button at the very bottom.

Name	Number
Classics	7
Komünist	4

**Owned Book Lists**

**Create Booklist**

List Name:

Description:

**Create** **Cancel**

**Create**

**Followed Book Lists**

Name	Number of Books	List Owner
GoT	5	Onur Oruç

Show Booklist

Users can specify the name and the description of the book list they want to create in this screen. After clicking ‘Create’, an empty book list is created for a user.

## 6.23 Publish Book

The screenshot shows a form titled 'Publish Book' with fields for Title, Genre, Description, Publication Year, Sequel of, and Series Name. The 'Title' field is currently empty. The 'Sequel of' field contains the message 'Sequel does not exist!'. A large 'Publish' button is at the bottom right.

**Publish Book**

Title:

Genre:

Description:

Publication Year:

Sequel of:  Sequel does not exist!

Series Name:

**Publish**

Authors can publish a book by specifying the title, genre, description, publication year from this screen. If the published book is a sequel book of some series, the author can also specify it.

## 6.24 User Profile

 BookHub [Home Page](#) [Search Book](#) [Profile \(ardaakcabuyuk\)](#) Challenges Recommendations [Logout](#)

  
User

**Arda Akça Büyük**  
@ardaakcabuyuk  
e-mail: ardaakcabuyuk@gmail.com

**Currently Reading**

Last Update	Title	Edition	Author	Total Page Count	Current Page	Actions
2021-05-17 00:38:19	The Royal Game	6	Stephen Zweig	238	163	<a href="#">Edit Progress</a>

**Read**

Finished Date	Title	Edition	Author	Actions
2021-05-10 21:48:04	A Feast for Crows	16	George R.R. Martin	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-11 23:26:37	Animal Farm	90	George Orwell	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-16 23:54:07	Silent House	21	Orhan Pamuk	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-17 00:41:25	Crime and Punishment	1	Fyodor Dostoyevski	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>
2021-05-17 00:32:12	Şimdiki Çocuklar Bir Harika	12	Aziz Nesin	<a href="#">Recommend</a> <a href="#">Post Review</a> <a href="#">Post Quote</a>

**Reviews**

Date	Title	Author	Likes	Comments	Ratings	Actions
2021-05-16 23:56:06	Silent House	Orhan Pamuk	1	0	4/5	<a href="#">Go to Review</a>
2021-05-17 00:36:12	Şimdiki Çocuklar Bir Harika	Aziz Nesin	1	1	5/5	<a href="#">Go to Review</a>

**Owned Book Lists**

Name	Number of Books	Number of Followers	Actions
Classics	7	2	<a href="#">Show Booklist</a>
Komünist	4	0	<a href="#">Show Booklist</a>

[Create](#)

**Followed Book Lists**

Name	Number of Books	List Owner	Actions
GoT	5	Onur Oruç	<a href="#">Show Booklist</a>

**Friends**

Name	Name
Mert Yıldırım	<a href="#">Remove</a>
Hami Mert Doğan	<a href="#">Remove</a>
Elif Özér	<a href="#">Remove</a>
Alperen Aikan	<a href="#">Remove</a>
adil meric	<a href="#">Remove</a>
Onur Oruç	<a href="#">Remove</a>
Emin Adem Buran	<a href="#">Remove</a>
Travis Scott	<a href="#">Remove</a>

[Add Friends](#)

**Challenges Succeeded**

Title	Book Count
Çelinc	3 / 3

**Challenges Failed**

Title	Book Count
Oku bakalım: AYI	3 / 15

This page is the profile of a user from the view of the user him/herself. What is listed in the user profile are currently read books by the user, completed books of the user, reviews that the user posted,

book lists of the user, followed book lists by the user, friends list, challenges succeeded, and challenges failed. The user can edit progress of a currently read book, recommend a book to a friend, post reviews or quotes on them. Also, he/she can go to their book lists or another user's book lists that he/she follows. He/she can add/remove friends and see him/her challenge success/failures.

## 6.25 Statistics

The screenshot shows the 'Statistics' page of the BookHub application. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (librarian), Challenges, and Statistics. On the far right of the header is a 'Logout' button. The main content area contains five tables:

- Most Rated Books**: A table showing books sorted by rating. The data is as follows:
 

Year	Title	Author	Rate
1996	Game of Thrones	George R.R. Martin	5.00
1987	Şimdiki Çocuklar Bir Harika	Aziz Nesin	4.50
1866	Crime and Punishment	Fyodor Dostoyevski	4.33
1983	Silent House	Orhan Pamuk	4.00
1945	Animal Farm	George Orwell	3.00
- Most Rated Authors**: A table showing authors sorted by rating. The data is as follows:
 

Name	Number of Books	Rate
Aziz Nesin	1	4.50
Fyodor Dostoyevski	2	4.33
Orhan Pamuk	1	4.00
George R.R. Martin	6	3.50
George Orwell	2	2.00
- Most Rated Genres**: A table showing genres sorted by rating. The data is as follows:
 

Genre	Rate
Novel	4.50
Crime	4.33
Fantasy	3.50
Fiction	3.50
Dystopia	1.00
- Most Read Books**: A table showing books sorted by read count. The data is as follows:
 

Year	Title	Author	Read Count
1866	Crime and Punishment	Fyodor Dostoyevski	4
1945	Animal Farm	George Orwell	2
1987	Şimdiki Çocuklar Bir Harika	Aziz Nesin	2
2011	A Dance with Dragons	George R.R. Martin	1
1996	Game of Thrones	George R.R. Martin	1
- Most Read Genres**: A table showing genres sorted by read count. The data is as follows:
 

Genre	Read Count
Crime	4
Fantasy	3
Fiction	3

A librarian can list some statistics about the website from this page. The statistics page contains the top 5 of the following: most rated books, most rated authors, most rated genres, most read books, and most read genres.

## 6.26 Search Results

The screenshot shows the BookHub application interface. At the top, there is a navigation bar with links: Home Page, Search Book, Profile (ardaakcabuyuk), Challenges, and Recommendations. On the far right of the navigation bar is a red-bordered "Logout" button. Below the navigation bar is a search bar with the placeholder "Search Authors". To the right of the search bar is a yellow "Search" button. The main content area is titled "Search Results". It displays three author profiles in a list format:

- George R.R. Martin**  
@georgerrmartin  
Books: 6  
[Profile](#)
- Orhan Pamuk**  
@orhiwhatspoppinmyg  
Books: 1  
[Profile](#)
- Aziz Nesin**  
@nesin  
Books: 1  
[Profile](#)

A user can search for authors and users from this page. According to the search keyword, authors and users are listed.

## 6.27 Search Book

The screenshot shows the BookHub website interface. At the top, there is a navigation bar with links for "Home Page", "Search Book" (which is highlighted in orange), "Profile (ardaakcabuyuk)", "Challenges", and "Recommendations". On the far right of the navigation bar is a "Logout" button. Below the navigation bar, the page title "Search Book" is displayed in bold. Underneath the title, there is a search form with a "Search:" label and a "Keyword" input field. Below this is a "Search By:" dropdown menu set to "Title". Further down, there are two input fields for "Range Search": "Year (min)" and "Year (max)". A large orange "Search" button is positioned below these controls. The main content area is titled "Search Results" and features a "Sort By" dropdown menu. The first result listed is "A Dance with Dragons" by George R.R. Martin. The summary text for this book states: "A Dance with Dragons is the fifth novel of seven planned in the epic fantasy series A Song of Ice and Fire by American author George R. R. Martin. In some areas, the paperback edition was published in two parts, titled Dreams and Dust and After the Feast. It was the only novel in the series to be published during the eight-season run of the HBO adaptation of the series, Game of Thrones, and runs to 1,040 pages with a word count of almost 415,000." Below the summary is a rating of "★★★★★ (2.00)".

This is the search book page. Any type of user can search books on this page. A keyword-search can be done by title, author, or genre. Also, the searcher can apply a year range to the search done. The results can be sorted by rate and title.

## 6. Website

Reports can be found at: <https://mericadil.github.io/>