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Subject: DBMS Lab Assignment 02

Table Creation Code:

```
CREATE TABLE Customer
(
    cust_no INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
    cust_fname VARCHAR(100),
    cust_lname VARCHAR(100),
    cust_company VARCHAR(100),
    cust_addr VARCHAR(200),
    city VARCHAR(100),
    cust_phone VARCHAR(15)
);

CREATE TABLE Author
(
    author_no INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
    author_name VARCHAR(100),
    country VARCHAR(50)
);

CREATE TABLE Publisher
(
    publisher_no INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
    publisher_name VARCHAR(100),
    publisher_addr VARCHAR(500),
    est_year INT
);

CREATE TABLE Books
(
    ISBN VARCHAR(50) NOT NULL PRIMARY KEY,
    title VARCHAR(200) NOT NULL,
    unit_price INT NOT NULL,
    author_no INT NOT NULL,
    publisher_no INT NOT NULL,
    publ_year INT,
    FOREIGN KEY (author_no) REFERENCES Author (author_no) ON DELETE CASCADE,
    FOREIGN KEY (publisher_no) REFERENCES Publisher (publisher_no) ON DELETE CASCADE
);

CREATE TABLE Ordering
(
```

```

order_no INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
cust_no INT NOT NULL,
ISBN VARCHAR(50) NOT NULL,
quantity INT,
ord_date DATE,
FOREIGN KEY (cust_no) REFERENCES Customer (cust_no) ON DELETE CASCADE,
FOREIGN KEY (ISBN) REFERENCES Books (ISBN) ON DELETE CASCADE
);

```

Data Insertion:

```

INSERT INTO Customer(cust_fname, cust_lname, cust_company, cust_addr, city, cust_
phone)
VALUES
('Harry', 'Potter', 'HSWW', 'Great Britain', 'Scotland', '62442-62442'),
('John', 'Wick', 'Lionsgate', 'Tilak Road', 'Pune', '8888888888'),
('Prince', 'Kaiser', 'Handsopher', 'MG Road', 'Pune', '9758398398'),
('Steve', 'Rogers', 'Captain America', 'US Road', 'Mumbai', '9876543210'),
('Tony', 'Stark', 'Iron Man', 'New York City Road', 'Delhi', '9999999999'),
('King', 'TChalla', 'Black Panther', 'Wakanda Road', 'Mumbai', '9876678912'),
('Natasha', 'Romanoff', 'Black Wodow', 'Avenger Tower', 'Kolkata', '8989898989'),
('Bruce', 'Banner', 'Hulk', 'Dyton', 'Mumbai', '8917372989'),
('Thor', 'Odinson', 'Thunder', 'Asgard', 'Pune', '9877800970'),
('Scot', 'Lang', 'Ant-Man', 'Quantum World, Worm Hole', 'MP', '9878988900')
;

INSERT INTO Customer(cust_fname, cust_lname, cust_company, cust_addr, city, cust_
phone)
VALUES ('Peter', 'Parker', 'Sony', 'xyz road', 'Pune', '9876678909');

INSERT INTO Author(author_name, country)
VALUES
('Hector Garcia', 'Japan'),
('James Clear', 'Australia'),
('Morgan Housel', 'Russia'),
('Robert Kiyosaki', 'Australia'),
('George RR Martin', 'USA'),
('Chetan Bhagan', 'India'),
('JK Rowling', 'USA'),
('JRR Tolkien', 'England'),
('Paulo Coelho', 'Portuguese');

INSERT INTO Publisher(publisher_name, publisher_addr, est_year)
VALUES
('ABC Publication', 'Pune', 2015),
('XYZ Publication', 'Mumbai', 2016),
('Red Heart Publication', 'Kolkata', 2014),
('Common Man Publication', 'Delhi', 2011),
('VV Publication', 'Meghalaya', 2019),

```

```

('ABC Publication', 'Pune', 2016);

INSERT INTO Books(ISBN, title, unit_price, author_no, publisher_no, publ_year)
VALUES
('123-456-789-123-4', 'Ikigai', 320, 1, 1, 2000),
('234-567-890-123-4', 'Atomic Habits', 380, 2, 2, 2004),
('345-678-901-234-5', 'The Psychology of Money', 400, 3, 3, 2006),
('456-789-012-345-6', 'Rich Dad and Poor Dad', 280, 4, 4, 2000),
('567-890-123-456-7', 'The Game of Thrones', 1100, 5, 4, 2006),
('678-901-234-567-8', 'Lord Of The Rings', '1500', 8, 1, 1999),
('789-012-345-678-9', 'The Alchemist', '400', 9, 2, 1995),
('123-456-789-123-5', 'Radom', 320, 7, 5, 2015);

INSERT INTO Ordering(cust_no, ISBN, quantity, ord_date)
VALUES
(4, '567-890-123-456-7', 5, '2021-08-20'),
(9, '678-901-234-567-8', 3, '2021-08-22');

```

Queries Code:

```

-- Selection queries

SELECT *
FROM Customer
WHERE (city='Pune' OR city='Mumbai') AND (cust_fname LIKE 'p%' OR cust_fname LIKE
'h%');

SELECT DISTINCT city
FROM Customer;

SELECT author_name, country
FROM Author
WHERE country='India'
UNION
SELECT author_name, country
FROM Author
WHERE country='Australia'

SELECT publisher_name, est_year
FROM Publisher
WHERE est_year=2015
AND publisher_name IN (SELECT publisher_name
FROM Publisher
WHERE est_year=2016);

SELECT *
FROM Books
WHERE unit_price=(SELECT MAX(unit_price) FROM Books);

```

```

SELECT title, unit_price
FROM Books
WHERE unit_price BETWEEN 300 AND 400;

SELECT title, unit_price, publ_year
FROM Books
ORDER BY publ_year DESC;

SELECT title, author_no, publisher_no
FROM Books
WHERE publ_year IN(2000, 2004, 2006);

CREATE VIEW books_and_authors AS
SELECT title, author_name
FROM Books, Author
WHERE Books.author_no=Author.author_no;

SELECT * FROM books_and_authors;

-- Update queries

UPDATE Books
SET unit_price = 1.05*unit_price
WHERE publ_year=2015;

-- Deletion queries

DELETE FROM Customer
WHERE city='Pune';

```

Tables:

```

mysql> SHOW TABLES;
+-----+
| Tables_in_a02_database |
+-----+
| author                  |
| books                   |
| customer                |
| ordering                 |
| publisher                |
+-----+
5 rows in set (0.00 sec)

```

Tables Schema:

```
mysql> DESC author;
```

Field	Type	Null	Key	Default	Extra
author_no	int	NO	PRI	NULL	auto_increment
author_name	varchar(100)	YES		NULL	
country	varchar(50)	YES		NULL	

```
3 rows in set (0.00 sec)
```

```
mysql> DESC books;
```

Field	Type	Null	Key	Default	Extra
ISBN	varchar(50)	NO	PRI	NULL	
title	varchar(200)	NO		NULL	
unit_price	int	NO		NULL	
author_no	int	NO	MUL	NULL	
publisher_no	int	NO	MUL	NULL	
publ_year	int	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> DESC ordering;
```

Field	Type	Null	Key	Default	Extra
order_no	int	NO	PRI	NULL	auto_increment
cust_no	int	NO	MUL	NULL	
ISBN	varchar(50)	NO	MUL	NULL	
quantity	int	YES		NULL	
ord_date	date	YES		NULL	

```
5 rows in set (0.00 sec)
```

```
mysql> DESC customer;
```

Field	Type	Null	Key	Default	Extra
cust_no	int	NO	PRI	NULL	auto_increment
cust_fname	varchar(100)	YES		NULL	
cust_lname	varchar(100)	YES		NULL	
cust_company	varchar(100)	YES		NULL	
cust_addr	varchar(200)	YES		NULL	
city	varchar(100)	YES		NULL	
cust_phone	varchar(15)	YES		NULL	

```
7 rows in set (0.00 sec)
```

```
mysql> DESC publisher;
```

Field	Type	Null	Key	Default	Extra
publisher_no	int	NO	PRI	NULL	auto_increment
publisher_name	varchar(100)	YES		NULL	
publisher_addr	varchar(500)	YES		NULL	
est_year	int	YES		NULL	

```
4 rows in set (0.00 sec)
```

Table Data:

```
mysql> SELECT * FROM author;
```

author_no	author_name	country
1	Hector Garcia	Japan
2	James Clear	
3	Morgan Housel	
4	Robert Kiyosaki	
5	George RR Martin	USA
6	Chetan Bhagan	India
7	JK Rowling	USA
8	JRR Tolkien	England
9	Paulo Coelho	Portuguese

```
9 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM books;
```

ISBN	title	unit_price	author_no	publisher_no	publ_year
123-456-789-123-4	Ikigai	320	1	1	2000
234-567-890-123-4	Atomic Habits	380	2	2	2004
345-678-901-234-5	The Psychology of Money	400	3	3	2006
456-789-012-345-6	Rich Dad and Poor Dad	280	4	4	2000
567-890-123-456-7	The Game of Thrones	1100	5	4	2006
678-901-234-567-8	Lord Of The Rings	1500	8	1	1999
789-012-345-678-9	The Alchemist	400	9	2	1995

```
7 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM customer;
```

cust_no	cust_fname	cust_lname	cust_company	cust_addr	city	cust_phone
1	Harry	Potter	HSNW	Great Britain	Scotland	62442-62442
2	John	Wick	Lionsgate	Tilak Road	Pune	8888888888
3	Prince	Kaiser	Handsopher	MG Road	Pune	9758398398
4	Steve	Rogers	Captain America	US Road	Mumbai	9876543210
5	Tony	Stark	Iron Man	New York City Road	Delhi	9999999999
6	King	TChalla	Black Panther	Wakanda Road	Mumbai	9876678912
7	Natasha	Romanoff	Black Wodow	Avenger Tower	Kolkata	8989898989
8	Bruce	Banner	Hulk	Dyton	Mumbai	8917372989
9	Thor	Odinson	Thunder	Asgard	Pune	9877800970
10	Scot	Lang	Ant-Man	Quantum World, Worm Hole	MP	9878988900

```
10 rows in set (0.00 sec)
```



```
mysql> select * from ordering;
```

order_no	cust_no	ISBN	quantity	ord_date
3	4	567-890-123-456-7	5	2021-08-20
4	9	678-901-234-567-8	3	2021-08-22

2 rows in set (0.00 sec)

```
mysql> SELECT * FROM publisher;
```

publisher_no	publisher_name	publisher_addr	est_year
1	ABC Publication	Pune	2015
2	XYZ Publication	Mumbai	2016
3	Red Heart Publication	Kolkata	2014
4	Common Man Publication	Delhi	2011
5	VV Publication	Meghalaya	2019

5 rows in set (0.00 sec)

Queries:

```
mysql> SELECT *  
-> FROM Customer  
-> WHERE (city='Pune' OR city='Mumbai') AND (cust_fname LIKE 'p%' OR cust_fname LIKE 'h%');
```

cust_no	cust_fname	cust_lname	cust_company	cust_addr	city	cust_phone
11	Peter	Parker	Sony	xyz road	Pune	9876678909

1 row in set (0.00 sec)

```
mysql> SOURCE select.sql;
```

city
Scotland
Pune
Mumbai
Delhi
Kolkata
MP

6 rows in set (0.00 sec)

```
mysql> SOURCE update.sql;
```

```
+-----+-----+-----+-----+-----+-----+
| ISBN          | title | unit_price | author_no | publisher_no | publ_year |
+-----+-----+-----+-----+-----+-----+
| 123-456-789-123-5 | Radom |      320 |      7 |      5 |      2015 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> SOURCE update.sql;
```

```
+-----+-----+-----+-----+-----+-----+
| ISBN          | title | unit_price | author_no | publisher_no | publ_year |
+-----+-----+-----+-----+-----+-----+
| 123-456-789-123-5 | Radom |      320 |      7 |      5 |      2015 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
+-----+-----+-----+-----+-----+-----+
| ISBN          | title | unit_price | author_no | publisher_no | publ_year |
+-----+-----+-----+-----+-----+-----+
| 123-456-789-123-5 | Radom |      336 |      7 |      5 |      2015 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> SOURCE delete.sql;
```

```
+-----+-----+-----+-----+-----+-----+
| cust_no | cust_fname | cust_lname | cust_company | cust_addr | city | cust_phone |
+-----+-----+-----+-----+-----+-----+
|      2 | John      | Wick       | Lionsgate    | Tilak Road | Pune | 8888888888 |
|      3 | Prince    | Kaiser     | Handsopher   | MG Road    | Pune | 9758398398 |
|      9 | Thor      | Odinson    | Thunder      | Asgard     | Pune | 9877800970 |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

Query OK, 3 rows affected (0.00 sec)

Empty set (0.00 sec)



```
mysql> SELECT * FROM author;
```

author_no	author_name	country
1	Hector Garcia	Japan
2	James Clear	
3	Morgan Housel	Australia
4	Robert Kiyosaki	
5	George RR Martin	USA
6	Chetan Bhagan	India
7	JK Rowling	USA
8	JRR Tolkien	England
9	Paulo Coelho	Portuguese

```
9 rows in set (0.00 sec)
```

```
mysql> SOURCE select.sql;
```

author_name	country
Chetan Bhagan	India
Morgan Housel	Australia

```
2 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM publisher;
```

publisher_no	publisher_name	publisher_addr	est_year
1	ABC Publication	Pune	2015
2	XYZ Publication	Mumbai	2016
3	Red Heart Publication	Kolkata	2014
4	Common Man Publication	Delhi	2011
5	VV Publication	Meghalaya	2019
6	ABC Publication	Pune	2016

```
6 rows in set (0.00 sec)
```

```
mysql> SOURCE select.sql;
```

publisher_name	est_year
ABC Publication	2015

```
1 row in set (0.00 sec)
```

5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20

```
mysql> source select.sql;
```

ISBN	title	unit_price	author_no	publisher_no	publ_year
678-901-234-567-8	Lord Of The Rings	1500	8	1	1999

1 row in set (0.00 sec)

title	unit_price
Ikigai	320
Radom	353
Atomic Habits	380
The Psycology of Money	400
The Alchemist	400

5 rows in set (0.00 sec)

```
mysql> source select.sql;
```

title	unit_price	publ_year
Radom	353	2015
The Psycology of Money	400	2006
The Game of Thrones	1100	2006
Atomic Habits	380	2004
Ikigai	320	2000
Rich Dad and Poor Dad	280	2000
Lord Of The Rings	1500	1999
The Alchemist	400	1995

8 rows in set (0.00 sec)

```
mysql> source select.sql;
```

title	author_no	publisher_no
Ikigai	1	1
Atomic Habits	2	2
The Psycology of Money	3	3
Rich Dad and Poor Dad	4	4
The Game of Thrones	5	4

5 rows in set (0.00 sec)

```
L mysql> source select.sql;  
Query OK, 0 rows affected (0.02 sec)
```

```
L mysql> source select.sql;
```

```
L +-----+  
L | title | author_name |  
L +-----+  
L | Ikigai | Hector Garcia |  
L | Atomic Habits | James Clear |  
L | The Psycology of Money | Morgan Housel |  
L | Rich Dad and Poor Dad | Robert Kiyosaki |  
L | The Game of Thrones | George RR Martin |  
L | Radom | JK Rowling |  
L | Lord Of The Rings | JRR Tolkien |  
L | The Alchemist | Paulo Coelho |  
L +-----+  
L 8 rows in set (0.01 sec)
```