CODE:

```sql
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));
```

```sql
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