**Instruction Manual**

Bibliothekos is a command line app that allows 2 different types of users to access a library database. These 2 users are the *admins* and the *borrowers*. *Admins* are able to access commands that contain sensitive info and add, delete or update books in addition to exiting Bibliothekos. Upon firing up the programme you can enter the help command to access a list of commands. They should appear as follows:

|  |  |  |
| --- | --- | --- |
| Name | Logged in as Admin? | Description |
| login admin | No | Login as an admin to access admin-only commands. Remember to logout using logout admin before relinquishing access to a borrower because you can be logged in as an admin and a borrower at the same time. |
| logout admin | Yes | Logout as an admin. |
| exit admin | No | Exit Bibliothekos. You need to enter the credentials of an admin to do so, whether or not you are logged in as an admin. |
| login | No | Login as a normal borrower. |
| logout | No | Logout as a normal borrower. |
| new user | No | Create a new borrower user. |
| edit user | No | Edit your user info. Must be logged in as a borrower. |
| search user | No | Get a list of all borrowers. |
| investigate user | Yes | Get more information of a borrower using their ID. After entering investigate user, you will be prompted to an enter the ID. |
| delete self | No | Delete your borrower account. Must be logged in. |
| about self | No | Get the details of your own borrower account. |
| check loans | No | Check your own outstanding loans |
| borrow book | No | Borrow a book using its ID. You can obtain the ID using search books. |
| return book | No | Return a book using the ID of the loan. The loan ID can be obtained by using check loans. |
| search books | No | Search for books. See the section named ‘Searching Books’ for more information. |
| add book | Yes | Add a book to the database. |
| delete book | Yes | Remove a book from the database. |
| edit book | Yes | Edit the details of a book. |
| who borrowed | Yes | Check who borrowed a book. |
| help | No | Get a list of commands and a short of description of each of them. |

**Searching Books**

You can enter ‘book searching’ mode by using the search books command. Upon entering this mode, you are given a prompt to edit queries with this line:

[update/delete/search/exit] [title/author/isbn]

The way the format is displayed is slightly misleading because only update and delete need to be paired with [title/author/isbn]. search and exit can be executed on their own.

When you type in update [title/author/isbn], you will be prompted to fill in that query field. For example, if you want to find a book with the word ‘Trump’ in it, do:

|> update title

Please enter search term |> Trump

*Search queries are not case-sensitive.*

You can also sort the search results according to their title, author, isbn, and number of pages. To sort book titles in descending order, do:

|> sort title -1

To get the programme to ignore title when searching, do:

|> sort title 0

If you want to remove a search query, do delete [name/authors/isbn] instead of delete [title/author/isbn].

**Schema Design**

The schema design can be found in ‘schema.pdf’. That document should display the mapping of the updated schema used in the database.