

2. For the given Library database

BOOK (Book_ISBN [PK], Title[Not Null], Publisher_ Name, price[Check Price>0], Date_Of_Publication,Book_Copy),

BOOK_AUTHORS (Book_ISBN [PK,FK]Author_Name [PK], Author_City)

-- Create the Library Database

CREATE DATABASE Library;

-- Use the Library Database

USE Library;

```
CREATE TABLE BOOK (  
    Book_ISBN VARCHAR(50) PRIMARY KEY,  
    Title VARCHAR(255) NOT NULL,  
    Publisher_Name VARCHAR(255),  
    Price DECIMAL(10, 2) CHECK (Price > 0),  
    Date_Of_Publication DATE,  
    Book_Copy INT  
);
```

```
CREATE TABLE BOOK_AUTHORS (  
    Book_ISBN VARCHAR(50),  
    Author_Name VARCHAR(255),  
    Author_City VARCHAR(255),  
    PRIMARY KEY (Book_ISBN, Author_Name),  
    FOREIGN KEY (Book_ISBN) REFERENCES BOOK(Book_ISBN)  
);
```

-- Insert record 1

```
INSERT INTO BOOK VALUES ('ISBN001', 'Book1', 'Publisher1', 15.99, '2022-01-15', 20);  
INSERT INTO BOOK_AUTHORS VALUES ('ISBN001', 'Author1', 'City1');
```

-- Insert record 2

```
INSERT INTO BOOK VALUES ('ISBN002', 'Book2', 'Publisher2', 25.50, '2021-05-20', 15);  
INSERT INTO BOOK_AUTHORS VALUES ('ISBN002', 'Author2', 'City2');
```

-- Insert record 3

```
INSERT INTO BOOK VALUES ('ISBN003', 'Book3', 'Publisher3', 18.75, '2023-02-10', 30);  
INSERT INTO BOOK_AUTHORS VALUES ('ISBN003', 'Author3', 'City3');
```

-- Insert record 4

```
INSERT INTO BOOK VALUES ('ISBN004', 'Book4', 'Publisher4', 12.25, '2020-12-01', 25);  
INSERT INTO BOOK_AUTHORS VALUES ('ISBN004', 'Author4', 'City4');
```

-- Insert record 5

```
INSERT INTO BOOK VALUES ('ISBN005', 'Book5', 'Publisher5', 22.00, '2022-04-05', 10);  
INSERT INTO BOOK_AUTHORS VALUES ('ISBN005', 'Author5', 'City5');
```

Solve the following :

- a) Select Book_ISBN, Title, Author_Name from relations Book and Book_Authors INNER JOIN on attribute Book_ISBN.**

```
SELECT b.Book_ISBN, b.Title, ba.Author_Name
FROM BOOK b
INNER JOIN BOOK_AUTHORS ba ON b.Book_ISBN = ba.Book_ISBN;
```

- b) Select Book_ISBN, Title, Publisher, Author_Name from relations Book and Book_Authors LEFT OUTER JOIN on attribute Book_ISBN.**

```
SELECT b.Book_ISBN, b.Title, b.Publisher_Name, ba.Author_Name
FROM BOOK b
LEFT JOIN BOOK_AUTHORS ba ON b.Book_ISBN = ba.Book_ISBN;
```

- c) Select Book_ISBN, Title, Publisher, Author_Name from relations Book and Book_Authors RIGHT OUTER JOIN on attribute Book_ISBN.**

```
SELECT b.Book_ISBN, b.Title, b.Publisher_Name, ba.Author_Name
FROM BOOK b
RIGHT JOIN BOOK_AUTHORS ba ON b.Book_ISBN = ba.Book_ISBN;
```

- d) Select Book_ISBN, Title from relation Book whose author is living in City = 'Pune'.**

```
SELECT b.Book_ISBN, b.Title
FROM BOOK b
INNER JOIN BOOK_AUTHORS ba ON b.Book_ISBN = ba.Book_ISBN
WHERE ba.Author_City = 'Pune';
```

- e) Select Book_ISBN, Title from relation Book, which written by more than 2 Authors.**

```
SELECT b.Book_ISBN, b.Title FROM BOOK b

INNER JOIN BOOK_AUTHORS ba ON b.Book_ISBN = ba.Book_ISBN

GROUP BY b.Book_ISBN, b.Title

HAVING COUNT(ba.Author_Name) > 2;
```