

Quiz #1 (Group 7)

A library needs a database to store information about members, their borrowing transactions, and the books borrowed. The requirements are:

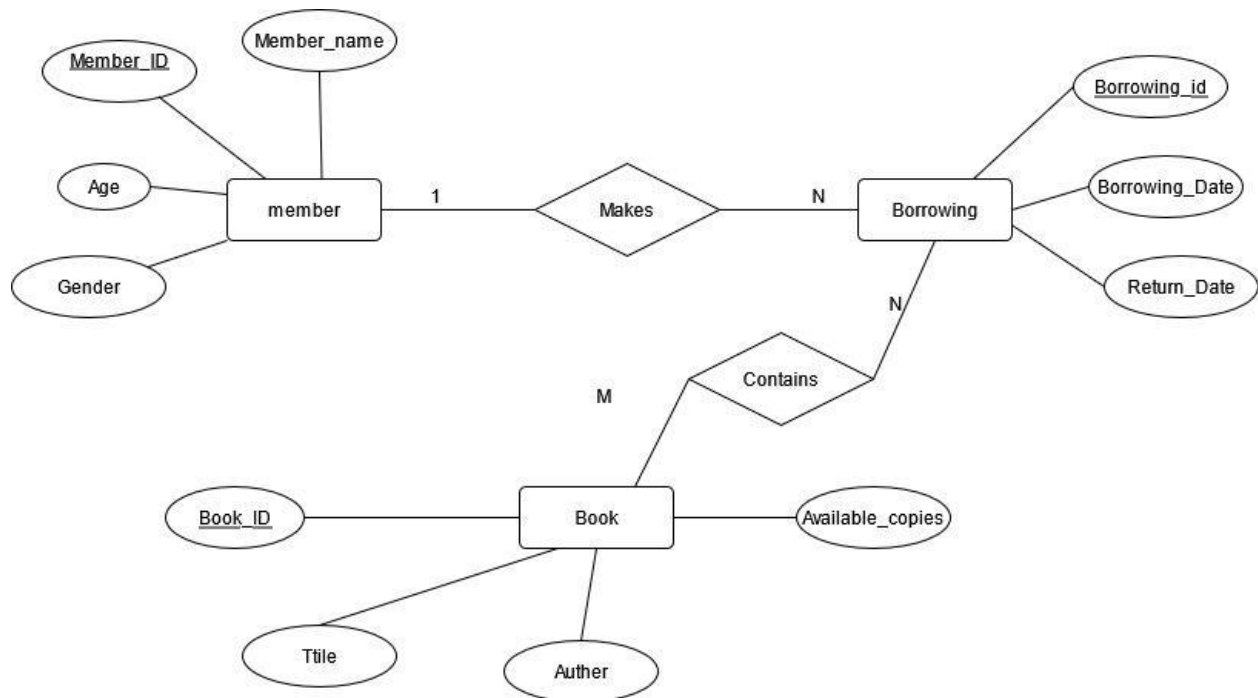
- A **member** can have one or more borrowings, but each borrowing is made by exactly one member.
- A **borrowing** may contain one or more books with their borrowing durations. A **book** can be borrowed in one or many borrowings.

Entities and Attributes

- **Member**(member_id NUMBER, member_name VARCHAR, age NUMBER, gender VARCHAR)
- **Borrowing**(borrowing_id NUMBER, borrowing_date DATE, return_date DATE)
- **Book**(book_id NUMBER, book_title VARCHAR, author VARCHAR, available_copies NUMBER)

Answer the following:

1. Using Chen's notation generate **ERD** for this schema.
2. Write **SQL** to create the tables, define primary keys, and relationships between the tables.



-- Create Member table

```

CREATE TABLE Member (
    member_id NUMBER PRIMARY KEY,
    member_name VARCHAR2(100) NOT NULL,
    age NUMBER,
    gender VARCHAR2(10)
);
  
```

-- Create Book table

```

CREATE TABLE Book (
    book_id NUMBER PRIMARY KEY,
    book_title VARCHAR2(200) NOT NULL,
    author VARCHAR2(100),
    available_copies NUMBER DEFAULT 5
);
  
```

-- Create Borrowing table

```
CREATE TABLE Borrowing (  
    borrowing_id NUMBER PRIMARY KEY,  
    member_id NUMBER NOT NULL REFERENCES Member(member_id),  
    borrowing_date DATE NOT NULL,  
    return_date DATE  
);
```

-- Create Borrowing_Details table

```
CREATE TABLE Borrowing_Details (  
    borrowing_id NUMBER REFERENCES Borrowing(borrowing_id),  
    book_id NUMBER REFERENCES Book(book_id),  
    PRIMARY KEY (borrowing_id, book_id)  
);
```