

**Module:** Practical Experience in Digital Media II

**Mayor:** Digital Media

## **Report: The Bookwish MVP**

App Development

**Date:** 15.09.2024

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## 1 Introduction

It can be hard to remember every book you own and which ones you still need in your collection. On top of that you might want to remember all the books your friends and family want to have. To keep track of all of that can be complicated.

*Bookwish* aims to make that process easier. While there are already some Wishlist apps out there, *Bookwish* is specific to books only and it has a more social side to it as well. You can see what other people have wished for and which books they already own. With the help of the app, you can look up the books you own, rate your books, look up what your friends own and how they rated the books and see what your friends want to have. It is a social Wishlist that can be used for presents for others or just for yourself.

## 2 Efforts

The MVP for *Bookwish* includes four main pages, “Homepage”, “My Books”, “Wishlist”, and “My Friends”. The page “About” has some information on the MVPs creation but is not that relevant for the user flow.

While creating the application, the focus was to get the important features to work. The most important things were the ability to add books and to see the lists that friends have created. At first, the login page was created. This was important to allow for user specific data to be shown correctly.

Afterwards, the homepage was developed. It is a simple welcoming page that displays the users profile picture and motivates the user to read something or to get a gift for someone. Throughout the development of the homepage, it has changed a bit. At first, the plan was to divide the page into two columns and to display the profile on the right side of the page. However, due to time restrictions and because it did not turn out looking as well as hoped for, this was changed to a simpler layout.

The books page shows the users owned books and allows for them to add new ones. Originally, it was planned for the form that is used to add new books, to only be opened when the user clicks on a button. However, this did not work properly. There was a possible solution in the Streamlit forum, but it seemed to be too complex to be implemented. Because of this a button to close the form, if the user did not need it, was implemented instead. This might not be as neat as the other idea, but it does not hinder the functions of the page. The Wishlist page uses the same format as the books page, but with some changed text and a different data table, since the Wishlist does not include ratings.

Lastly, the friends page displays every friend the user has and their books and Wishlist. Additionally, the user can add new friends here. The data tables are displayed in the same way as on the other pages.

### **3 Limitations**

As of now, *Bookwish* does not have the function to create a new profile. This is not necessary for the MVP, as it can convey the idea behind the app anyways, but it could potentially be added in the future. There is also no real profile customization. This proved to be harder to implement than first imagined. Because of this it was left out, as it is not necessary for the functionality of the MVP. In future there could be the option to change your profile picture and write a small description of yourself. Additionally, it might be a nice feature to display a favourite and potentially a least favourite book in your profile.

Another feature that is missing is the ability to add books that the user does not want to be gifted. This was originally planned to be implemented as well. However, it was scrapped as not to overcomplicate the app and to keep within the deadline. Additionally, it is not really needed since there the Wishlist is there already.

Possibly a chat room could also be implemented to allow the user to interact with other users and possibly discuss different books, but this feature would be too difficult and too advanced to implement with the knowledge from the App Development course. This could also include a more complicated way of rating books with writing actual reviews and talking about them with other people. However, that would be too much for a simple MVP and would not even be needed for a final version of the app.

### **4 User feedback**

The *Bookwish* MVP was tried out by a few testers. They gave positive feedback overall. Firstly, they found the app to be easy to navigate and to use, as there are not too many pages, and the pages are named intuitively. Everything that can be done is explained well and there is no confusion as to what to do with the different forms.

Additionally, they liked the idea behind the app and related to some of the problems that inspired it. One tester had recently written a list with every book they own and mentioned that this would be a more convenient option.

Another tester brought up the possibility to create a feature for exchanging books with friends. This cannot directly be done through the MVP but could be a nice additional way to use it. It is also a possibility for a potential final version of the app. A feature like that might add more social aspects to it and further differentiate it from other Wishlist apps.

The testers also found an error where the Wishlist of a friend should be. This error occurred sometimes, but not always. It also did not occur when running the app locally through the terminal. After changing to another page and then going back to the friends page, the error message always went away, but reappeared every second time the friends page was opened. No solution for the problem was found, as it seemed to be a problem with Streamlit. However, removing the friend's owned books list resolved the issue. Since this seemed to be the only solution and the Wishlist was the important part of the page, the other list was left out of the code. This also had the benefit of decluttering the page.

## **Code resources**

To allow for the username of the user that is logged in, to be displayed and used, some code from Towards Data Science was used. It can be found in the homepage file in line 6.

(<https://towardsdatascience.com/how-to-add-a-user-authentication-service-in-streamlit-a8b93bf02031>)

Displaying the different user data required some online research. The Streamlit feature for data frames was used to display the data. This is used on the books page in line 34, on the Wishlist page in line 34, and on the friends page in line 59.

(<https://docs.streamlit.io/library/advanced-features/dataframes>)

To format the data frames, the attribute "column\_order" was needed. This can be found in the same lines as the source above.

(<https://discuss.streamlit.io/t/hide-dataframe-columns/52127/2>)

Lastly, the columns that included links to the books covers needed to be formatted to image columns. Here "st.column\_config.ImageColumn" was used. This can be found on the books page in line 35, on the Wishlist page in line 35, and on the friends page in lines 54 and 61.

([https://docs.streamlit.io/library/api-reference/data/st.column\\_config/st.column\\_config.imagecolumn](https://docs.streamlit.io/library/api-reference/data/st.column_config/st.column_config.imagecolumn))