

# Task C Creating and Loading Relations

April 13, 2025

*This is preliminary report* In this report are the .dat files as well as the load and create sql files.

## Create

```
CREATE TABLE User (  
    UserLibraryID INT PRIMARY KEY NOT NULL,  
    UserFName VARCHAR(255),  
    UserMName VARCHAR(255),  
    UserLName VARCHAR(255)  
);  
  
CREATE TABLE Patron (  
    UserLibraryID INT NOT NULL,  
    FOREIGN KEY (UserLibraryID) REFERENCES User(UserLibraryID)  
        ON DELETE CASCADE  
        ON UPDATE CASCADE  
);  
  
CREATE TABLE Staff (  
    UserLibraryID INT NOT NULL,  
    FOREIGN KEY (UserLibraryID) REFERENCES User(UserLibraryID)  
        ON DELETE CASCADE  
        ON UPDATE CASCADE  
);  
  
CREATE TABLE Book (  
    BookID INT PRIMARY KEY NOT NULL,  
    BookTitle VARCHAR(255),  
    Author VARCHAR(255),  
    Genre VARCHAR(255),  
    LocationID VARCHAR(255) DEFAULT 'New Arrivals',  
    ISBN INT NOT NULL  
);  
  
CREATE TABLE Fines (  
    FineID INT PRIMARY KEY NOT NULL,  
    UserLibraryID INT NOT NULL,  
    BookID INT,  
    Amount DOUBLE NOT NULL,  
    FOREIGN KEY (UserLibraryID) REFERENCES Patron(UserLibraryID)  
        ON DELETE RESTRICT  
        ON UPDATE CASCADE,  
    FOREIGN KEY (BookID) REFERENCES Book(BookID)  
        ON DELETE SET NULL  
        ON UPDATE CASCADE  
);  
  
CREATE TABLE Checkouts (  

```

```

    CheckOutID INT PRIMARY KEY NOT NULL,
    UserLibraryID INT,
    BookID INT NOT NULL,
    CheckedOutDate DATE NOT NULL,
    DueDate DATE,
    ReturnedDate DATE DEFAULT NULL,
    FOREIGN KEY (UserLibraryID) REFERENCES Patron(UserLibraryID)
        ON DELETE SET NULL
        ON UPDATE CASCADE,
    FOREIGN KEY (BookID) REFERENCES Book(BookID)
        ON DELETE CASCADE
        ON UPDATE CASCADE
);

```

## Load

```

LOAD DATA INFILE '/User.dat'
INTO TABLE User
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\n'
(UserLibraryID, UserFName, UserMName, UserLName);

```

```

LOAD DATA INFILE '/Patron.dat'
INTO TABLE Patron
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\n'
(UserLibraryID);

```

```

LOAD DATA INFILE '/Staff.dat'
INTO TABLE Staff
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\n'
(UserLibraryID);

```

```

LOAD DATA INFILE '/Book.dat'
INTO TABLE Book
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\n'
(BookID, BookTitle, Author, Genre, LocationID, ISBN);

```

```

LOAD DATA INFILE '/Fines.csv'
INTO TABLE Fines
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\n'
(UserLibraryID, BookID, FineID, Amount);

```

```

LOAD DATA INFILE '/Checkouts.csv'
INTO TABLE Checkouts
FIELDS TERMINATED BY ','
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY '\n'
(UserLibraryID, BookID, CheckOutID, CheckedOutDate, DueDate, ReturnedDate);

```

## Dat

### Books

1001,"The Secret Garden","Frances Hodgson Burnett","Children's Literature,Classics",9780140367884  
1002,"Pride and Prejudice","Jane Austen","Romance","Fiction",9780141439518  
2005,"Foundation","Isaac Asimov","Science Fiction","Sci-Fi",9780553803717  
3010,"To Kill a Mockingbird","Harper Lee","Fiction","Classics",9780061120084

### Checkouts

1,13579,1001,2024-01-15,2024-01-29,2024-01-28  
2,24680,1002,2024-02-01,2024-02-15,  
3,13579,2005,2024-02-20,2024-03-05,2024-03-10  
4,98765,3010,2024-03-10,2024-03-24,  
5,24680,1001,2024-03-15,2024-03-29,2024-04-05

### Fines

1,13579,1001,2.50  
2,13579,1002,1.00  
3,24680,2005,5.00  
4,24680,,3.75  
5,98765,3010,0.50

### Patron

67890  
13579  
24680  
98765

### Users

12345,John,Michael,Doe  
67890,Jane,,Smith  
13579,Peter,Alan,Jones  
24680,Mary,,Williams  
98765,Robert,Lee,Brown

### Staff

12345