

PROGRAM 7. BOOK DEALER DATABASE

The following tables are maintained by a book dealer:

AUTHOR(author-id: int, name: String, city: String, country: String)
PUBLISHER(publisher-id: int, name: String, city: String, country: String)
CATALOG (book-id: int, title: String, author-id: int, publisher-id: int, category-id: int, year: int, price: int)
CATEGORY(category-id: int, description: String)
ORDER-DETAILS(order-no: int, book-id: int, quantity: int)

i. Create the above tables by properly specifying the primary keys and the foreign keys.

```
CREATE DATABASE book_dealer;
```

```
CREATE TABLE author (  
    author_id INT,  
    author_name VARCHAR(20),  
    author_city VARCHAR(20),  
    author_country VARCHAR(20),  
    PRIMARY KEY(author_id));
```

```
CREATE TABLE publisher (  
    publisher_id INT,  
    publisher_name VARCHAR(20),  
    publisher_city VARCHAR(20),  
    publisher_country VARCHAR(20),  
    PRIMARY KEY(publisher_id));
```

```
CREATE TABLE category (  
    category_id INT,  
    description VARCHAR(30),  
    PRIMARY KEY(category_id) );
```

```
CREATE TABLE catalogue(  
    book_id INT,  
    book_title VARCHAR(30),  
    author_id INT,  
    publisher_id INT,  
    category_id INT,  
    year INT,  
    price INT,  
    PRIMARY KEY(book_id),  
    FOREIGN KEY(author_id) REFERENCES author(author_id),  
    FOREIGN KEY(publisher_id) REFERENCES publisher(publisher_id),  
    FOREIGN KEY(category_id) REFERENCES category(category_id) )
```

```
CREATE TABLE orderdetails(
    order_id INT,
    book_id INT,
    quantity INT,
    PRIMARY KEY(order_id),
    FOREIGN KEY(book_id) REFERENCES catalogue(book_id));
```

ii. Enter at least five tuples for each relation.

```
INSERT INTO author (author_id,author_name,author_city,author_country)
VALUES (1001,'JK Rowling','London','England'),
       (1002,'Chetan Bhagat','Mumbai','India'),
       (1003,'John McCarthy','Chicago','USA'),
       (1004,'Dan Brown','California','USA') ;
```

```
INSERT INTO publisher
(publisher_id,publisher_name,publisher_city,publisher_country)
VALUES (2001,'Bloomsbury','London','England'),
       (2002,'Scholastic','Washington','USA'),
       (2003,'Pearson','London','England'),
       (2004,'Rupa','Delhi','India') ;
```

```
INSERT INTO category (category_id,description)
VALUES (3001,'Fiction'),
       (3002,'Non-Fiction'),
       (3003,'thriller'),
       (3004,'action'),
       (3005,'fiction') ;
```

```
INSERT INTO catalogue
(book_id,book_title,author_id,publisher_id,category_id,year,price)
values (4001,'HP and Goblet Of Fire',1001,2001,3001,2002,600),
       (4002,'HP and Order Of Phoenix',1001,2002,3001,2005,650),
       (4003,'Two States',1002,2004,3001,2009,65),
       (4004,'3 Mistakes of my life',1002,2004,3001,2007,55),
       (4005,'Da Vinci Code',1004,2003,3001,2004,450),
       (4006,'Angels and Demons',1004,2003,3001,2003,350),
       (4007,'Artificial Intelligence',1003,2002,3002,1970,500) ;
```

```
INSERT INTO orderdetails (order_id,book_id,quantity)
VALUES (5001,4001,5),
       (5002,4002,7),
       (5003,4003,15),
       (5004,4004,11),
       (5005,4005,9),
       (5006,4006,8),
       (5007,4007,2),
       (5008,4004,3) ;
```

iii) Give the details of the authors who have 2 or more books in the catalog and the price of the books in the catalog and the year of publication is after 2000.

```
SELECT * FROM author
WHERE author_id IN
(SELECT author_id FROM catalogue WHERE
year>2000 AND price>
(SELECT AVG(price) FROM catalogue)
GROUP BY author_id HAVING COUNT(*)>1);
```

Showing rows 0 - 0 (1 total, Query took 0.0108 seconds.)

```
SELECT * FROM author WHERE author_id IN (SELECT author_id FROM catalogue WHERE year>2000 AND price> (SELECT AVG(price) FROM catalogue) GROUP BY author_id HAVING COUNT(*)>1)
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

	author_id	author_name	author_city	author_country
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1001	JK Rowling	London	England

iv) Find the author of the book which has maximum sales.

```
SELECT author_name FROM author a,catalogue c WHERE a.author_id=c.author_id AND book_id IN
(SELECT book_id FROM orderdetails WHERE quantity= (SELECT MAX(quantity) FROM orderdetails));
```

Showing rows 0 - 0 (1 total, Query took 0.0083 seconds.)

```
SELECT author_name FROM author a,catalogue c WHERE a.author_id=c.author_id AND book_id IN (SELECT book_id FROM orderdetails WHERE quantity= (SELECT MAX(quantity) FROM orderdetails))
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

author_name
Chetan Bhagat

v. Demonstrate how you increase the price of books published by a specific publisher by 10%.

```
UPDATE catalogue SET price=1.1*price
WHERE publisher_id IN
(SELECT publisher_id FROM publisher WHERE
publisher_name='pearson');
```

Show query box

2 rows affected. (Query took 0.0084 seconds.)

```
UPDATE catalogue SET price=1.1*price WHERE publisher_id IN (SELECT publisher_id FROM publisher WHERE publisher_name='pearson')
```

[Edit inline] [Edit] [Create PHP code]

