

Create the following tables.

- 1) PUBLISHER(PID , PNAME ,ADDRESS ,STATE ,PHONE ,EMAILID);
- 2) BOOK(ISBN ,BOOK_TITLE , CATEGORY , PRICE , COPYRIGHT_DATE , YEAR ,PAGE_COUNT ,PID);
- 3) AUTHOR(AID,ANAME,STATE,CITY ,ZIP,PHONE,URL)
- 4) AUTHOR_BOOK(AID,ISBN);
- 5) REVIEW(RID,ISBN,RATING);

Solve following queries by SQL

1. Retrieve city, phone, url of author whose name is 'CHETAN BHAGAT'.
2. Retrieve book title, reviewable id and rating of all books.
3. Retrieve book title, price, author name and url for publishers 'MEHTA'.
4. In a PUBLISHER relation change the phone number of 'MEHTA' to 123456
5. Calculate and display the average, maximum, minimum price of each publisher.
6. Delete details of all books having a page count less than 100.
7. Retrieve details of all authors residing in city Pune and whose name begins with character 'C'.
8. Retrieve details of authors residing in same city as 'Korth'.

Step 1: Create Tables

sql

Copy code

-- Create PUBLISHER table

```
CREATE TABLE PUBLISHER (  
    PID INT PRIMARY KEY,  
    PNAME VARCHAR(100),  
    ADDRESS VARCHAR(200),  
    STATE VARCHAR(100),  
    PHONE VARCHAR(15),  
    EMAILID VARCHAR(100)  
);
```

-- Create BOOK table

```
CREATE TABLE BOOK (  
    ISBN VARCHAR(20) PRIMARY KEY,  
    BOOK_TITLE VARCHAR(100),  
    CATEGORY VARCHAR(50),  
    PRICE DECIMAL(10, 2),
```

```
COPYRIGHT_DATE DATE,  
YEAR INT,  
PAGE_COUNT INT,  
PID INT,  
FOREIGN KEY (PID) REFERENCES PUBLISHER(PID)  
);
```

-- Create AUTHOR table

```
CREATE TABLE AUTHOR (  
    AID INT PRIMARY KEY,  
    ANAME VARCHAR(100),  
    STATE VARCHAR(100),  
    CITY VARCHAR(100),  
    ZIP VARCHAR(10),  
    PHONE VARCHAR(15),  
    URL VARCHAR(100)  
);
```

-- Create AUTHOR_BOOK table

```
CREATE TABLE AUTHOR_BOOK (  
    AID INT,  
    ISBN VARCHAR(20),  
    PRIMARY KEY (AID, ISBN),  
    FOREIGN KEY (AID) REFERENCES AUTHOR(AID),  
    FOREIGN KEY (ISBN) REFERENCES BOOK(ISBN)  
);
```

-- Create REVIEW table

```
CREATE TABLE REVIEW (  
    RID INT PRIMARY KEY,  
    ISBN VARCHAR(20),
```

```
RATING INT CHECK (RATING BETWEEN 1 AND 5),  
FOREIGN KEY (ISBN) REFERENCES BOOK(ISBN)  
);
```

Step 2: Insert Sample Data

Here's how to insert sample data into the tables:

sql

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```
-- Insert data into PUBLISHER table
```

```
INSERT INTO PUBLISHER (PID, PNAME, ADDRESS, STATE, PHONE, EMAILID) VALUES  
(1, 'MEHTA', '1234 Elm St', 'Maharashtra', '9876543210', 'mehta@example.com'),  
(2, 'RATNA', '5678 Oak St', 'Maharashtra', '9123456789', 'ratna@example.com');
```

```
-- Insert data into BOOK table
```

```
INSERT INTO BOOK (ISBN, BOOK_TITLE, CATEGORY, PRICE, COPYRIGHT_DATE, YEAR,  
PAGE_COUNT, PID) VALUES  
( '978-3-16-148410-0', 'The 3 Mistakes of My Life', 'Fiction', 299.99, '2008-03-10', 2008, 200, 1),  
( '978-0-14-303996-5', 'Five Point Someone', 'Fiction', 399.99, '2004-10-10', 2004, 250, 1),  
( '978-0-14-341800-5', 'One Night @ the Call Center', 'Fiction', 499.99, '2005-09-01', 2005, 300, 1),  
( '978-1-4842-0385-1', 'The Immortals of Meluha', 'Fantasy', 199.99, '2010-03-10', 2010, 400, 2);
```

```
-- Insert data into AUTHOR table
```

```
INSERT INTO AUTHOR (AID, ANAME, STATE, CITY, ZIP, PHONE, URL) VALUES  
(1, 'CHETAN BHAGAT', 'Maharashtra', 'Mumbai', '400001', '9998887777',  
'http://chetanbhagat.com'),  
(2, 'RAVI KIRAN', 'Maharashtra', 'Pune', '411001', '9998886666', 'http://ravikiran.com');
```

```
-- Insert data into AUTHOR_BOOK table
```

```
INSERT INTO AUTHOR_BOOK (AID, ISBN) VALUES  
(1, '978-3-16-148410-0'),  
(1, '978-0-14-303996-5'),  
(2, '978-1-4842-0385-1');
```

-- Insert data into REVIEW table

INSERT INTO REVIEW (RID, ISBN, RATING) VALUES

(1, '978-3-16-148410-0', 5),

(2, '978-0-14-303996-5', 4),

(3, '978-1-4842-0385-1', 3);

Step 3: Execute Queries

Here are the queries to solve your requirements:

1. **Retrieve city, phone, and URL of the author whose name is 'CHETAN BHAGAT'.**

sql

Copy code

SELECT

CITY,

PHONE,

URL

FROM

AUTHOR

WHERE

ANAME = 'CHETAN BHAGAT';

2. **Retrieve book title, reviewable id, and rating of all books.**

sql

Copy code

SELECT

b.BOOK_TITLE,

r.RID,

r.RATING

FROM

BOOK b

LEFT JOIN

REVIEW r ON b.ISBN = r.ISBN;

3. **Retrieve book title, price, author name, and URL for publishers 'MEHTA'.**

sql

Copy code

```
SELECT
    b.BOOK_TITLE,
    b.PRICE,
    a.ANAME,
    a.URL
FROM
    BOOK b
JOIN
    PUBLISHER p ON b.PID = p.PID
JOIN
    AUTHOR_BOOK ab ON b.ISBN = ab.ISBN
JOIN
    AUTHOR a ON ab.AID = a.AID
WHERE
    p.PNAME = 'MEHTA';
```

4. In the PUBLISHER relation, change the phone number of 'MEHTA' to 123456.

sql

Copy code

```
UPDATE
    PUBLISHER
SET
    PHONE = '123456'
WHERE
    PNAME = 'MEHTA';
```

5. Calculate and display the average, maximum, minimum price of each publisher.

sql

Copy code

```
SELECT
    p.PNAME,
    AVG(b.PRICE) AS AveragePrice,
```

```
MAX(b.PRICE) AS MaximumPrice,  
MIN(b.PRICE) AS MinimumPrice  
FROM  
PUBLISHER p  
JOIN  
BOOK b ON p.PID = b.PID  
GROUP BY  
p.PNAME;
```

6. Delete details of all books having a page count less than 100.

sql

Copy code

```
DELETE FROM  
BOOK  
WHERE  
PAGE_COUNT < 100;
```

7. Retrieve details of all authors residing in the city Pune and whose name begins with the character 'C'.

sql

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```
SELECT  
*  
FROM  
AUTHOR  
WHERE  
CITY = 'Pune'  
AND ANAME LIKE 'C%';
```

8. Retrieve details of authors residing in the same city as 'Korth'.

sql

Copy code

```
SELECT  
*
```

FROM

AUTHOR

WHERE

CITY IN (SELECT CITY FROM AUTHOR WHERE CITY = 'Korth');

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