Design Consideration

The Desktop application is was designed with the MVC design pattern in mind. This is simply to separate the business logic from the views and controllers. My primary goals was to also for functionality to be easily added without the need to understand the code on a high-level. I created a layer of abstraction for communication between the database and the application, but I was unable to make use of it due to redundant issues. I had to include the communication string whenever a part of the application required it.

For the appearance of the form, I decided to go with a clear and simple form for each and every section to ensure all the functionalities are catered for.

User guide

The homepage of the app is a simple form the requires you to confirm you are customer or not. Select an option to.

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If you are a customer, enter a valid id to proceed with the application.

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After click submit a popup with the customer details should appear

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Click on the OK option then begin a search by selecting the Select Request link.

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Select the criteria you wish to use to search for the book. Valid options include name, author, and Subject.

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Click on the book you wish to view and a pop would show all the details

A computer screen shot of a book

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You can then check the availability.

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Make a reservation

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Once you reserve. You see a list of the books you have reserved.

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Developer Guide

For Development, a MySQL instance provisioned by cleaver-cloud was used to ensure the usability of the application.

In the program.cs file, I handled the initial migration of the tables and some dummy data to seed the database.

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I also included code to handle the edge case where the database connection fails.

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Navigation of the application is possible to due to the use of linkedLabels that connect forms together.

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To handle to request for a reservation, I made use of JOIN SQL statements to ensure all the data required to be returned to the use was made available.

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After the customer enters their customer id and the database is queried for the details, a session is created to help the keep track of the user’s activities. The session manager is a singleton that is available to all the other components.

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References

[Home | Clever Cloud (clever-cloud.com)](https://www.clever-cloud.com/)