DOKUZ EYLÜL UNIVERSITY

ENGINEERING FACULTY

DEPARTMENT OF COMPUTER ENGINEERING

# Book Review System
# RAF ARASINDA

## CME 3201 Database Management Systems Term Project

## Report

**Phase 3**

**2020-2021 FALL**

**Group 16**

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# Abstract

The Book Review System is a web application project. This project implements a web-based online book review system. In this project, the team used PHP technology and MYSQL database management system. For framework the team used CODEIGNITER. This system provides passionate book readers to express their feelings in order to encourage new readers to read books.

The users of this website do not have to have an account in order to search books and read the comments but they are obligated to have an account to make comments on certain books. The users can rate the books that they commented on.

The website is ready for users to join our system and able to show the other book lovers' reviews from all around the world.

# 1. Completion Report

The Book Review Website which is called “Raf Arasında”, all pages were designed by using HTML5, CSS, and for a dynamic website JAVASCRIPT.

For designing(front-end part) the logo as shown in the figure 1.1, Adobe XD tool is used. Furthermore for designing the background image, Adobe AI is used.

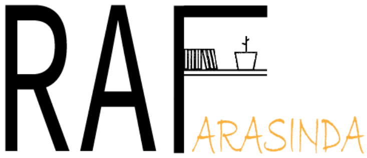


Figure 1.1 Logo of the Website

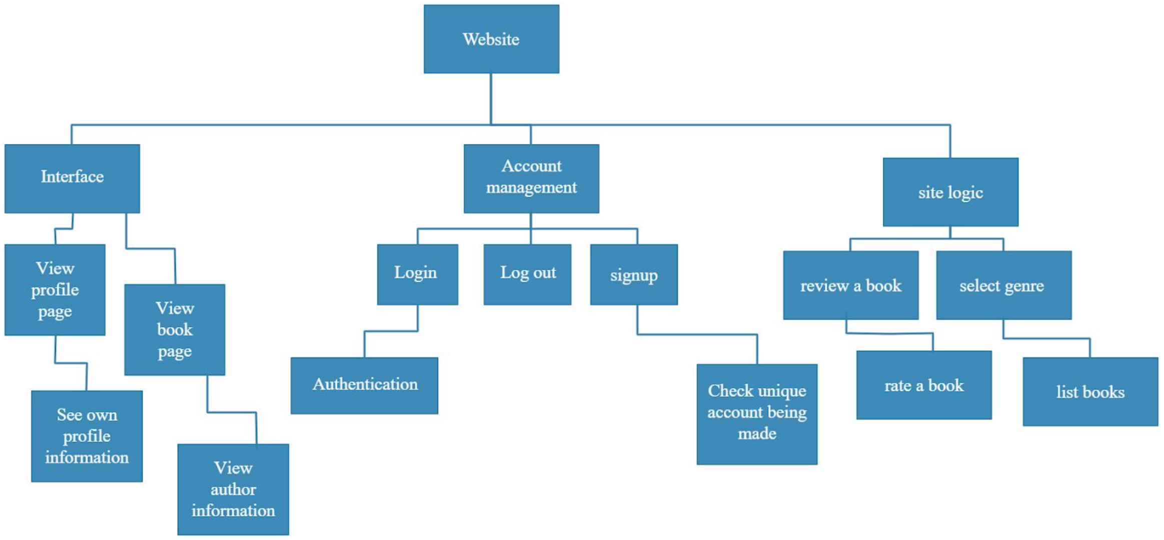
About the database part of the system, First the team tried connecting the same database using PhpMyAdmin. Due to the same port opening problems and inadequate modems, we could not manage to connect each other through our modems. Because of the failure, the team solved this problem connecting the same database using HEIDISQL. To make a connection between database and the website, the team used the PHP programming language. With the help of this all of the pages are handled.

To fill the database tables easily, the team made research about data scraping using PYTHON and BEAUTIFUL SOUP. As mentioned in the previous report phase-2 the Book Depository Website is used to take books information such as the title of the book, image and url links (this link will help the users to purchase the selected book.) etc. According to this information that we take from the website, we manage to insert the data into the database tables. Instead of inserting each data by hand, this method will help us to insert real world data from the website efficiently.

Despite all the challenges that the team has faced, we managed to accomplish all the milestones that were clarified in previous reports. The website’s all pages are working and ready for its users to join.

# 2. Functional Decomposition

## 2.1 Functional Decomposition Diagram



## 2.2 MVC Model

The team has used an open-source software rapid development web framework CodeIgniter, for use in building a dynamic web site with PHP.

### 2.2.1 Model

Model is the central component of the MVC pattern. It is the application's dynamic data structure, independent of the user interface. It directly manages the data, logic and rules of the application.[1] The system has 4 models and each one of them are used. Through models, the system is connected with the database.

In the book model, 2 functions are used. "Fetchdata" function is used for the search bar mainly. It takes the name of the book when it's typed and works dynamically. By writing a needed query, this function returns a book table including all of the searched book information. "Listall" function is used for listing all of the books on the database. According to the needed query this function shows all books.

In the genre model which is used in the homepage controller. has 1 function which is "getgenre" function. This function returns lists of books' information such as title genre name etc. according to wanted genre. Function takes genre id from the pushed button and compares with other books genre id's. When it matches then it will print that book's information. All of this queries are written in that model.

In the author model, there are 3 functions used in the controller mainly. First function is “getAuthor” and it is used in the main book page only. It returns a table and the table contains all of the information about the book that was searched, the author name of the book, the comments that user made and the user nicknames. Another function that has been used in the model is “getAuthorAndBooks” and it is used in the author information page. It joins book and author tables and in order to do that the function wants an author id after that it returns the table to the controller. Finally the last function in our model is “insert” and it is used when we want to add data to the database. It requires a data array in order to add that data in a table called ‘review’.

In the user model, 8 functions are included and used. The first function is “insertuser” function. It is used when a user wants to sign up to a website this model is called from the controller. Users' information is inserted. In the ”login” function, returns 1 or 0.It is used for controlling if that user is registered already .”getuser” function returns a selected user row from the table. ”deleteuser” function is used for deleting an existing account from the website. ”updatePassword” function is for updating a password for the user. ”findUserByEmail” function returns true or false due to the result of the query that we’ve given to it. If there is a user with a specific email or username .That returns true.Email and username are passed in by the controller. ”control_pwd” function is a control function too. It returns 0 or 1. In controllers, this function is called for controlling password changing. “findUser” function is used when we need the information of a certain user. It requires a user_id and returns a table filled with that user’s information.”getuser” function is used for profile pages. It gets the user information.

### 2.2.2 View

View is any representation of information. Mainly it uses HTML and other designing tools. The system has 11 view php files including nav and head php. This nav and head php is a shortcut of navigation and head of the HTML.

Main page that will come up when the website is open is hpage which is used in the homepage controller. This view shows the opening page. Like other view pages this hpage also includes nav and head php files.

In the author page, the page stores authors information and the books that s/he wrote. The users can reach this page by clicking the author's name on the book page. This view takes a data array called “author” from the “authordata” controller. The users can see the information about the books that s/he wrote when they click the book pictures on the author page.

In the browse page,the page has several genre buttons and a search bar. Genre buttons directs the user to the genre page that has the list of the specific genre of books.”Homepage” controller “fetch” function using here.

In the book page, the view includes all of the information about a certain book for instance: the book author, the information of the book such as title, cover picture and summation. Moreover it includes the users that commented on that book and their nicknames, reviews and ratings. When a user clicks the author name, the view redirects the user to the author page to show the author's information.

In the allbook page shows/displays all the books in our database. Users can see all of the books at the same time. This view takes a data array called “books” from the “bookPage” controller. So it loops all of the books and writes all of the information about each one of the books.

In the genre page, difference with allbook page, this view will display books’ information according to the wanted genre type. Choosing which books will come happens in the genre model as we mentioned before. So it prints coming ( by genre) books’ information.

In the signup page, Signup and login forms are stored. Head and hpage pages are included. Users see this page when they are not logged in or not signed up.

In the myprofile, the user profile displays on the website. Users can see their information and if they want, they can change their password or they can delete their account. All they have to do is push the buttons on the page. The changepassword page is a page that a user uses when a user wants to change their password in the website. User writes the current password, new password and confirms it and then these informations are assigned to the function in the controller part and the password is updated in the database as well.

## 2.2.3 Controller

Controller accepts input and converts it to commands for the model or view. Basically it is a bridge between model and view. There are 2 different php pages in the controller part.

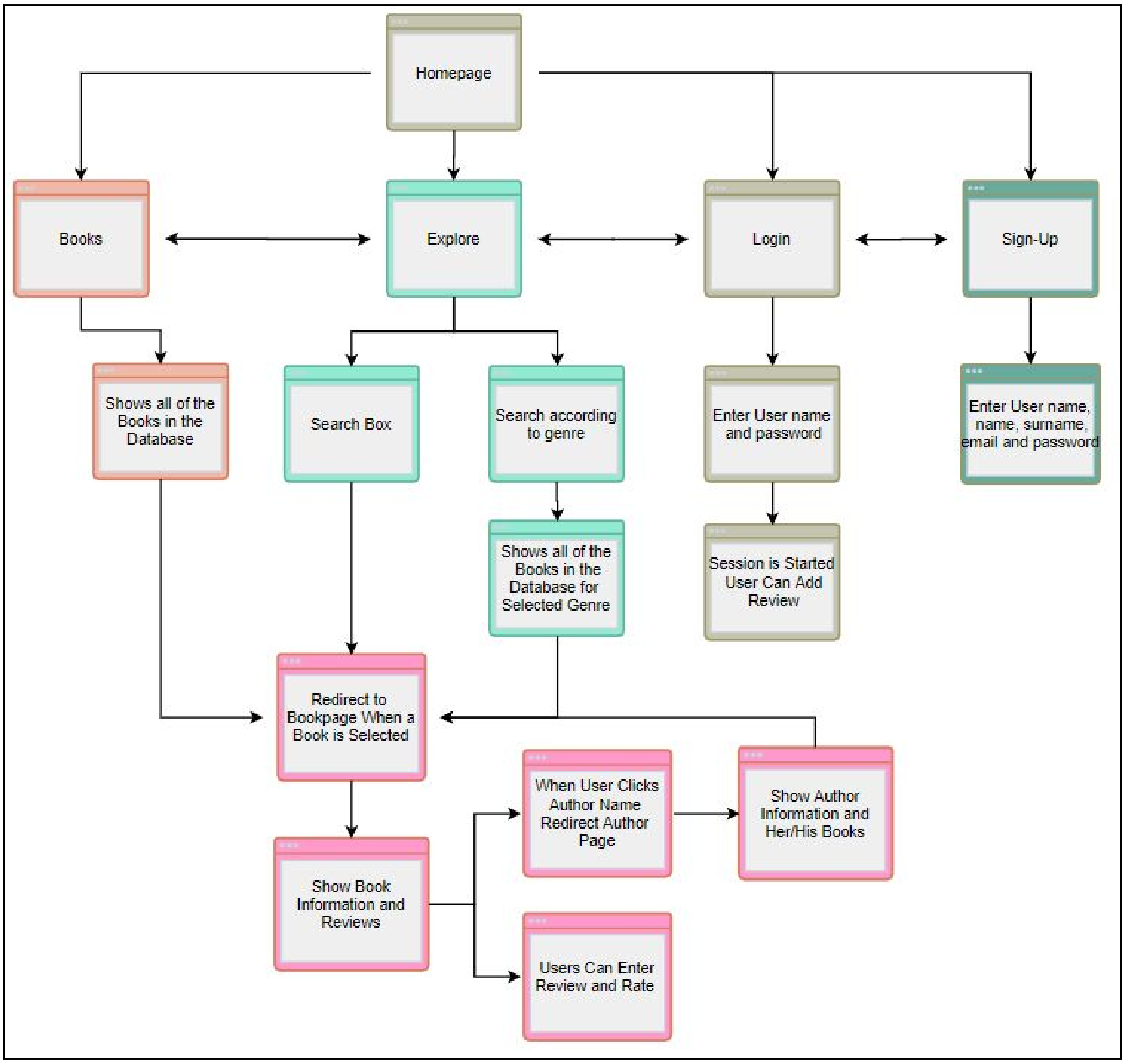
In the Homepage controller is a main controller that displays all 10 functions. In the config file the team changed the  default_controller as one of the functions ,which is called “showhome”. This function loads hpage view file. So it displays the opening page. In “fetch” function is used for displaying books (that are already in the database) when a user searches in the search bar. It takes segment 3 which is the written word, from the url. This function is used in the browse page view. That part is written as a javascript. “browsepage” function, loads view of the browse page view php. “bookpage” function is a bridge between bookmodel and allbookpage view. This function keeps books as  a data array which comes from bookmodel’s “listall” function. Then take this array and send it to the bookpage view. “genredata” function is used for listing books according to genres. As a “bookpage” function, it keeps an array of books (which listed according to  wanted genre) and sends this array to the bookpage view. Another function in the Homepage controller is “authordata”. It reads the author id number from the url and returns a table filled with author’s information. After that the function loads this data to the authorpage view. In the “bookdata” function, the function reads the book id from url like we did in the authordata but it takes a much more different table than that. It returns user and book information as well. The last function we used in the bookPage view is “addReview” function. It works when a user enters a review for a book. Basic task of this function is just reading data from the input boxes and adding the values of them into the database with the help of our models.”loggedout” function used to when the user click the logout button, this function redirect to the Register controller's logout function and it destroys the session.”loggedin” function controls if user is logged in and if it is  then it views to hpage but it it is not it views the signup page again for user to see.

In the Register controller, 8 functions are used for the system. Firstly,”getall” function returns  all the users in the system by loading and using user_model. The “signup” function is used for registering the users to the system. It uses post method and gets the inputs that user entered and then from user_model function named finduserByEmail, system controls the user email and username. If there is a username or email registered already to the system it returns true and error message shows up. If it returns false user_model function “insertuser” runs and insert the certain user in to the system. After a user has registered, he/she has to login to the system. So the signup view page is loaded. The ”logincontrol”function is used for login operations. First, the system controls if the user entered valid inputs into the forms. If there is no error then the system, user_model gets loaded and the login function in that model is used. Results return 1 or 0. If it returns 1 finduser function in user_model is used and it gets the user information. Then sessiondata gets created.These informations are kept and set in these sessiondata. User redirected to loggedin function in Homepage controller. The ”logout” function basically destroys the session and redirects the page to Homepage. The “delete” function is used when a user wants to delete their account from the system. This function loads the user_model and calls deleteuser function in that model. User account gets deleted and the page redirects to the Register controller’s logout function. The “changepassword” function works when a user clicks to change password button on their profile page. This function gets inputs from user and assign them into variables then the control_pwd function in user_model gets current password and session variable username and controls if  the current password is correct with that username. If that function returns 1 and user current password matches with confirm password, with user_model function updatePassword,user’s password is updated. The “changepwd” function simply views the changepassword view page. Last function named “myprofile” is used to view myprofile page. It controls if a user's session is available and is not empty.Then it can view myprofile page.If there is no user logged in it redirects the user to signup page.

# 3. High-level Organization

## 3.1 Site Map

The picture below shows the sitemap of the website. As we can see in the picture we can reach Books, Explore, Login and Sign-Up through the Homepage. Moreover the users are able to reach all of those pages from each one of them.

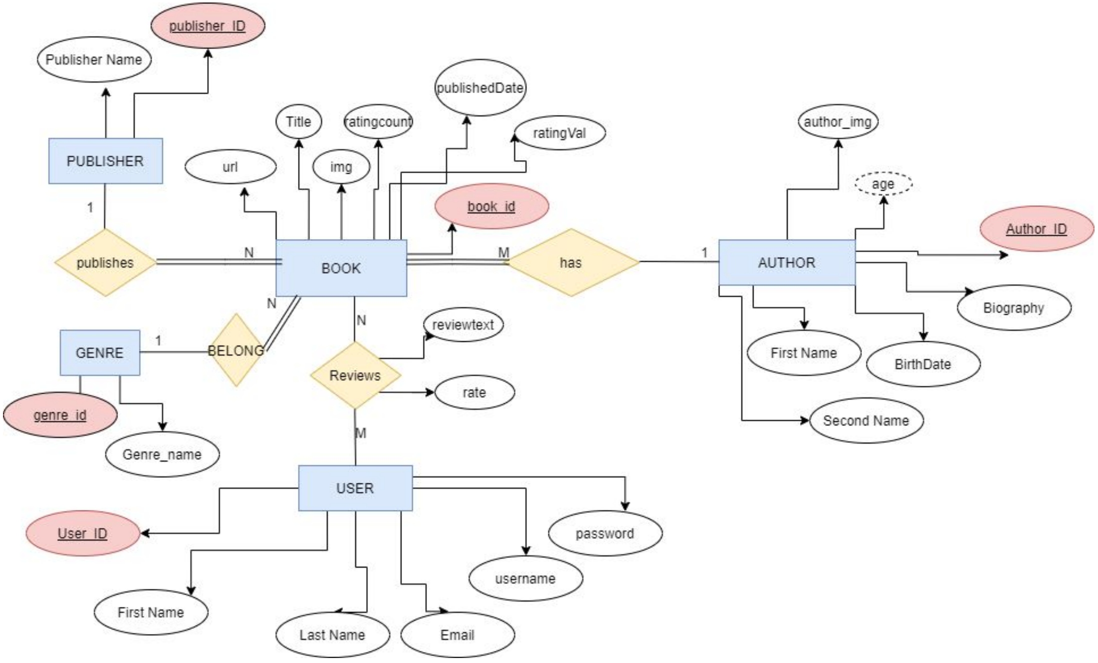


Homepage
Books
Explore
Login
Sign-Up
Shows all of the Books in the Database
Search Box
Search according to genre
Enter User name and password
Enter User name, name, surname, email and password
Shows all of the Books in the Database for Selected Genre
Session is Started User Can Add Review
Redirect to Bookpage When a Book is Selected
When User Clicks Author Name Redirect Author Page
Show Author Information and Her/His Books
Show Book Information and Reviews
Users Can Enter Review and Rate

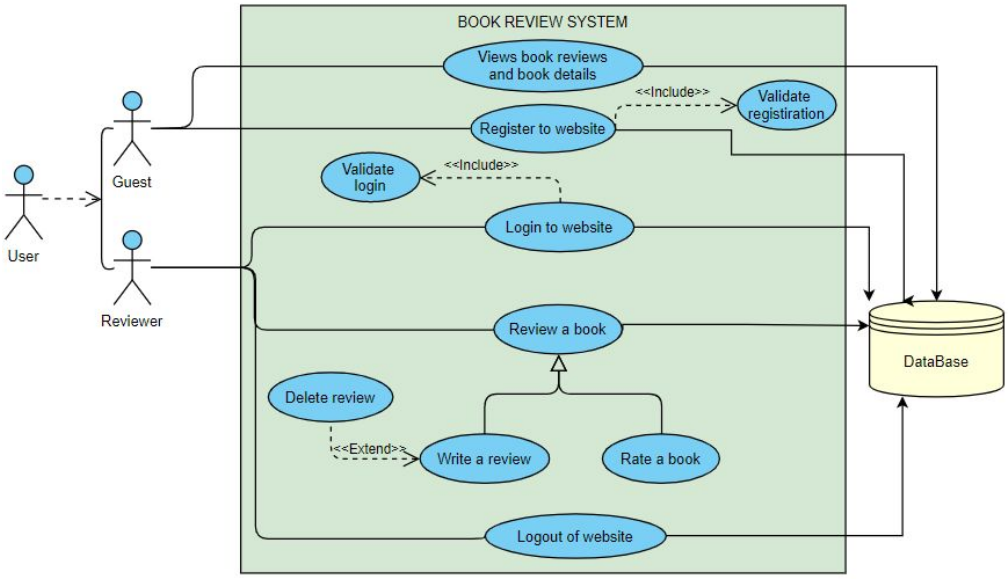
# 4. Clickstream

## 4.1 Diagrams

- **ER Diagram**



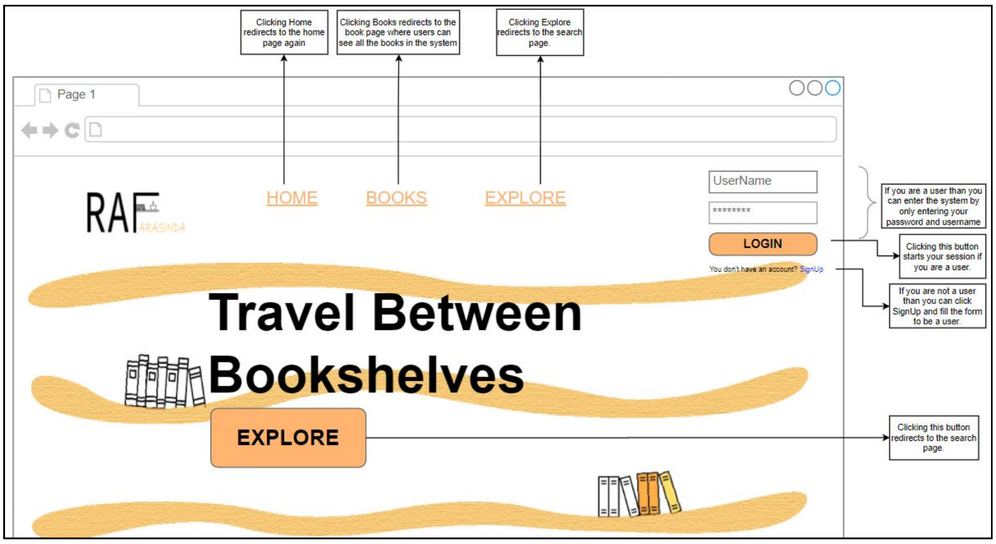
- **Use Case Diagram**



This use-case diagram shows our initial plan for both users and explains their basic actions on the website.

# 5. Layout

## 5.1 Wire-frames



Clicking Home redirects to the home page again

Clicking Books redirects to the book page where users can see all the books in the system

Clicking Explore redirects to the search page.

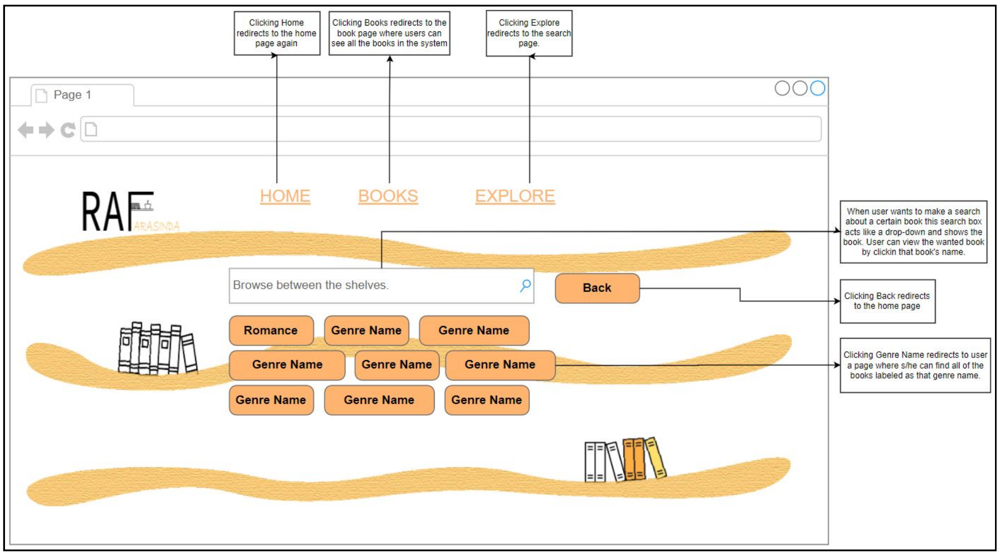
If you are a user than you can enter the system by only entering your password and username

Clicking this button starts your session if you are a user.

If you are not a user than you can click SignUp and fill the form to be a user.

Clicking this button redirects to the search page.

This wireframe shows the homepage of the website. The usage of the home page is described in the picture.



Clicking Home redirects to the home page again

Clicking Books redirects to the book page where users can see all the books in the system

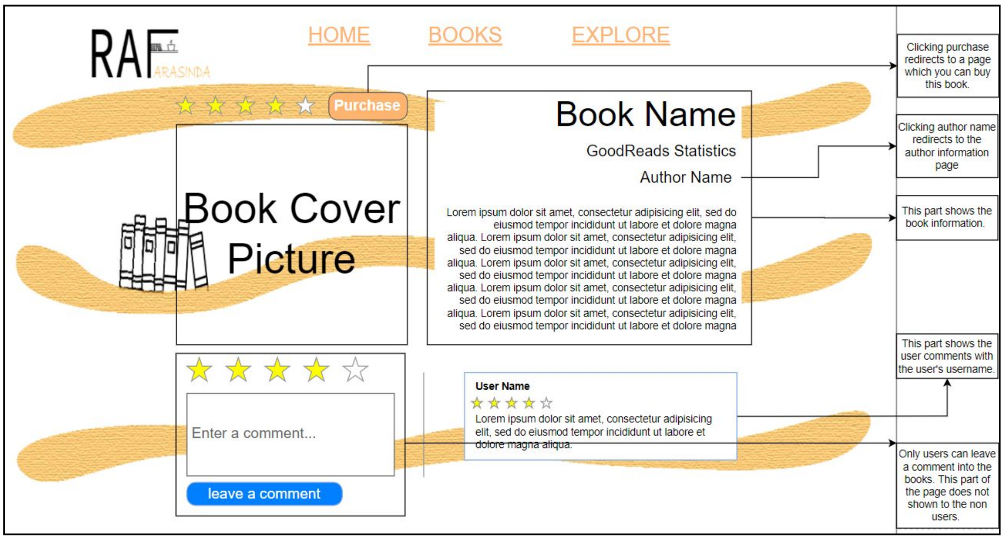
Clicking Explore redirects to the search page.

When user wants to make a search about a certain book this search box acts like a drop-down and shows the book. User can view the wanted book by clickin that book's name.

Clicking Back redirects to the home page

Clicking Genre Name redirects to user a page where s/he can find all of the books labeled as that genre name.

This wireframe shows the search page of the website. The usage of the search page is described in the picture.



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Clicking purchase redirects to a page which you can buy this book.

Clicking author name redirects to the author information page

This part shows the book information.

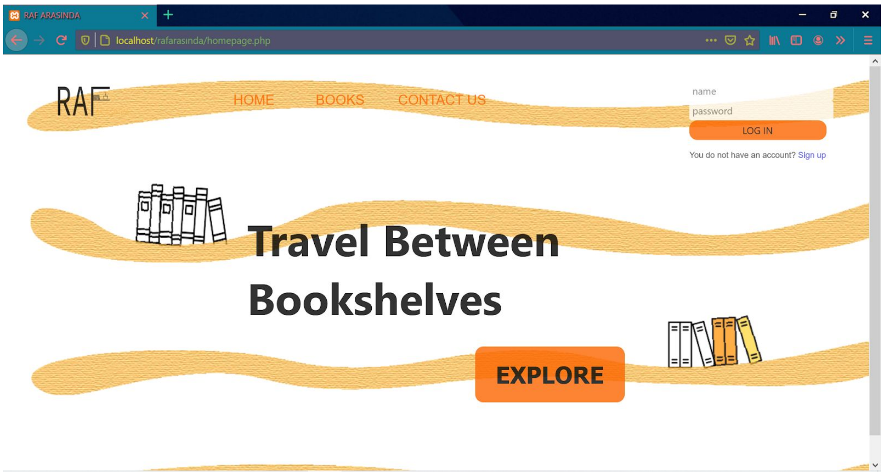
This part shows the user comments with the user's username.

Only users can leave a comment into the books. This part of the page does not shown to the non users.

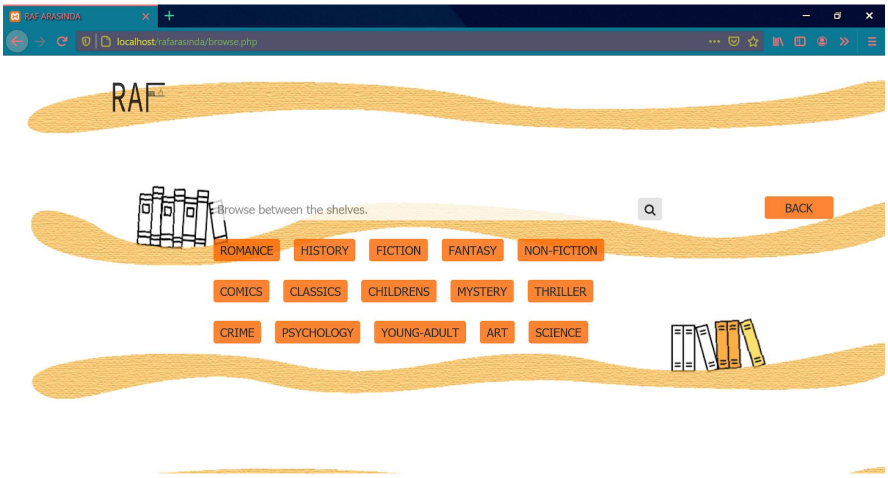
This wireframe shows the book page of the website. The usage of the book page is described in the picture.

# 6. Implementation

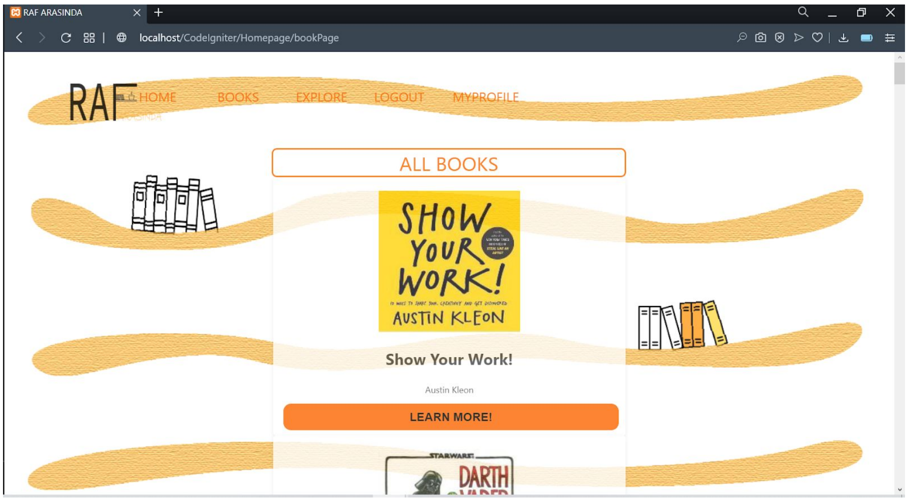
## 6.1 ScreenShots



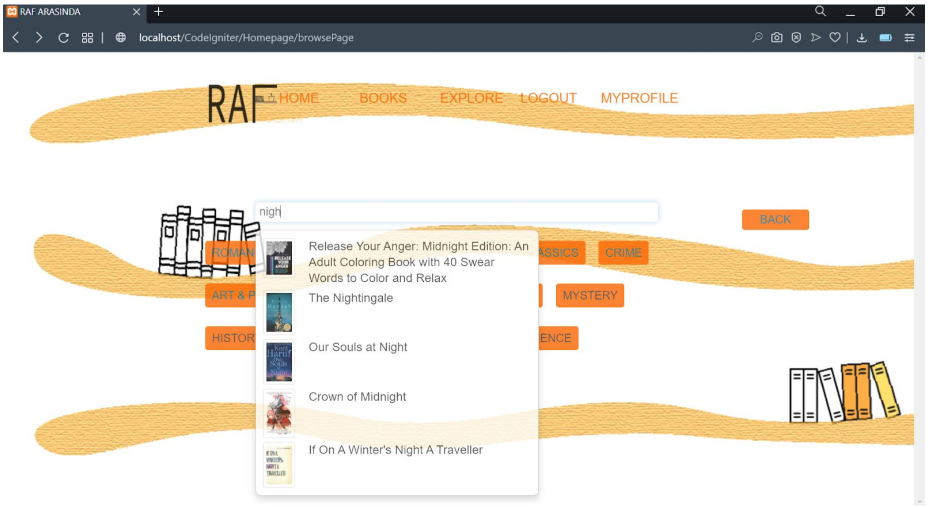
This screenshot shows our homepage (opening page). On the top right side login/signup button occurs. When the user pushes the “Explore” button the following page will occur.



This screenshot shows our browse page. Users can browse a specific book or select a genre of the wanted book.



When the user clicks the BOOKS button on the navigation bar.This page displays on screen.



nigh

Release Your Anger: Midnight Edition: An Adult Coloring Book with 40 Swear Words to Color and Relax

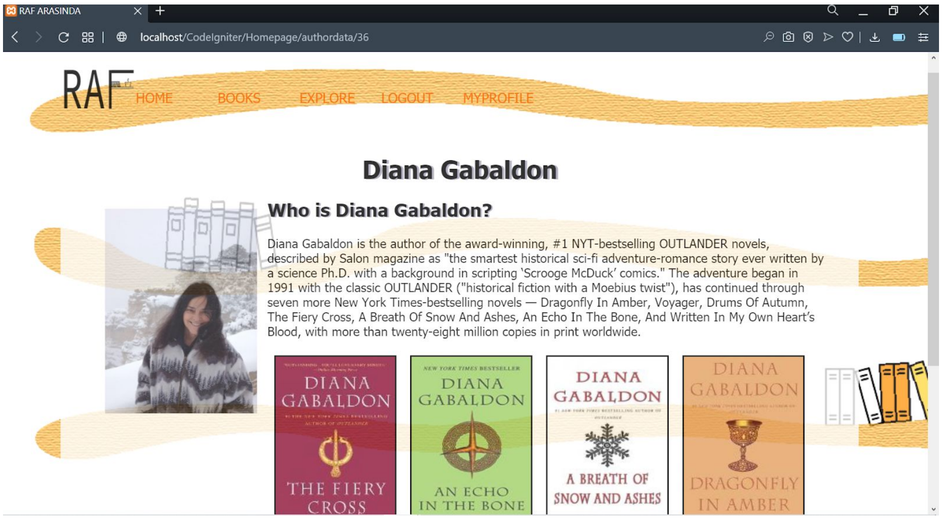
The Nightingale

Our Souls at Night

Crown of Midnight

If On A Winter's Night A Traveller

When the user clicks to EXPLORE, this page displays and if they start to type on the search box books appear at the below.

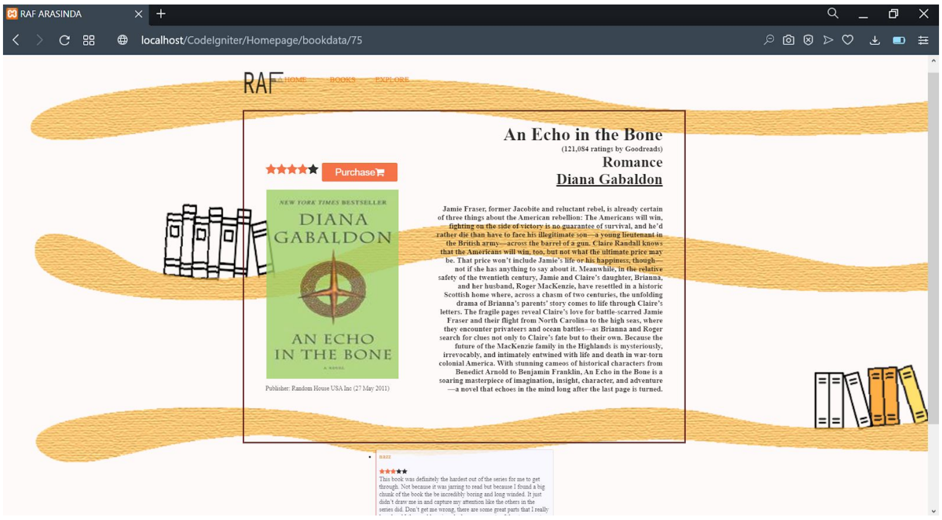


Diana Gabaldon

Who is Diana Gabaldon?

Diana Gabaldon is the author of the award-winning, #1 NYT-bestselling OUTLANDER novels, described by Salon magazine as "the smartest historical sci-fi adventure-romance story ever written by a science Ph.D. with a background in scripting 'Scrooge McDuck' comics." The adventure began in 1991 with the classic OUTLANDER ("historical fiction with a Moebius twist"), has continued through seven more New York Times-bestselling novels — Dragonfly In Amber, Voyager, Drums Of Autumn, The Fiery Cross, A Breath Of Snow And Ashes, An Echo In The Bone, And Written In My Own Heart's Blood, with more than twenty-eight million copies in print worldwide.

Author page displays when a user clicks on the book's author name.



An Echo in the Bone

(121,084 ratings by Goodreads)

Romance

Diana Gabaldon

Jamie Fraser, former Jacobite and reluctant rebel, is already certain of three things about the American rebellion: The Americans will win, fighting on the side of victory is no guarantee of survival, and he'd rather die than have to face his illegitimate son—a young lieutenant in the British army—across the barrel of a gun. Claire Randall knows that the Americans will win, too, but not what the ultimate price may be. That price won't include Jamie's life or his happiness, though—not if she has anything to say about it. Meanwhile, in the relative safety of the twentieth century, Jamie and Claire's daughter, Brianna, and her husband, Roger MacKenzie, have resettled in a historic Scottish home where, across a chasm of two centuries, the unfolding drama of Brianna's parents' story comes to life through Claire's letters. The fragile pages reveal Claire's love for battle-scarred Jamie Fraser and their flight from North Carolina to the high seas, where they encounter privateers and ocean battles—as Brianna and Roger search for clues not only to Claire's fate but to their own. Because the future of the MacKenzie family in the Highlands is mysteriously, irrevocably, and intimately entwined with life and death in war-torn colonial America. With stunning cameos of historical characters from Benedict Arnold to Benjamin Franklin, An Echo in the Bone is a soaring masterpiece of imagination, insight, character, and adventure—a novel that echoes in the mind long after the last page is turned.

Publisher: Random House USA Inc (27 May 2011)

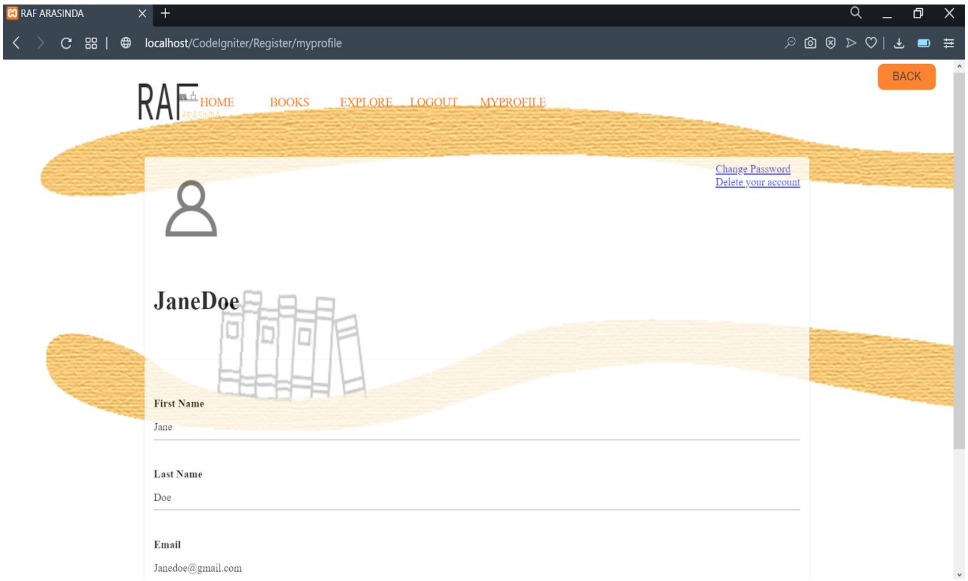
- nazz

  ★★★★★

  This book was definitely the hardest out of the series for me to get through. Not because it was jarring to read but because I found a big chunk of the book the be incredibly boring and long winded. It just didn't draw me in and capture my attention like the others in the series did. Don't get me wrong, there are some great parts that I really

Book page contains the book's information. Such as publisher, published date, author's name and review section. Users can review and rate this book.

Also users can click the purchase button and be directed to the other page that they can buy the book.



JaneDoe

First Name
Jane

Last Name
Doe

Email
Janedoe@gmail.com

This is the profile page. When a user clicks on to MYPROFILE , this page displays.

# 7. Future Work

The team completed the project on time as we mentioned in the milestones (previous phase-2 report). As a future work, the team considered some additional improvements. Such as the website design, adding other genres of books, uploading a profile photo for the user and adding books on the user's readlist.

In the front-end part the team struggled about css. Because the team created the logo, back-ground image and also wrote some css by themselves. Implementation of these handmade css on the Codeigniter was a challenge. The team is proud of the final result. But website design could be improved a little.

To improve the website, the team can add other genres of books on the website.

About user pages there can be extras such as uploading a profile photo and listing user's wanted books.