Library Project

Library Management System

Team4#

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1. Overview

Libraries have always had a broad educational mission it has a huge impact on society it helps people to get information easily, and provide a quiet environment for studying or reading. Library contains many sections each section contains many books ,where people can benefit from books either by borrowing it or reading it in the library. We are building a data base for a library to help them keep track of their employees , barrows, and books.

2. Requirement Specification

-Library keeps track of employee name, ID, address, and phone. The library must have only one manager. Employee either manages section or sorts books.
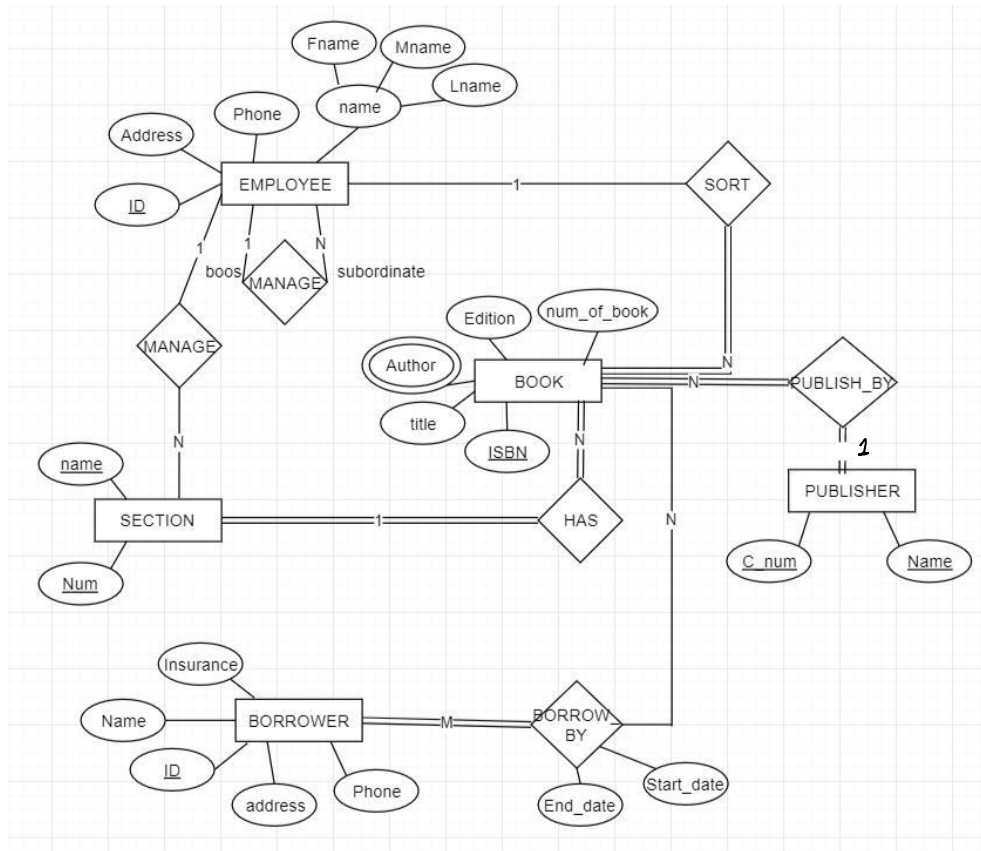
-Each book must have author name, book title, book edition, ISBN, and number of copies. Each book must sort by only one employee. Each book must publish by publisher.

-Library keeps track of publisher name, and unique commerce number. Each publisher must publish at least one book.
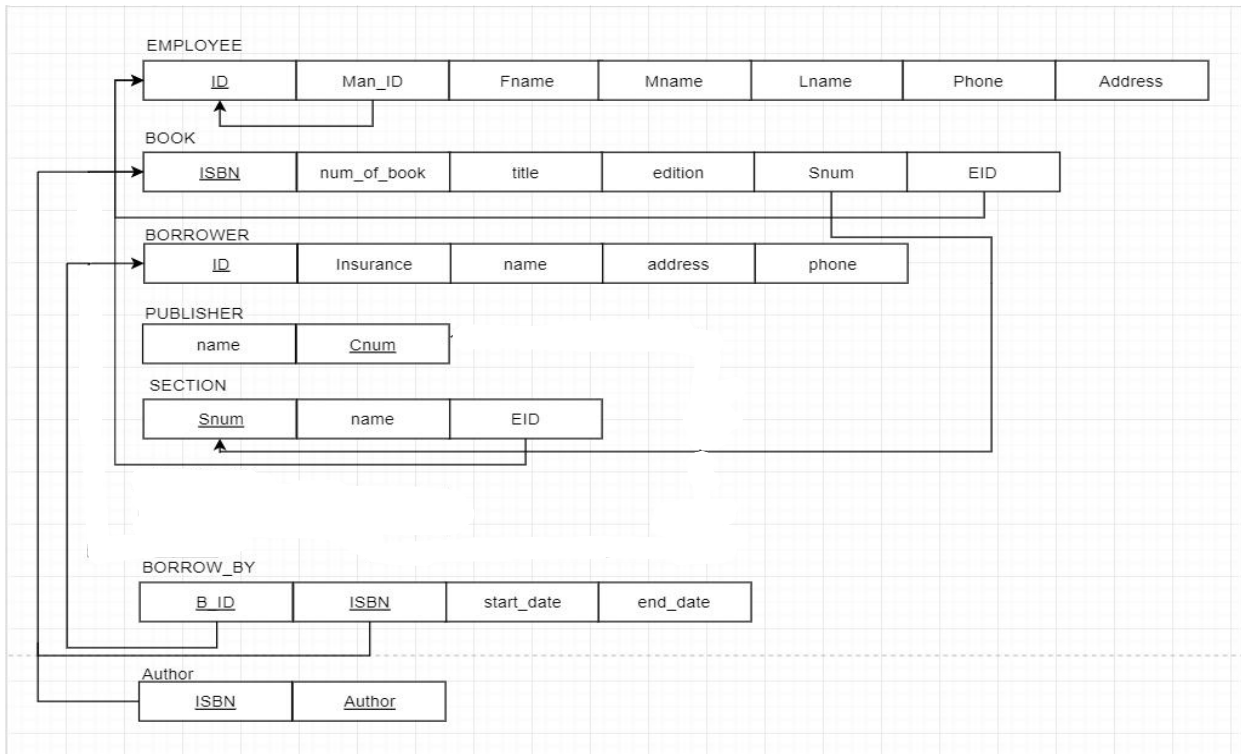
- Borrower Borrows (at least one book, at most 3 books). Library keeps track of Borrower name, ID, phone, and insurance. The borrowing has start date, end date.

-Section have many books and manage by one employee at most, section identified by unique name and section number.

3. Entity Relationship Diagram

4. Realitional Schema

EMPLOYEE

ID	Man_ID	Fname	Mname	Lname	Phone	Address

BOOK

ISBN	num_of_book	title	edition	Snum	EID

BORROWER

ID	Insurance	name	address	phone

PUBLISHER

name	Cnum

SECTION

Snum	name	EID

BORROW_BY

B_ID	ISBN	start_date	end_date

Author

ISBN	Author

4. System users

ADMINISTRATOR VIEW

Employees Information

(Administrator who manages the database and can view employees information and modify on data)

First name	Last name	ID	Section name	Phone number	Address
Fahad	Al-jam	1234567891	Computer science	054436899	ALSAHAFAH-7A

Operations:

- *Retrieve* each Employee information by ID : **First name** , **Last name ,** the name of the section they manage.
- *Update* **Address** .
- *Insert* each new Employee information: Employee ID**,** First name, Last name, Phone number, and address.

LIBRARIAN VIEW

Borrowing system

(librarian is a person who works in a library, has access to Borrowing system he can and modify the data after return or borrow)

First name	Book title	Start date	End date	ID	Insurance
Rema	DATABASE	2019-8-19	2019-8-30	0000000113	AB-123

Operations:

- *Retrieve* each Borrower information by End Date: First name , Book title **,** Insurance.
- *Return Book (by deleting borrower from table borrow_by) .*
- *Borrow book (Insert new* Borrower to table borrow_by).
- *Update num_of_book for each book (after return or borrow).*

This section covers the views for all user groups of the system and their operations (phase#3)

5. Implementation
Connection part

6. Test and Run
This section defines the test cases applied in your code and sample run from the project.

7. Difficulties
Problems that you faced and how you solved it.