

## SOURCE CODE

### BOOK DATABASE

```
create database bookdb1;  
use bookdb1;
```

```
CREATE TABLE PUBLISHER  
(NAME VARCHAR(20) PRIMARY KEY,  
PHONE VARCHAR(10),  
ADDRESS VARCHAR(20));  
SELECT * FROM PUBLISHER;  
CREATE TABLE BOOK(  
BOOK_ID INTEGER PRIMARY KEY,  
TITLE VARCHAR(20),  
PUB_YEAR VARCHAR(20),  
PUBLISHER_NAME VARCHAR(20),  
FOREIGN KEY (PUBLISHER_NAME) REFERENCES PUBLISHER (NAME) ON DELETE  
CASCADE);  
SELECT * FROM BOOK;
```

```
CREATE TABLE BOOK_AUTHORS(  
AUTHOR_NAME VARCHAR(20),  
BOOK_ID INTEGER,  
PRIMARY KEY (BOOK_ID, AUTHOR_NAME),  
FOREIGN KEY (BOOK_ID) REFERENCES BOOK (BOOK_ID) ON DELETE CASCADE );  
SELECT * FROM BOOK_AUTHORS;
```

```
CREATE TABLE LIBRARY_BRANCH (  
BRANCH_ID INTEGER PRIMARY KEY,  
BRANCH_NAME VARCHAR(20),  
ADDRESS VARCHAR(20));  
SELECT * FROM LIBRARY_BRANCH;
```

```
CREATE TABLE BOOK_COPIES  
(  
NO_OF_COPIES INTEGER,  
BOOK_ID INTEGER,  
BRANCH_ID INTEGER ,  
PRIMARY KEY (BOOK_ID, BRANCH_ID),  
FOREIGN KEY (BOOK_ID) REFERENCES BOOK (BOOK_ID) ON DELETE CASCADE,  
FOREIGN KEY (BRANCH_ID) REFERENCES LIBRARY_BRANCH (BRANCH_ID) ON  
DELETE CASCADE);  
SELECT * FROM BOOK_COPIES;
```

```
CREATE TABLE CARD
(CARD_NO INTEGER PRIMARY KEY);
SELECT * FROM CARD;
```

```
CREATE TABLE BOOK_LENDING(
DATE_OUT DATE,
DUE_DATE DATE,
BOOK_ID INTEGER,
BRANCH_ID INTEGER ,
CARD_NO INTEGER,
PRIMARY KEY (BOOK_ID, BRANCH_ID, CARD_NO),
FOREIGN KEY (BOOK_ID) REFERENCES BOOK (BOOK_ID) ON DELETE CASCADE,
FOREIGN KEY (CARD_NO) REFERENCES CARD (CARD_NO) ON DELETE CASCADE,
FOREIGN KEY (BRANCH_ID) REFERENCES LIBRARY_BRANCH (BRANCH_ID) ON
DELETE CASCADE);
SELECT * FROM BOOK_LENDING;
```

```
INSERT INTO PUBLISHER VALUES ("MCGRAW-HILL", "9989076587", "BANGALORE"),
("PEARSON", "9889076565", "NEWDELHI"),
("RANDOM HOUSE", "7455679345", "HYDRABAD"),
("HACHETTE LIVRE", "8970862340", "CHENNAI"),
("GRUPO PLANETA", "7756120238", "BANGALORE");
```

```
INSERT INTO BOOK VALUES ("1", "DBMS", "JAN-2017", "MCGRAW-HILL"),
("2", "ADBMS", "JUN-2016", "MCGRAW-HILL"),
("3", "CN", "SEP-2016", "PEARSON"),
("4", "CG", "SEP-2015", "GRUPO PLANETA"),
("5", "OS", "MAY-2016", "PEARSON");
```

```
INSERT INTO BOOK_AUTHORS VALUES ("NAVATHE", "1"),
("NAVATHE", "2"),
("TANENBAUM", "3"),
("EDWARD ANGEL", "4"),
("GALVIN", "5");
```

```
INSERT INTO LIBRARY_BRANCH VALUES ("10", "RR NAGAR", "BANGALORE"),
("11", "RNSIT", "BANGALORE"),
("12", "RAJAJI NAGAR", "BANGALORE"),
("13", "NITTE", "MANGALORE"),
("14", "MANIPAL", "UDUPI");
```

```
INSERT INTO BOOK_COPIES VALUES ("10", "1",  
"10"),("5","1","11"),("2","2","12"),("5","2","13"),("7","3","14"),("1","5","10"),("3","4","11");  
INSERT INTO CARD VALUES ("100"),("101"),("102"),("103"),("104");
```

```
INSERT INTO BOOK_LENDING VALUES ("17-01-01","17-06-01","1","10","101"),  
("17-01-17","17-03-17","3", "14", "101"),  
("17-02-21","17-04-21", 2, 13, 101),  
("17-03-15","17-07-15", "4", "11", "101"),  
("17-04-12","17-05-12", "1", "11", "104");
```

```
SELECT B.BOOK_ID, B.TITLE, B.PUBLISHER_NAME,  
A.AUTHOR_NAME,C.NO_OF_COPIES,L.BRANCH_ID  
FROM BOOK B, BOOK_AUTHORS A, BOOK_COPIES C, LIBRARY_BRANCH L  
WHERE B.BOOK_ID=A.BOOK_ID AND B.BOOK_ID=C.BOOK_ID AND  
L.BRANCH_ID=C.BRANCH_ID;
```

```
SELECT CARD_NO FROM BOOK_LENDING  
WHERE DATE_OUT BETWEEN "2017-01-01" AND "2017-07-01"  
GROUP BY CARD_NO  
HAVING COUNT(*)>3;
```

```
DELETE FROM BOOK  
WHERE BOOK_ID=3;
```

```
CREATE VIEW YEAR_OF_PUBLICATION AS SELECT PUB_YEAR  
FROM BOOK;  
SELECT * FROM YEAR_OF_PUBLICATION;
```

```
CREATE VIEW BOOKS_AVAILABLE_IN_LIBRARY AS  
SELECT B.BOOK_ID, B.TITLE, C.NO_OF_COPIES  
FROM BOOK B, BOOK_COPIES C, LIBRARY_BRANCH L  
WHERE B.BOOK_ID=C.BOOK_ID  
AND C.BRANCH_ID=L.BRANCH_ID;  
SELECT * FROM BOOKS_AVAILABLE_IN_LIBRARY;
```