

LAB 7

BOOK DATABASE

CODE:

```
create table publisher(  
name varchar(30),  
address varchar(50),  
phone varchar(10),  
primary key(name));
```

```
create table book(  
book_id int,  
title varchar(30),  
publisher_name varchar(50),  
pub_year varchar(30),  
primary key(book_id),  
foreign key(publisher_name) references publisher(name) on delete cascade);
```

```
create table book_authors(  
book_id int,  
author_name varchar(30),  
primary key(book_id,author_name),  
foreign key(book_id) references book(book_id) on delete cascade);
```

```
create table library_branch(  
branch_id int,  
branch_name varchar(30),  
address varchar(50),  
primary key(branch_id));
```

```
create table book_copies(  
book_id int,  
branch_id int,  
copies int,  
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);
```

```
create table card(  
card_no int,  
primary key(card_no));
```

```
create table book_lending(  
book_id int,  
branch_id int,  
card_no int,  
date_out date,  
due_date date,  
primary key(book_id,branch_id,card_no),  
foreign key(book_id) references book(book_id) on delete cascade,  
foreign key(branch_id) references library_branch(branch_id) on delete cascade,  
foreign key(card_no) references card(card_no) on delete cascade);
```

```
INSERT INTO publisher VALUES ('MCGRAW-HILL','9989076587','BANGALORE');  
INSERT INTO PUBLISHER VALUES ('PEARSON', '9889076565', 'NEW DELHI');  
INSERT INTO PUBLISHER VALUES ('RANDOM HOUSE', '7455679345',  
'HYDERABAD');  
INSERT INTO PUBLISHER VALUES ('HACHETTE LIVRE', '8970862340', 'CHENNAI');  
INSERT INTO PUBLISHER VALUES ('GRUPO PLANETA','7756120238',  
'BANGALORE');
```

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

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

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

```
INSERT INTO BOOK_COPIES VALUES ( 1, 10,10);  
INSERT INTO BOOK_COPIES VALUES ( 1, 11,5);  
INSERT INTO BOOK_COPIES VALUES ( 2, 12,2);  
INSERT INTO BOOK_COPIES VALUES ( 2, 13,5);  
INSERT INTO BOOK_COPIES VALUES ( 3, 14,7);  
INSERT INTO BOOK_COPIES VALUES ( 5, 10,1);  
INSERT INTO BOOK_COPIES VALUES ( 4, 11,3);
```

```
INSERT INTO CARD VALUES (100);
```

```
INSERT INTO CARD VALUES (101);
INSERT INTO CARD VALUES (102);
INSERT INTO CARD VALUES (103);
INSERT INTO CARD VALUES (104);
```

```
INSERT INTO BOOK_LENDING VALUES ( 1, 10, 101,'01-JAN-17','01-JUN-17');
INSERT INTO BOOK_LENDING VALUES ( 3, 14, 101,'11-JAN-17','11-MAR-17');
INSERT INTO BOOK_LENDING VALUES ( 2, 13, 101,'21-FEB-17','21-APR-17');
INSERT INTO BOOK_LENDING VALUES ( 4, 11, 101,'15-MAR-17','15-JUL-17');
INSERT INTO BOOK_LENDING VALUES ( 1, 11, 104,'12-APR-17','12-MAY-17');
```

```
select * from publisher;
select * from book;
select * from library_branch;
select * from book_copies;
select * from card;
select * from book_lending;
```

```
SELECT B.BOOK_ID, B.TITLE, B.PUBLISHER_NAME, A.AUTHOR_NAME,
C.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 '01-JAN-2017' AND '01-JUL-2017'
GROUP BY CARD_NO
HAVING COUNT (*)>3;
```

```
delete from book where book_id=3;
```

```
CREATE VIEW V_PUBLICATION AS
SELECT PUB_YEAR
FROM BOOK;
```

```
select * FROM V_PUBLICATION;
```

```
CREATE VIEW V_BOOKS AS
SELECT B.BOOK_ID, B.TITLE, C.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 V_BOOKS;
```

OUTPUTS:**TABLES:****PUBLISHER:**

| | NAME | ADDRESS | PHONE |
|---|----------------|------------|-----------|
| 1 | MCGRAW-HILL | 9989076587 | BANGALORE |
| 2 | PEARSON | 9889076565 | NEW DELHI |
| 3 | RANDOM HOUSE | 7455679345 | HYDERABAD |
| 4 | HACHETTE LIVRE | 8970862340 | CHENNAI |
| 5 | GRUPO PLANETA | 7756120238 | BANGALORE |

BOOK:

| | BOOK_ID | TITLE | PUBLISHER_NAME | PUB_YEAR |
|---|---------|-------|----------------|----------|
| 1 | 1 | DBMS | MCGRAW-HILL | JAN-2017 |
| 2 | 2 | ADBMS | MCGRAW-HILL | JUN-2016 |
| 3 | 3 | CN | PEARSON | SEP-2016 |
| 4 | 4 | CG | GRUPO PLANETA | SEP-2015 |
| 5 | 5 | OS | PEARSON | MAY-2016 |

LIBRARY_BRANCH:

| | BRANCH_ID | BRANCH_NAME | ADDRESS |
|---|-----------|--------------|-----------|
| 1 | 10 | RR NAGAR | BANGALORE |
| 2 | 11 | RNSIT | BANGALORE |
| 3 | 12 | RAJAJI NAGAR | BANGALORE |
| 4 | 13 | NITTE | MANGALORE |
| 5 | 14 | MANIPAL | UDUPI |

BOOK_COPIES:

| | BOOK_ID | BRANCH_ID | COPIES |
|---|---------|-----------|--------|
| 1 | 1 | 10 | 10 |
| 2 | 1 | 11 | 5 |
| 3 | 2 | 12 | 2 |
| 4 | 2 | 13 | 5 |
| 5 | 3 | 14 | 7 |
| 6 | 5 | 10 | 1 |
| 7 | 4 | 11 | 3 |

CARD:

| | CARD_NO |
|---|---------|
| 1 | 100 |
| 2 | 101 |
| 3 | 102 |
| 4 | 103 |
| 5 | 104 |

BOOK LENDING:

| | BOOK_ID | BRANCH_ID | CARD_NO | DATE_OUT | DUE_DATE |
|---|---------|-----------|---------|----------|----------|
| 1 | 1 | 10 | 101 | 01-01-17 | 01-06-17 |
| 2 | 3 | 14 | 101 | 11-01-17 | 11-03-17 |
| 3 | 2 | 13 | 101 | 21-02-17 | 21-04-17 |
| 4 | 4 | 11 | 101 | 15-03-17 | 15-07-17 |
| 5 | 1 | 11 | 104 | 12-04-17 | 12-05-17 |

QUERY:

1]

| | BOOK_ID | TITLE | PUBLISHER_NAME | AUTHOR_NAME | COPIES | BRANCH_ID |
|---|---------|-------|----------------|--------------|--------|-----------|
| 1 | 1 | DBMS | MCGRAW-HILL | NAVATHE | 10 | 10 |
| 2 | 1 | DBMS | MCGRAW-HILL | NAVATHE | 5 | 11 |
| 3 | 2 | ADBMS | MCGRAW-HILL | NAVATHE | 2 | 12 |
| 4 | 2 | ADBMS | MCGRAW-HILL | NAVATHE | 5 | 13 |
| 5 | 3 | CN | PEARSON | TANENBAUM | 7 | 14 |
| 6 | 5 | OS | PEARSON | GALVIN | 1 | 10 |
| 7 | 4 | CG | GRUPO PLANETA | EDWARD ANGEL | 3 | 11 |

2]

| | CARD_NO |
|---|---------|
| 1 | 101 |

3]

| | PUB_YEAR |
|---|----------|
| 1 | JAN-2017 |
| 2 | JUN-2016 |
| 3 | SEP-2015 |
| 4 | MAY-2016 |

4]

| | BOOK_ID | TITLE | PUBLISHER_NAME | PUB_YEAR |
|---|---------|-------|----------------|----------|
| 1 | 1 | DBMS | MCGRAW-HILL | JAN-2017 |
| 2 | 2 | ADBMS | MCGRAW-HILL | JUN-2016 |
| 3 | 4 | CG | GRUPO PLANETA | SEP-2015 |
| 4 | 5 | OS | PEARSON | MAY-2016 |

5]

| | BOOK_ID | TITLE | COPIES |
|---|---------|-------|--------|
| 1 | 1 | DBMS | 10 |
| 2 | 1 | DBMS | 5 |
| 3 | 2 | ADBMS | 2 |
| 4 | 2 | ADBMS | 5 |
| 5 | 5 | OS | 1 |
| 6 | 4 | CG | 3 |