

```
IF NOT EXISTS(SELECT * FROM sys.databases WHERE name = 'LibraryManagemt')
```

```
    CREATE DATABASE LibraryManagemt
```

```
GO
```

```
use LibraryManagemt
```

```
GO
```

```
-- DOWN
```



```
ALTER TABLE authors DROP CONSTRAINT fk_authors_author_book_id
```

```
GO
```



```
CONSTRAINT pk_publisher_publisher_name PRIMARY KEY(publisher_name)  
)
```

```
GO
```

```
CREATE TABLE book(
```


```
book_id INT NOT NULL IDENTITY (1,1),  
    book_title VARCHAR(100) NOT NULL,
```



```
CREATE TABLE borrower(  
    borrower_card_no INT NOT NULL IDENTITY (100,1),  
        borrower_name VARCHAR(100) NOT NULL,  
        borrower_address VARCHAR(200) NOT NULL,  
        borrower_phone VARCHAR(50) NOT NULL  
    CONSTRAINT pk_borrower_borrower_card_no PRIMARY KEY(borrower_card_no)  
)
```

GO

```
CREATE TABLE book_loans(  
    loan_id INT NOT NULL IDENTITY (1,1),  
    loan_book_id INT NOT NULL,  
    loan_branch_id INT NOT NULL,  
    loan_card_no INT NOT NULL,  
    loan_date_out VARCHAR(50) NOT NULL,  
    loan_due_date VARCHAR(50) NOT NULL,  
    loan_return_date VARCHAR(50) NOT NULL  
    CONSTRAINT pk_book_loans_loan_id PRIMARY KEY(loan_id)
```



```
copies_book_id INT NOT NULL,  
copies_branch_id INT NOT NULL,  
copies_no_Of_copies INT NOT NULL
```

```
,
```

```
ALTER TABLE authors
```

```
ADD CONSTRAINT fk_authors_author_book_id FOREIGN KEY(author_book_id)  
REFERENCES book(book_id)
```

```
GO
```

5-0100'),
rk, NY 10019',
18', '212-419-
3-5577-6507'),
07-7000'),
110', '212-

('Scholastic', '557 Broadway, New York, NY 10012', '800-724-6527'),
('Bantam', '375 Hudson Street, New York, NY 10014', '212-366-2000'),
('Picador USA', '175 Fifth Avenue, New York, NY 10010', '646-307-5745');

GO

INSERT INTO book (book_title, book_publisher_name)

VALUES

('The Name of the Wind', 'DAW Books'),

('It', 'Viking'),

('The Green Mile', 'Signet Books'),

('Dune', 'Chilton Books'),

('The Hobbit', 'George Allen & Unwin'),

('Eragon', 'Alfred A. Knopf'),

('A Wise Mans Fear', 'DAW Books'),

('Harry Potter and the Philosophers Stone', 'Bloomsbury'),

('Hard Boiled Wonderland and The End of the World', 'Shinchosa'),

('The Giving Tree', 'Harper and Row'),

('The Hitchhikers Guide to the Galaxy', 'Pan Books'),

('Brave New World', 'Chalto & Windus'),

('The Hobbit', 'George Allen & Unwin'),



GO

```
INSERT INTO borrower (borrower_name, borrower_address, borrower_phone)
```

```
VALUES
```

```
('Joe Smith', '1321 4th Street, New York, NY 10014', '212-312-1234'),
```

```
('Jane Smith', '1321 4th Street, New York, NY 10014', '212-931-4124'),
```

```
('Tom Li', '981 Main Street, Ann Arbor, MI 48104', '734-902-7455'),
```

```
('Angela Thompson', '2212 Green Avenue, Ann Arbor, MI 48104', '313-591-2122'),
```

```
('Hanna Fennsack', '1321 Park Drive, Ann Arbor, MI 48104', '413-512-5533')
```

```
_due_date,
```

```
('11', '1', '102', '1/3/18', '2/3/18', '2/3/18'),
```

```
('12', '2', '105', '12/12/17', '1/12/18', '1/11/18'),
```


('10','2','105','12/12/17','1/12/17','1/13/18'),
('20','2','105','2/3/18','3/3/18','3/3/18'),
('18','2','105','1/5/18','2/5/18','2/6/18'),
('19','2','105','1/5/18','2/5/18','2/5/18'),
('19','2','100','1/3/18','2/3/18','4/3/18'),
('11','2','106','1/7/18','2/7/18','2/10/18'),
('1','2','106','1/7/18','2/7/18','2/2/18'),



('9','4','103','1/15/18','2/15/18','2/22/18'),
('7','4','107','1/1/18','2/2/18','2/2/18'),
('4','4','103','1/1/18','2/2/18','2/1/18'),

('1','4','103','2/2/18','3/2/18','3/4/18'),
('20','4','103','1/3/18','2/3/18','2/3/18'),
('1','4','102','1/12/18','2/12/18','2/2/18'),
('3','4','107','1/13/18','2/13/18','2/15/18'),
('18','4','107','1/13/18','2/13/18','2/17/18'),
('12','4','102','1/14/18','2/14/18','3/2/18'),
('11','4','103','1/15/18','2/15/18','4/2/18'),
('9','4','103','1/15/18','2/15/18','2/2/18'),
('7','4','107','1/19/18','2/19/18','2/20/18'),
('4','4','103','1/19/18','2/19/18','2/2/18'),
('1','4','103','1/22/18','2/22/18','2/26/18');



('14','1','3'),

('15','1','5'),

('16','1','4'),

('17','1','5'),

('18','1','5'),

('19','1','6'),

('20','1','7'),

('1','2','6'),

('2','2','6'),

('3','2','4'),

('4','2','3')



('3','3','3'),
('4','3','3'),
('5','3','4'),
('6','3','5'),
('7','3','5'),
('8','3','6'),
('9','3','7'),
('10','3','5'),
('11','3','6'),
('12','3','3'),
('13','3','4'),
('14','3','2'),
('15','3','2'),
('16','3','3'),
('17','3','4'),
('18','3','5'),
('19','3','2'),
('20','3','6'),
('1','4','3'),
('2','4','4'),
('3','4','2'),
('4','4','5'),
('5','4','5'),
('6','4','6'),
('7','4','6'),
('8','4','7'),
('9','4','4'),
('10','4','3'),
('11','4','2'),

('12','4','6'),
('13','4','3'),
('14','4','4'),
('15','4','3'),
('16','4','5'),
('17','4','5'),
('18','4','5'),
('19','4','2'),
('20','4','7');

GO



```
('16', 'J.K. Rowling'),  
('17', 'J.K. Rowling'),  
('18', 'J.R.R. Tolkien'),  
('19', 'George R.R. Martin'),  
('20', 'Mark Lee');
```

```
GO
```

```
-- Verify
```

```
SELECT * FROM publisher;  
SELECT * FROM book;  
SELECT * FROM library_branch;  
SELECT * FROM borrower;  
SELECT * FROM book_loans;  
SELECT * FROM book_copies;  
SELECT * FROM authors;
```