CIS 451/551 Final Project

Fall 2020

name(s): Xiangqian Zhang

project title: DuckQuack – a book store database system

Connection information

port number: 3414
hostname: zhang13@ix.cs.uoregon.edu
guest account login/password: guest/guest
database name: Duck

project URL: https://ix.cs.uoregon.edu/~zhang13/html/duck_main_page.html

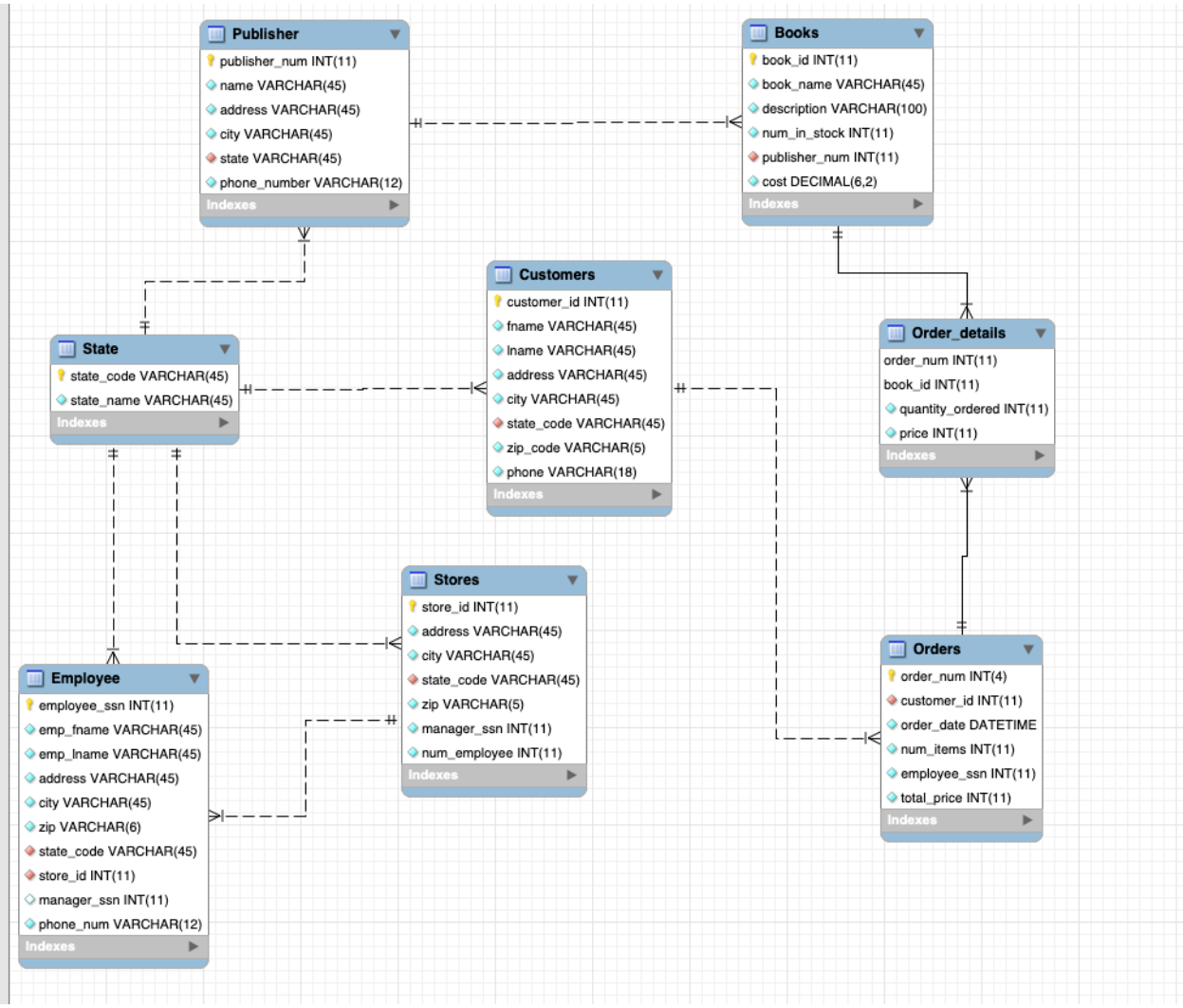
highlights: For simplicity, this system didn't conduct login process to distinguish customers and managers for security purpose.

Summary

Basically, this is not just a database for a business --- the Duckquack book store here, it's also a place where customers can find their order information. Through this website, the manager could better control the business and make decision based on the actual sale condition.
In the database, there are 8 tables in total, and all the operations are based on these tables. The attributes have shown on the Crowsfoot ER diagram.
There are four main pages on this website, HOME, BOOKS, FIND ORDER, MANAGER PAGE.

1. The home page provided a general view of new collections and links to other pages.
2. The books page provided the list of books the stores are selling
3. The find order page helps customer to check its order by typing into his/her order number
4. The manager page provided 3 choices to understand the selling information
    a. Check stock: manager could knowledge its stock condition easily in this way
    b. Find best seller: manager could find which books are popular
    c. Popular publisher: manager could contact the popular publisher to re-stock books in time.

Logical design ---ER Diagram:



Physical design ---descriptions of tables and attributes.

Publisher: has the information about the publisher such as its publisher_number, name, address and so on. The state is a foreign key from the State table.

Books: has the information about the books the stores are selling. The primary key is book_id and foreign key is publisher_num.

State: has just the state information which is a foreign key in multiple tables.

Customers: has the information about the customer, since there are more than one stores so it's important to record the address of customers'.

Order details: has the detailed information about each order. Since there are orders having more than one item so this table has two primary keys from Books and Orders tables.

Orders: has the general information about an order.

Stores: has the information about each store.

Employees: has the information about each employee and it's important to has this table because each customer must be served by one of these employees.

List of Applications ---description of all the desired applications

1. Home page --- no table used
2. Books page --- the Books table was used to list the information of books.
3. Find Order --- the Orders table was used to list the information of customers' orders
4. Manager page:
    a. Stock page: the Books and Order_details tables were used to generate the number of books in stock
    b. Best sellers page: the Order_details and Books tables were used to generate the top 3 popular books
    c. Popular publisher page: the Publisher, Order_details, and Books tables were used to find the most popular publisher

User's guide

Since the system is a web-based program so user just need to click the buttons on the webpage. In addition, the php file and html file have been provided on the website as well.

Implementation code

All code is provided with links format on the website.

Conclusion

For this project, I thought about finding a way to better help manager manage book stock and make marketing change based on its sales. Therefore, it's important to know what has been sold, what has been in stock for a while, which books are popular, and which publishers have more popular books. If I could have more time, I will add more data into each tables, especially the order and order details tables so that more interesting and useful information could be utilized to help the manager. Also, for the order check function, I could have added more information so that customers can track the shipping information if they ordered online.