Instructions to test database interface (MAKE SURE TO HAVE DATABASE DOWNLOADED!!!) -

1) Press Login and log in with database username and root password.

2) To test Borrow, Reserve, Return, and guarantee it will work then you will **NEED** to insert some data first.

3) In the first dropdown menu choose "Modify Database," and click next. In the second dropdown menu choose "Insert Row," and click next. Then choose "library_member" in the next menu, and you will be prompted with a text box.

4) You will then have to insert values with the format shown, (user_ID, First_Name, Last_Name, Address, Email, Gender, Birthdate, Age, librarian_ID). Here is a sample to copy and paste → (111111, "Colin", "Johnson", "Chicago", "email@email.com", "M", "Jan 7, 2003",20, 542202)

5) After you click next, the data should be inserted into the library_member relation. If you want to verify, press reset and go through it again but do Search→Show Table→library_member.

6) Now do the same process but go through the menus like:

   Modify Database→Insert Row→book and insert sample data:

   (1000, "Harry Potter", 2, "Action", 2, "No", 4059, 3150, 4201)

   Welcome to the City Library Database.
   Modify Database
   Next
   Choose an Operation.
   Insert Row
   Next
   Choose a Table.
   book
   Next
   INSERT VALUES WITH THIS FORMAT (book_ID, book_name, book_edition, genre, copies_available, isBorrowed, author_ID, publisher_ID, form_ID)
   (1000, "Harry Potter", 2, "Action", 2, "No", 4059, 3150, 4201)
   Next

7) Again if you want to verify, press reset and go through it again but do Search→Show

   Table→book.

8) Now you can borrow and reserve books. You can only borrow books that still have copies and

   you can only reserve books that don't. So press reset to go back to the main menu, and press

   "Borrow a Book" in the first dropdown menu.

9) All the available books will pop up in another window, choose the sample book ID (1000) to use

   and set the window aside. Enter your user ID (if you used the sample data it should be 111111)

   and enter the book ID from the window and press borrow. It will say you have successfully

   borrowed a book and if you go through and search the book table and borrowed table they will

   both be updated as well.

10) In the book table copies_available with book_ID, 1000, will be subtracted by 1 and if it hits 0, isBorrowed will switch from "No" to "Yes" and the tuple with the book ID, user ID, date_borrowed and date_due will be properly recorded in the borrowed table. As you can see below, copies_available was inputted as 2 at the beginning, but after I borrowed it, it became one less.

book_ID	book_name	book_edition	genre	copies_availab	isBorrowed	author_ID	publisher_ID	form_ID
1000	Harry Potter	2	Action	1	No	4059	3150	4201
3128	lorem	2	Romance	0	Yes	4059	3150	4201
3518	vestibulum	3	Action	2	No	3775	3150	4586

book_ID	user_ID	date_borrowed	date_due
1000	111111	Apr 26 2023	May 3 2023

11) To reserve a book, just reset and pick "reserve a book" at the first menu and press next. Enter user ID (111111). Again a pop-up window will appear to show all the available books to reserve. Choose any reservable book and press reserve. The reserved table will then be properly updated with the correct tuple.

book_ID	user_ID	reserve_date
3128	111111	26-Apr

Then to return the book, press reset again, and in the first menu pick, "return a book."

After you press next, another popup will appear with all the books you have borrowed. Enter a book ID from the popup and click return. The book table will then be updated back again and the borrowed table will delete the tuple containing the user_ID and book_ID. See below, the copies_available is back at 2.

book_ID	book_name	book_edition	genre	copies_availab	isBorrowed	author_ID	publisher_ID	form_ID
1000	Harry Potter	2	Action	2	No	4059	3150	4201

All the other operations are pretty straightforward, just follow the menus one by one and if there is a textbox, follow the format shown above the text box.