

CIS 451/551 Final Project

Winter 2023

name(s): Madeline Porcaro

project title: A Tale of Two Libraries

Connection information

port number: 3282

Hostname: ix-dev.cs.uoregone.edu

guest account login/password: guest / notguest
(the password needed to be 8 characters)

database name: cs451_final_project

project URL: <http://ix.cs.uoregon.edu/~mporcaro/cs451-final/main.html>

Highlights:

Users from libraries can look up books from the books both in their own library and the library they are not members in

Users can also request a transfer of a book if they would like to obtain it.

Summary:

There are two libraries, one exclusively of nonfiction and one exclusively of fiction. The libraries realized that they needed each other so they asked a database admin to help them. The two libraries are in separate locations and can transfer books between each other. The libraries are so far apart that they do not share users, but users can search for books for both libraries on one website and request a transfer from the other library. Staff can add new books to the libraries and each library has a unique code that is used to identify who's associated with them for each library.

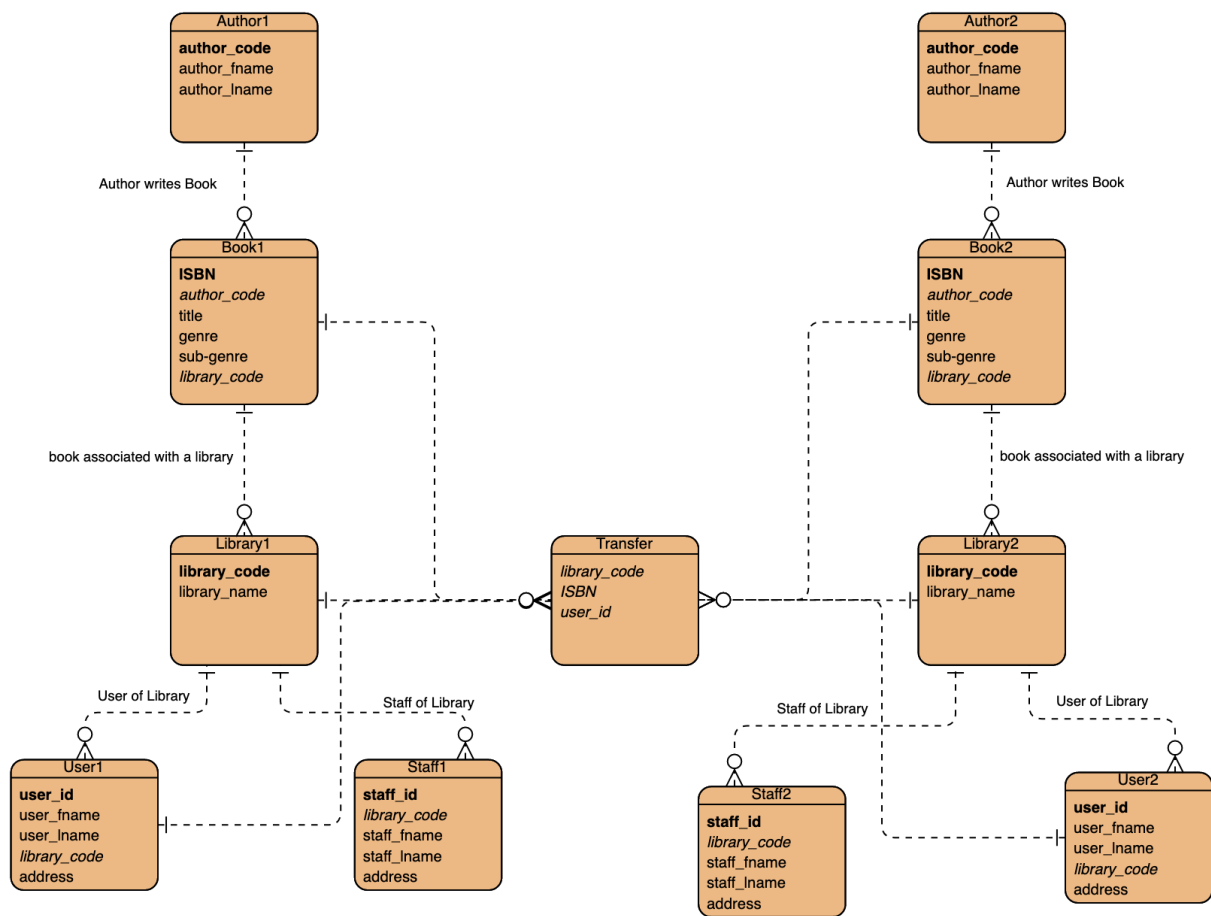
Logical Design:

Key:

Bold: Primary Key

Italics: Foreign Key

Identifying relationships have notes next to them.



Physical Design:

Author1: Contains an ID and the author's first and last name.

Author2: Contains an ID and the author's first and last name.

Book1: Contains and ISBN, title, the author's ID and genre, sub-genre is not required. There is only one author for every book.

Book2: Contains and ISBN, title, the author's ID and genre, sub-genre is not required. There is only one author for every book.

Library1: Contains a code to differentiate it from the other libraries and its name.

Library2: Contains a code to differentiate it from the other libraries and its name.

User1: Users of Library 1. There is a User ID, first and last name and an address. Library code is there to differentiate users.

User2: Users of Library 2. There is a User ID, first and last name and an address. Library code is there to differentiate users.

Staff1: Staff of Library 1. There is a Staff ID, first and last name and an address. Library code is there to differentiate users.

Staff2: Staff of Library 1. There is a Staff ID, first and last name and an address. Library code is there to differentiate users.

Transfer: Contains a transfer ID, userID, library code and ISBN. Used to manage transfers across libraries. Transfer IDs are auto incrementing.

List of Applications:

- Find a book in library1
- Find a book in library2
- Find a user in library1
- Find a user in library2
- Request a transfer from either of the libraries.

User's Guide:

There is a main page that has a few hyperlinks that takes the user to their desired destination. The Library of Fiction, The Library of Nonfiction, User ID lookup and the Transfer Portal. Instructions included on the webpages for users.

Contents of Tables:

<https://github.com/orcap23/cs451/blob/main/cs451.sql/>

Implementation Code:

<https://github.com/orcap23/cs451/>

Conclusion:

I really enjoyed this project and I would like to spend more time on it in the future, maybe as a personal project or something I can showcase down the line. Libraries have massive databases and are full of information, both in books and in their respective databases. I am new to PHP and DBMS workbenches so most of my time was spent learning how to utilize those tools to the best of my abilities. I know there are a lot of security issues with my current code and I wish I had better knowledge on how to have a safer and more secure database and software.