2024

Python Assessment - Book Store

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Code can be found here

Initial Planning

This book store application had to be broken down into smaller tasks to ensure that all requirements were met, to do this I took the following approach in chronological order:

- Create a home menu where users can sign up, login, continue as a guest and signout. For this main menu I ensured that when the user signed up, their credentials were stored in a credentials.txt file so that when they wanted to sign in, the system could read their email ID and password from this file and successfully log in. As this credentials.txt file is being read for sign in, it can see if the users email ID and password exist and/or are correct, depending on the outcome the system will give the correct corresponding feedback to the user. Logout is an easy function to implement as it will give feedback to the user and the program will stop running.

- After a successful log in or continuing as a guest, I want to ensure that users would have an easy to navigate main menu. I want to make sure the user can search for books easily and access our entire collection. Therefore, I want all books to be on a books.txt file, which the system will read and display to the user. I also want to ensure that all registered and unregistered users have access to searching for a book by its title. Registered users will have access to search for authors and ISBNs. To ensure that these functionalities work, functions will be created to read from the books.txt file and display the correct information to the user upon request.

- A basket is an important functionality to have as I want users to see what they have in their basket before deciding to checkout. Therefore, the main menu will also have an option to view the basket. Inside the basket, there should be another small menu where the user can add or remove books and also go back to the main menu.

- As this is an online store, I want to ensure that users can proceed to checkout and purchase. Therefore, when the user views their basket, there should be an option to proceed to checkout, this way the user does not need to go back to the main menu to checkout. This will then lead to the system asking the user if they would like to complete their purchase, thus making it an easy and linear system.

- Just like in any ecommerce store, the registered users can view and edit their personal information and also see their previous orders. To view and update details, I want the system to take the users email ID and find it in the credentials.txt file and print out the line to them. To edit their details, I want the user to give the system the new credentials and the system to update the credential.txt file. For seeing previous orders, I want the basket on purchase to be written to an orders.txt file and it should have the users email attached. This way, when the user wants to see their past orders they will only need to give the system their email ID so it can fetch them the details and print to console.

- Lastly, I want to ensure that the users have feedback on their actions. Normally on a web-based app this would be in the form of toast but as this is console based, all feedback will be given on the console/terminal. Some examples of feedback to users for good UX is stating when they have successfully done something like purchasing or if there is an error such as entering the wrong login credentials.

Home Menu

As soon as the application is run, the user will be displayed with the Home Menu. This home menu has four options so that the user can proceed to the bookstore or to exit.

If the user would like to continue to the bookstore, there are three options: Signup, Login and Continue as Guest.

Signup

If the user selects Signup, they will be prompted to enter the following: First Name, Last Name, Email, Password and to Confirm Password. If the passwords do not match, the system will throw an error stating that the passwords do not match and the system will make them insert their credentials again. But, if the passwords do match, the system will alert the user that they have registered successfully and they will be directed to the Main Menu.

Login

If the user selects Login, and they enter the correct credentials (Email and Password), the system will tell them that they have logged in successfully. If either or both credentials are incorrect, the system will alert the user stating that either the email or password are incorrect and will prompt the user to login again.

Guest

If the user selects Continue as Guest, the system will tell the user that they are continuing as a guest and the user will be presented with the Main Menu. Further along we’ll see where logged in users have more access to the bookstore system.

Exit

If the user selects Logout/Exit, the system will not continue any further and will stop.

Main Menu

In the Main Menu all users will be able to access the following: Display all the books, search a book by its title, search a book by its author, search by ISBN number, view basket, view account details and logout.

Display Books

If the user selects the first option - Display all books, all the books that are in the books.txt file will be displayed. Every book will have an ID, Title, Author, Price and ISBN, which are all displayed to the user. If the user would like to select a book to put in their basket, the only thing they need to do is type in the ID of the book. Both registered and unregistered users have access to this functionality.

Search Title

If the user selects the second option - Search by title, the user will be prompted to type in the title of the book they are searching. If the book title exists in the books.txt file it will be displayed to the user along with all its other details and the user can select to add it to their basket or not. If the user inserts a book title that does not exist in the book.txt file, the system will display to the user that the book was not found and will redirect them to the main menu. Both registered and unregistered users have access to this functionality.

Search Author

If the user selects the third option - Search by author, the user will be prompted to type in the author of the book they are searching. If the name of the author exists in the books.txt file it will be displayed to the user along with all its other details and the user can select to add it to their basket or not. If the user inserts an author name that does not exist in the book.txt file, the system will display to the user that the author was not found and will redirect them to the main menu. Only registered users have access to this functionality, if the user continued as guest and tries to use this functionality, they will be redirected to signup.

Search ISBN

If the user selects the fourth option - Search by ISBN, the user will be prompted to type in the ISBN of the book they are searching. If the ISBN exists in the books.txt file it will be displayed to the user along with all its other details and the user can select to add it to their basket or not. If the user inserts an ISBN that does not exist in the book.txt file, the system will display to the user that the ISBN was not found and will redirect them to the main menu. Only registered users have access to this functionality, if the user continued as guest and tries to use this functionality, they will be redirected to signup.

View Basket

If the user selects the fifth option - View Basket, the user will be able to view the contents of their basket. If the user did add any book(s) to their basket they will all be displayed, along with all the information associated with those books. The user can then select whether they would like to remove an item from their basket, proceed to the checkout or go back to the main menu. If the user would like to remove a book, the system will ask to enter the position of the book that they would like to remove. Therefore, if the user wants to remove the second book in their basket they would only need to type the number ‘2’. If the basket is empty, and the user selects to remove a book from their basket, the system will display that the basket is empty and redirect them back to the main menu. Both registered and unregistered users have access to view their basket and make changes by adding or removing books.

Account Details

If the user selects the sixth option - Account Details, the user will be able to view and edit their account details, view their order history and to return to the main menu. The user will need to confirm their email ID to be able to both view and edit their account details. If the user opts to edit their details, they can edit any of their credentials such as first name, last name, email ID and password. If the user decides to view their order history, they must also confirm their email ID to bring up this information. As this functionality is centered around viewing/editing account details and order history, this is only accessible to registered users.

Other

Checkout & Purchase

A user will be able to checkout once they select to view their basket. Upon selecting to see their basket, the user will have a menu to choose from, in which the second option would be to proceed to checkout. If the user has at least one book in their basket, they will be able to proceed to the checkout where they can then select to purchase the books that are in their basket. Once the user selects the purchase option, they will be prompted by the system to confirm their email address, once given, the system will display to the user that their purchase has been successful. In addition, the orders.txt file will update with this order so a record can be kept for the user to see their previous purchases. If the user attempts to checkout while their basket is empty, the system will display to the user that their basket is empty and redirect them back to the main menu. If an unregistered user proceeds to purchase, the system will display that they need to sign in or sign up to proceed, the unregistered user will then be redirected to the home menu where they can either sign in to an existing account or register.

Roadblocks

During the development of the book store there were some roadblocks that did occur and they were rectified, unless stated otherwise. These roadblocks came in the form of the following:

- Many times the system would only read the first line in the .txt file, meaning that if the user credentials were on the second line and they tried to sign in, the system would state there an login failed. This roadblock also persisted when trying to search a book by title, author and ISBN, if these parameters were searched and did not occur in the first line of the .txt file, the system would state that there were no books with the searched criteria.

- Initially, when the user wanted to edit their details the line in the credentials.txt file which stored all their details was overwritten with what they changed. For example, the line in the credentials.txt file has first name, last name, email ID and password, if the user decided to only change their password, this line would be re-written with just their changed password.

- Once the project was finished, an extra feature was attempted which was password encryption. Initially, it did seem like it would work as this would take all the users credentials and add it to the credentials.txt file, in which the password would be encrypted. But, when testing this feature, it would state that the login credentials were incorrect. I believe that the password was not being transformed into its original before being used to login. Therefore, this was a bug that was encountered.

Conclusion

To conclude, the console-based bookstore application meets all the specifications outlined in the brief.

Both registered and unregistered users have the ability to:

- List and search for books, this is done in the form of selecting to view all the books at once or searching for a specific book by its title.
- Read book information, this is done by giving the book title, author, price and ISBN to both users when books are listed or searched.
- Add to basket, this can be done when the user searches for a book, the system will ask if they would like to add it to the basket or not.
- Modify the basket, this can be done when the user views their basket, they can either add or remove any book.
- Checkout, this is done by the user viewing their basket, there will be an option to proceed to checkout and to purchase.

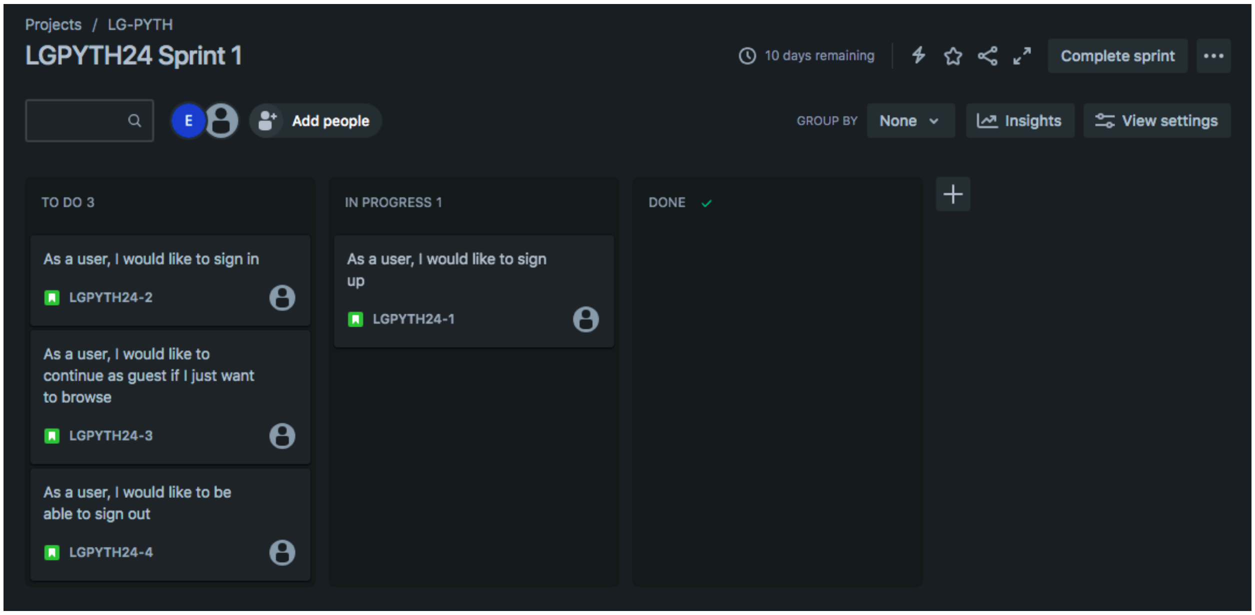
Some functionalities are reserved for those users who are registered, these functionalities include:

- Order history, this will take the purchases of a user and put them in a orders.txt file so it can be printed to the console if the user requests to see their past orders.
- Account details, all credentials from the user will be taken, such as first name, last name, email ID and password. This information will be stored in a txt file so the details can be printed to the console if the user wants to view those details and also can be overwritten if the user decides to change their credentials.
- Purchase books, the user can purchase the books after confirming that they would like to proceed to checkout. If the purchase is successful the system will confirm to the user.

In addition to the above, the following has been added for a better UX:

- Menus that always have an option to go back to the main menu.
- Feedback for wrong inputs, and gets the user to give a correct input.
- Feedback when the user has logged in, added a book to basket, successfully purchases and so on.

Appendix



LGPYTH24 Sprint 1

TO DO 3

As a user, I would like to sign in
LGPYTH24-2

As a user, I would like to continue as guest if I just want to browse
LGPYTH24-3

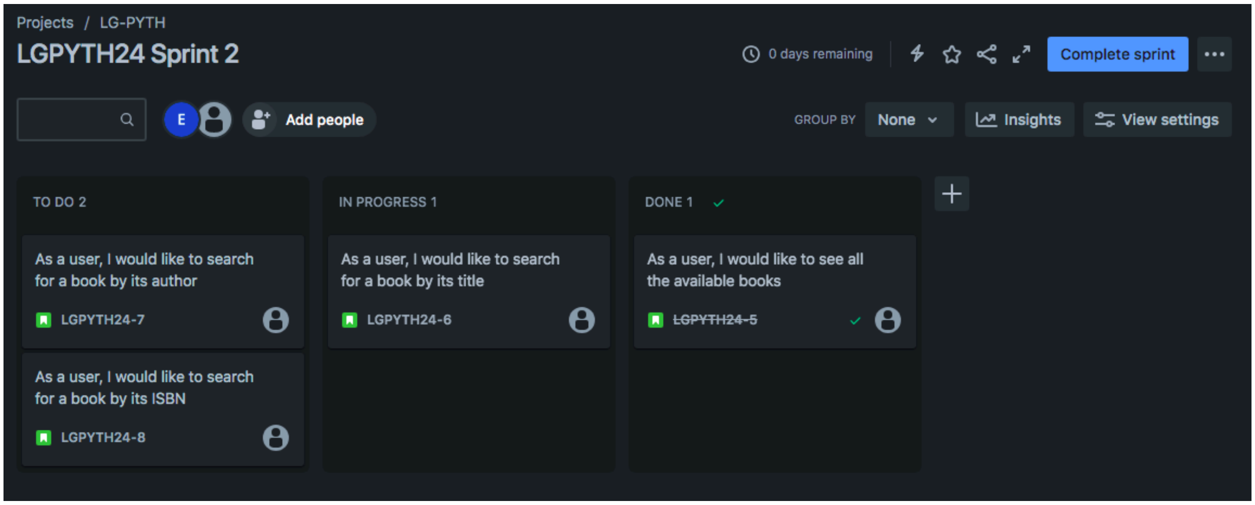
As a user, I would like to be able to sign out
LGPYTH24-4

IN PROGRESS 1

As a user, I would like to sign up
LGPYTH24-1

DONE ✓

Fig. 1 - Showing the first sprint of the project



LGPYTH24 Sprint 2

TO DO 2

As a user, I would like to search for a book by its author
LGPYTH24-7

As a user, I would like to search for a book by its ISBN
LGPYTH24-8

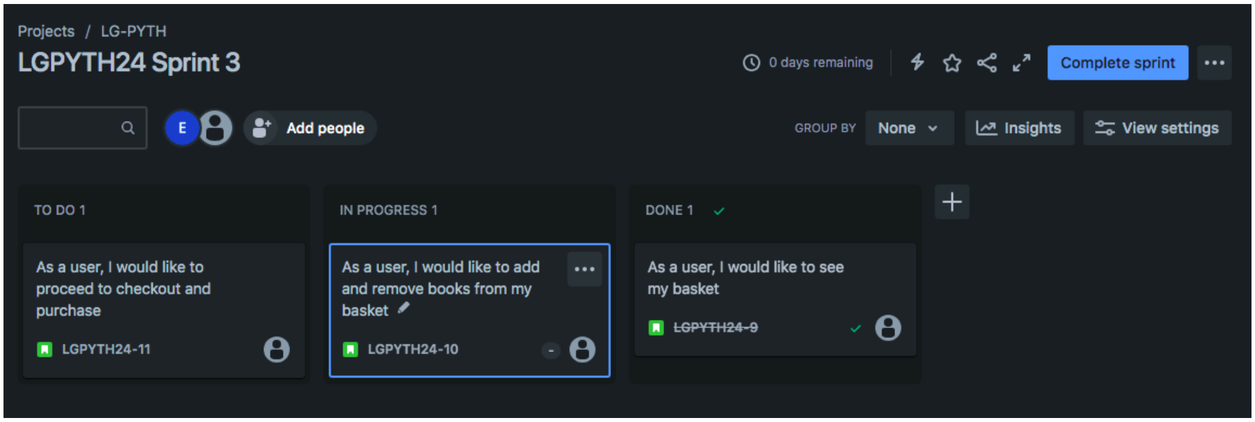
IN PROGRESS 1

As a user, I would like to search for a book by its title
LGPYTH24-6

DONE 1 ✓

As a user, I would like to see all the available books
~~LGPYTH24-5~~ ✓

Fig. 2 - Showing the second sprint of the project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LGPYTH24 Sprint 3

TO DO 1

As a user, I would like to proceed to checkout and purchase

LGPYTH24-11

IN PROGRESS 1

As a user, I would like to add and remove books from my basket

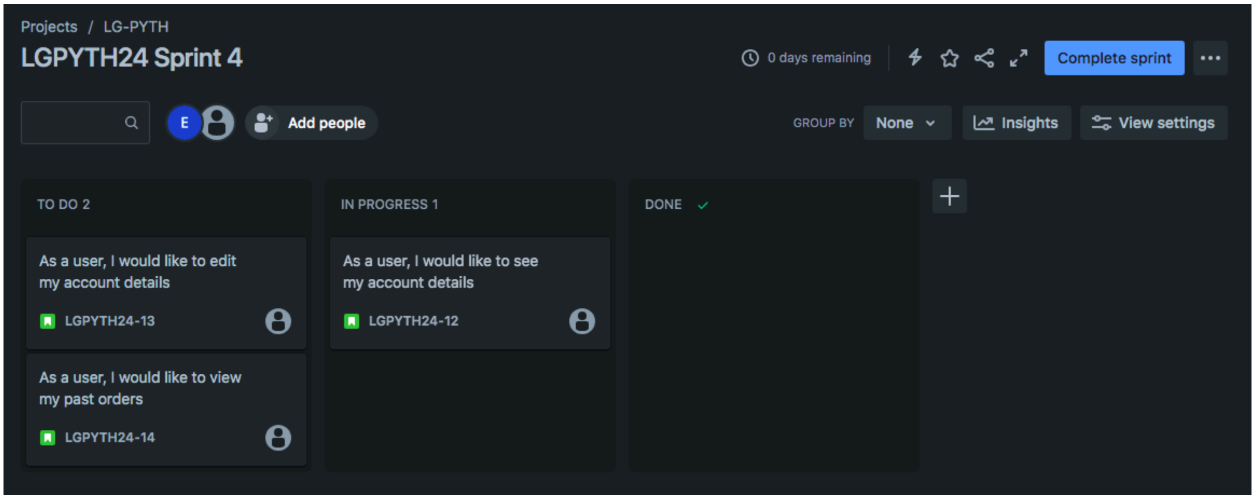
LGPYTH24-10

DONE 1 ✓

As a user, I would like to see my basket

~~LGPYTH24-9~~ ✓

Fig. 3 - Showing the third sprint of the project


Projects / LG-PYTH

LGPYTH24 Sprint 4

TO DO 2

As a user, I would like to edit my account details

LGPYTH24-13

As a user, I would like to view my past orders

LGPYTH24-14

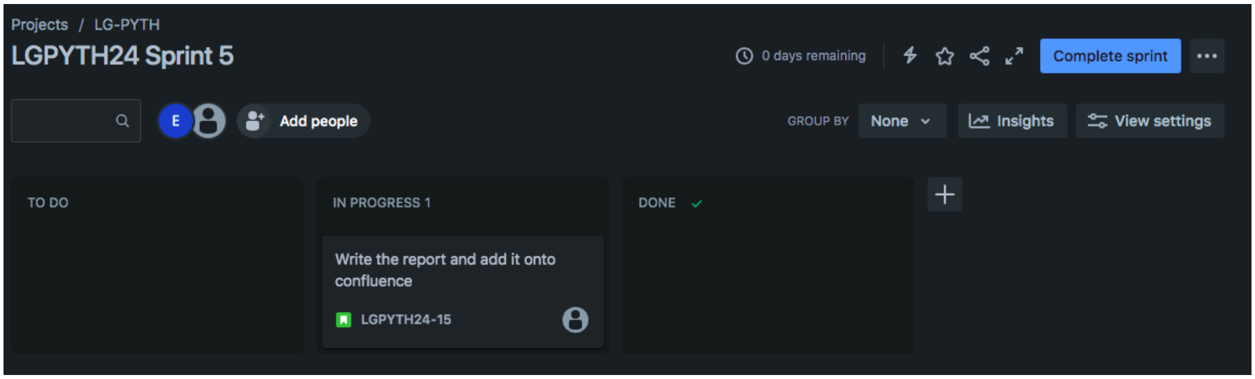
IN PROGRESS 1

As a user, I would like to see my account details

LGPYTH24-12

DONE ✓

Fig. 4 - Showing the fourth sprint of the project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LGPYTH24 Sprint 5

TO DO

IN PROGRESS 1

Write the report and add it onto confluence

LGPYTH24-15

DONE ✓

Fig. 5 - Showing the fifth sprint of the project

Confluence Link here