

Requirements Gathering:

For the Final Project we will be creating a Library System

The library system will consist of 7 tables:

1. Employees-abby
2. Books-abby
3. Movies-sophia
4. Members-veronica
5. Library Cards-veronica
6. Borrowed Books – relation between book and member-Jake
7. Borrowed Movies – relation between movie and member-Sophia
8. Check outs-relation between book and member-Jake

Description of Library System:

A library system consists of many employees. Each **employee** has a name, employee ID, email address, multiple phone numbers, and a full address: street, city, state, zip.

Each **employee** can lend books to **members** of the library which the members will check out. **Members** have a name, memberID, email address, multiple phone numbers, a full address, and a foreign key of libraryCard. **Members** can **borrow** books or movies from the library, storing the borrow date, return due data, return date, bookID or movieID, and MemberID.

Books in the library each have a name, ISBN, an unique bookID, author.

Movies include a title, release date, genre, director, and duration. Each of these items can be borrowed by members.

Members may **borrow books and/or movies**, and each borrowing action is tracked. A **Borrowed Book** or **Borrowed Movie** table stores the borrow date, due date, return date, the relevant book or movie ID, and the member ID. These tables track the borrowing history.

Every member has a **library card**. A member must have a library card, and a library card only exists with a member. A library card has a unique ID, creation date, expiration date, and a totalfee attribute.

The system includes Checkouts, which represents a member checking out one or more books/movies at a specific date and time. A checkout table connects the employee processing the transaction, the member borrowing the book, the specific book being borrowed, and the time of transaction. This allows the library to track which employee handled each checkout and maintains a history of events.