Assignment 3

Final Idea Submission

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The problem that we are trying to find a solution for is library system where members of the library can borrow books from the library. The members who borrow the books have 3 weeks to return the borrowed book. The library wants to have a DBMS so they could manage the books in the library. To be able to manage the books that the members are borrowing whether a member returns the borrowed book in time or not. Also to make it easier for the member of the library to search information of a specific type of a book whether that book is available at the library or not.

We are thinking to create a console application which allow a user to store, edit or delete data in the database. The users of this are the admins managing the DBMS. Some of the functionality is that users can insert books data and the details of the books to the DBMS. Also the loan details of a book when a member borrows a specific book.

The DBMS is going to have the following 4 tables of the figure below shows the E/R diagram of the DBMS that we are planning to create.
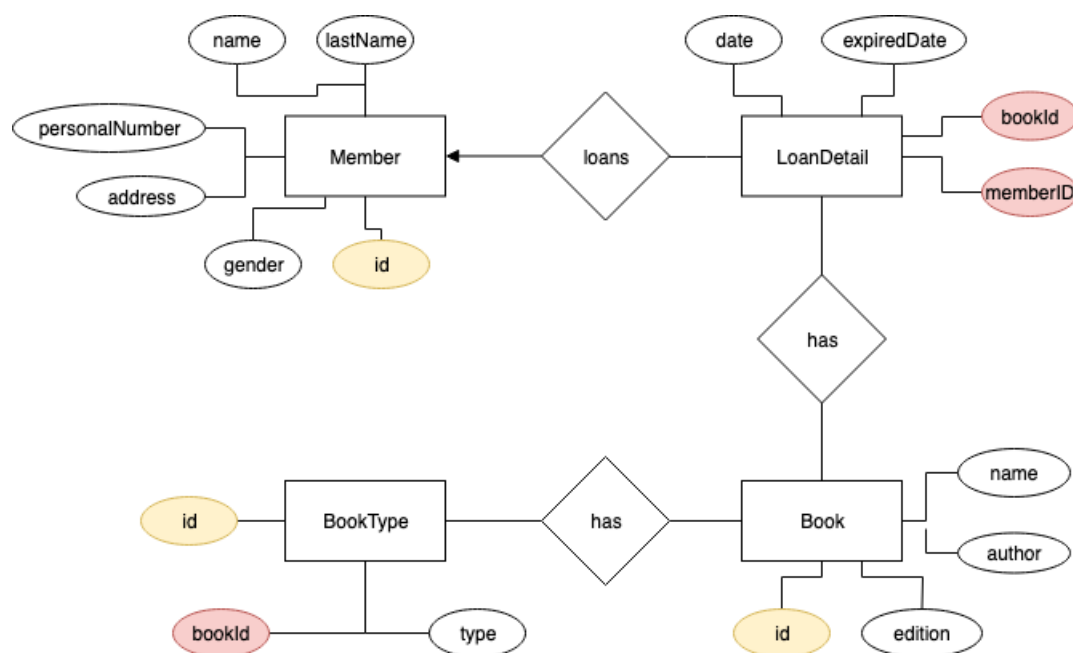

Figure 1: E/R diagram

The E/R diagram shows that a member could borrow many books from the library. The member table has the following attributes:

- Name - the name of the person

- Last name - the person's last name

- Id (primary key)- the unique id the member has in the library system

- Personal number - the personal number of the person

- Gender - female/male

- Address - the address of the person

The loan details table has the following attributes:

- Member Id (foreign key): the id of the member that is borrowing the book

- Book Id (foreign key): the book that is being borrowed

- Date: the date that the book was borrowed

- Expiry date: the date that the borrowing time expires

The book table has the following attributes:

- Id (primary key): the id of the book

- Author: the author of the book

- Name: name of the book

- Edition: the edition of the book e.g first edition

The book type table has the following attributes:

- Id (primary key): the id of the book

- Author: the author of the book

- Name: name of the book

- Edition: the edition of the book e.g first edition