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# Documentation of the technical and functional requirements of the project

**Hardware Requirements:** For the creation of this project a system that has a cpu with 2 or more core's with a speed of 1.83GHz, a storage device with 50GB of storage and at least 4Gb of ram, these are the absolute minimum system specifications needed to run the necessary software to complete the project in mind.

**Software Requirements:** The software that will be needed for this project will be listed below.

**Operating system:** Windows, mac os or linux

**Text editor:** Visual studio code

**Database Management System:** MySQL workbench

**Web Browser:** Google Chrome, FireFox, Edge

**Database:** mySQL workbench

**Server/container:** Docker or wamp

**Other software:** Node Js, node libraries

## Functional Requirements:

The functional requirements of this website is to be able to receive, display, update and delete data for all of the respective content on the website, which are books, authors, and users. Javascript with the addition of node js and additional libraries will be required to achieve these functions.

Making a link from the backend to connect the database and the frontend to work together will need to be made in order for this to work. Once this connection has been made we can query the database to show the results with the help of the express library to display the information in a json type file via an api endpoint. We can then use vanilla javascript to fetch from the api endpoint to view the data and display it to the frontend.

For the rest of the needed functionality which is; Create, update and delete, we simply need to fetch the form data and post to the backend which handles the rest of the queries.

## **Description of the client and/or business context for this web application:**

This web application is to provide a place for users to upload and look up data associated with books and authors. The clientele who would use this web app are people who are involved in specific industries such as, authors, publishers, libraries and bookstores.

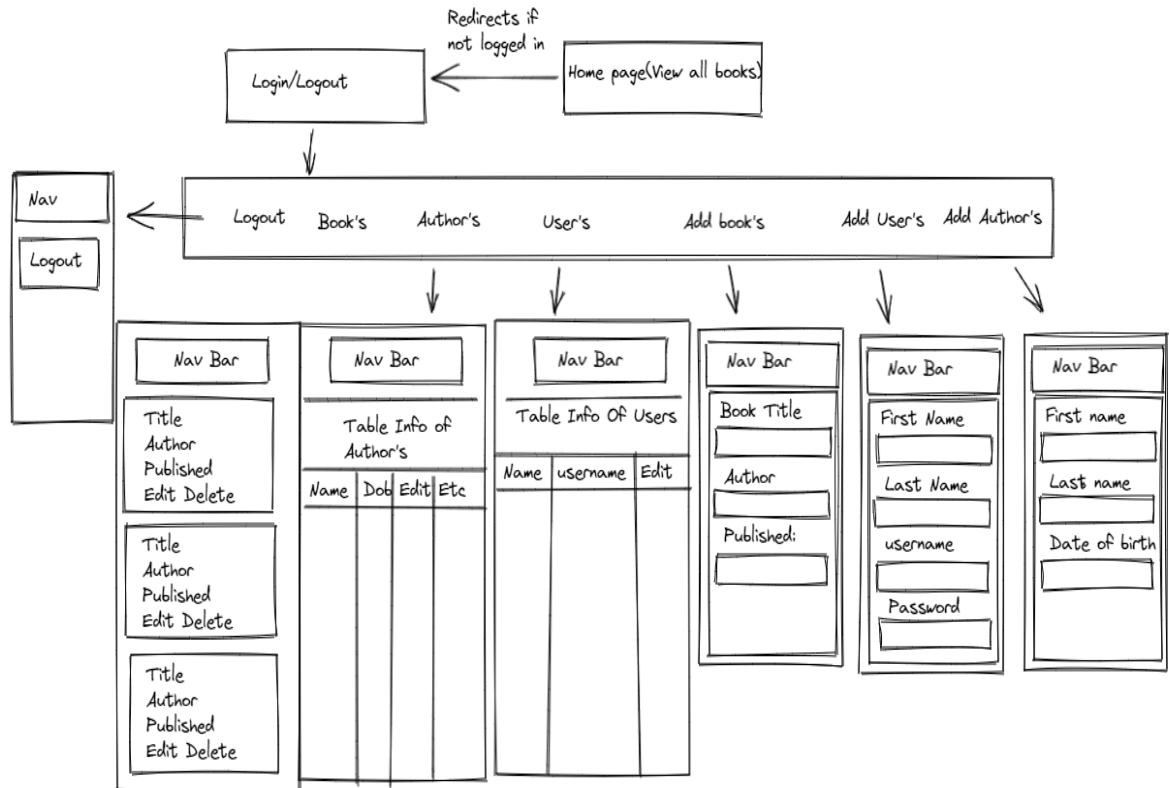
## **Identify the target audience and their needs**

The target audience for this web app are for those who want or need to find data for specific books and authors. Search functions by multiple different options need to be available for the users to locate the data that they need for example, search by book genre, author name, nationality, age, sales, etc. It's important to be able to apply specificity to the search queries as each different client will use the data for different reasons. The website needs to be functional and responsive and be able to show the data in an easy to read and accessible way for the clients to extrapolate the data they desire.

## **Identify the purpose of this web application**

The purpose of this web application is to provide a place for the above clients/businesses to access a database of books/authors. The reason for accessing the data can vary depending on the need of the business but for instance, book stores to track trends in sales data to stock books accordingly, libraries to do similar for stocking books for renting. Publishers can search for up and coming authors, estimate how many copies to print for a specific genre or next installment of a series. Authors could use it to track their own sales data, genres that have more popularity, genres that take up a small market share compared to others. It has a variety of uses for all types of clients in the industry, it just depends on how you decide to interpret the data.

## Books Web Application Site Map



## Content Inventory:

1	Website Content Inventory											
2	PROJECT: Books Website				Project Description:							
3	Project Leader: xxxxx				A website for professional's called "Books" who want to look up a variety of data associated with sales for specific books, their author's etc.							
13	Content ID	Page Title	URL	File Type e.g php, html, xml, pdf	Resources e.g. images, video, sound, animation	Copyright Check for content and resources (if necessary)	Author	Location of copy copy/backup/archive	Meta Description	Meta Keywords	Date created	Last Updated
14	1	login/logout	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	login/logout page	login, signin, logout	15/09/2021	18/11/21
15	2	add author	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	page to add authors	Books, authors, write	15/09/2021	18/11/21
16	3	add book	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML	images	Completed and documented	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	page to add a book	Books, authors, write	15/09/2021	18/11/21
17	4	author list	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	view a list of authors	Books, authors, write	15/09/2021	18/11/21
18	5	book list	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML	images	Completed and documented	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	view a list of books	Books, authors, write	15/09/2021	18/11/21
19	6	create users	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	create a new user	user creation, create	15/09/2021	18/11/21
20	7	delete author	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	delete a book from the	delete author	15/09/2021	18/11/21
21	8	delete book	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	delete a book from the	delete book	15/09/2021	18/11/21
22	9	delete user	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	delete a book from the	delete users	15/09/2021	18/11/21
23	10	footer	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	footer for every page	footer	15/09/2021	18/11/21
24	11	list users	<a href="http://127.0.0.1:5500">http://127.0.0.1:5500</a>	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	list of all users created	users, all users	15/09/2021	18/11/21
25	12	nav	frontend/views/nav.f	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	navbar for all pages	nav bar	15/09/2021	18/11/21
26	13	update author	frontend/views/upd	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	update details for autho	update details	15/09/2021	18/11/21
27	14	update book	frontend/views/upd	HTML	images	Completed and documented	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	update details for book	update details	15/09/2021	18/11/21
28	15	update user	frontend/views/upd	HTML		N/A	Justin	<a href="https://github.com/HilmJu">https://github.com/HilmJu</a>	update user details	update details	15/09/2021	18/11/21

A copy can also be found in the documentations folder

## **Explain what technologies/techniques have been used in the website to overcome the stateless nature of HTTP protocol:**

The technology to overcome the statelessness of the http protocol in this project is with the use of sessions.

We can use a library called express sessions to allow us to easily implement the technology that does the hard work. How express session works is that it sends a cookie to the client that contains the unique session id and with every subsequent request it sends it back and forth checking to see if it's from the same client, if it matches it remembers the user's details and keeps them logged in throughout the site. With this technique it's possible to create a responsive, personalised browsing experience for users but for this application it will only be used to keep a user logged in between pages and to track changes made to the data.

### **Version Control Documentation**

Version	Author	Date	Changes
0.1	Justin Coates	17/09/21	Initial project plan created
0.2	Justin Coates	19/09/21	Web app mockup created, file structure, basic content with no functionality
0.3	Justin Coates	2/11/21	Application is fully functional besides book cover images.
1.0	Justin Coates	18/11/21	All functionality is now working along with styling of the application

## References

### For the use of images

*IMDb: Ratings, Reviews, and Where to Watch the Best Movies & TV Shows* (2021). Available at: <https://www.imdb.com/> (Accessed: 17 November 2021).

*Wikipedia, the free encyclopedia* (2021). Available at: [https://en.wikipedia.org/wiki/Main\\_Page](https://en.wikipedia.org/wiki/Main_Page) (Accessed: 17 November 2021).

*The Hobbit, or There and Back Again* (2021). Available at: <https://www.pluggedin.com/book-reviews/hobbit/> (Accessed: 17 November 2021).