

**A. Consider the following schema for a Library Database:**

**BOOK** (*Book\_id, Title, Publisher\_Name, Pub\_Year*)

**BOOK\_AUTHORS** (*Book\_id, Author\_Name*)

**PUBLISHER** (*Name, Address, Phone*)

**BOOK\_COPIES** (*Book\_id, Branch\_id, No-of\_Copies*)

**BOOK\_LENDING** (*Book\_id, Branch\_id, Card\_No, Date\_Out, Due\_Date*)

**LIBRARY\_BRANCH** (*Branch\_id, Branch\_Name, Address*)

**Write SQL queries to**

- 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc.**
- 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017**
- 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation.**
- 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query.**
- 5. Create a view of all books and its number of copies that are currently available in the Library.**

**Insertion of Values to Tables**

INSERT INTO PUBLISHER VALUES ('MCGRAW-HILL', 9989076587, 'BANGALORE');

INSERT INTO PUBLISHER VALUES ('PEARSON', 9889076565, 'NEWDELHI');

INSERT INTO PUBLISHER VALUES ('RANDOM HOUSE', 7455679345, 'HYDRABAD');

INSERT INTO PUBLISHER VALUES ('HACHETTE LIVRE', 8970862340, 'CHENAI');

INSERT INTO PUBLISHER VALUES ('GRUPO PLANETA', 7756120238, 'BANGALORE');

INSERT INTO BOOK VALUES (1, 'DBMS', 'JAN-2017', 'MCGRAW-HILL'); INSERT INTO BOOK VALUES (2, 'ADBMS', 'JUN-2016', 'MCGRAW-HILL'); INSERT INTO BOOK VALUES (3, 'CN', 'SEP-2016', 'PEARSON');

INSERT INTO BOOK VALUES (4, 'CG', 'SEP-2015', 'GRUPO PLANETA'); INSERT INTO BOOK VALUES (5, 'OS', 'MAY-2016', 'PEARSON');

```

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

```

```

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

```

```

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

```

```
SQL> select * from publisher;
```

NAME	PHONE	ADDRESS
MCGRAW-HILL	9989076587	BANGALORE
PEARSON	9889076565	NEWDELHI
RANDOM HOUSE	7455679345	HYDRABAD
HACHETTE LIVRE	8970862340	CHENAI
GRUPO PLANETA	7756120238	BANGALORE

```
SELECT * FROM BOOK;
```

```
SQL> SELECT * FROM BOOK;
```

BOOK_ID	TITLE	PUB_YEAR	PUBLISHER_NAME
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

SELECT \* FROM BOOK\_AUTHORS;

SQL> SELECT \* FROM BOOK\_AUTHORS;

AUTHOR_NAME	BOOK_ID
NAVATHE	1
NAVATHE	2
TANENBAUM	3
EDWARD ANGEL	4
GALVIN	5

SELECT \* FROM LIBRARY\_BRANCH;

SQL> SELECT \* FROM LIBRARY\_BRANCH;

BRANCH_ID	BRANCH_NAME	ADDRESS
10	RR NAGAR	BANGALORE
11	RNSIT	BANGALORE
12	RAJAJI NAGAR	BANGALORE
13	NITTE	MANGALORE
14	MANIPAL	UDUPI

SELECT \* FROM BOOK\_COPIES;

SELECT \* FROM CARD;

SQL> SELECT \* FROM CARD;

CARD_NO
100
101
102
103
104

SELECT \* FROM BOOK\_LENDING;

SQL> select \* from book\_lending;

DATE_OUT	DUE_DATE	BOOK_ID	BRANCH_ID	CARD_NO
01-JAN-17	01-JUN-17	1	10	101
11-JAN-17	11-MAR-17	3	14	101
21-FEB-17	21-APR-17	2	13	101
15-MAR-17	15-JUL-17	4	11	101
12-APR-17	12-MAY-17	1	11	104