

COMP 636: Web Technologies

Instructions

This code is library management system for Waikirikiri Library. It is used to manage books, borrowers and loans. You are provided with a flask app with some template files.

Add the following features to the system:

1. **Book list:** Add bootstrap table formatting to the booklist.html template so that each row is striped and hoverable.
2. **Borrower list:** Add Jinja code to borrowerlist.html so that it lists all borrowers in a table.
3. **Add Loan:** Complete the addloan.html template so that a drop down box of Borrowers is shown along with a drop down box of available book copies. The form should be submitted using POST to the /loan/add route. The form should have a hidden input field set to the current date. Required control ids are shown in comments in the template.
4. **Loan History Report:** Complete the currentloans.html template to display a list of current and past loans sorted by borrower family name then first name. Use a table. Each row should be coloured depending on the type of book borrowed (Paperback and Hardback, white; eBook, Green; Audio Book, Yellow). Indicate 'Returned' or 'On Loan' for each book. The borrower ID should not be shown and the borrower name should be shown only once, even if they have borrowed more than one book.
5. **Search Books:** Search the books by title and/or author, allowing for partial text searches
6. **Book Availability:** See the availability of all copies of a book, whether a copy is on loan and, if so, the due date.

To run the app, install flask (pip install flask), unzip the files into a folder, open the folder then open connect.py and update with your MySQL connection password.

Open app.py and in a terminal type: flask run

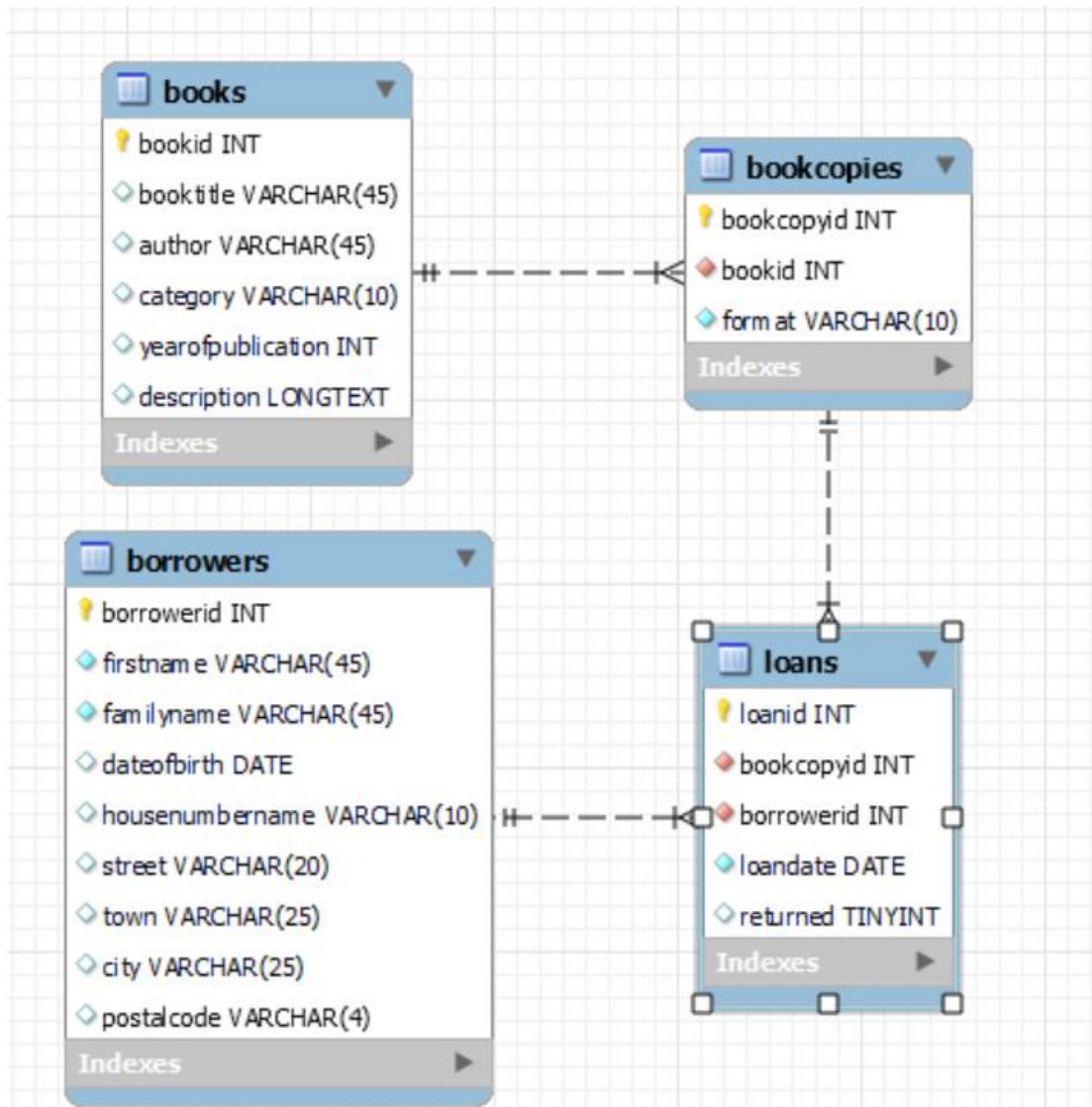
You can then click the link to <http://127.0.0.1:5000/> to open the home page of the app.

You need to stop the app running (CTRL+C in terminal window) before modifying templates.

Remember to run the app again after making modifications to test them.

Database structure

Note: The lines shown only indicate the relationships between the tables. They do not indicate which fields are included in the table relationships. See the table below the diagram for the field details.



Foreign keys

Foreign keys enforce 'referential integrity' – which means that a value in the child table field must match an entry in the parent table field, e.g., a **bookid** cannot be entered into the **bookid** field of the **bookcopies** table if it is not in the **bookid** field of the **books** table.

Parent table and field(s)		Child table and field(s)
books.bookid	—>	bookcopies.bookid
bookcopies.bookcopyid	—>	loans.bookcopyid
borrowers.borrowerid	—>	loans.borrowerid

Loans that have been returned have the value 1 in the returned field.