DBMS LAB 2

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.
ii) Enter at least five tuples for each relation.
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.
iv) Find the author of the book which has maximum sales.
v) Demonstrate how you increase the price of books published by a specific publisher by 10%.

```
CREATE DATABASE Book_Dealer_Database;
USE Book_Dealer_Database;
CREATE TABLE Author(
        author_id int,
   A_name varchar(30),
   city varchar(30),
   country varchar(30),
   PRIMARY KEY (author_id)
);
DESC Author;

CREATE TABLE Publisher(
        publisher_id int,
   P_name varchar(30),
   city varchar(30),
   country varchar(30),
   PRIMARY KEY (publisher_id)
);
DESC Publisher;
```

```
CREATE TABLE Category(
        category_id int,
   description varchar(30),
   PRIMARY KEY(category_id)
);
DESC Category;

CREATE TABLE Catalog(
        book_id int,
   title varchar(30),
   author_id varchar(30),
   publisher_id int,
   category_id int,
   year int,
   price int,
   PRIMARY KEY (book_id),
   FOREIGN KEY(publisher_id) references Publisher(publisher_id) ON DELETE
CASCADE,
   FOREIGN KEY(category_id) REFERENCES Category(category_id) ON DELETE
CASCADE
);
DESC Catalog;

CREATE TABLE Order_Details(
        order_no int,
   book_id int,
   quantity int,
   PRIMARY KEY (Order_no),
   FOREIGN KEY(book_id) REFERENCES Catalog(book_id) ON DELETE CASCADE
);
DESC Order_Details;

INSERT INTO Author VALUES('11','Author1','A_city1','A_country1');
commit;
SELECT * FROM Author;
INSERT INTO Author VALUES('12','Author2','A_city2','A_country2');
INSERT INTO Author VALUES('13','Author3','A_city3','A_country3');
INSERT INTO Author VALUES('14','Author4','A_city4','A_country4');
INSERT INTO Author VALUES('15','Author5','A_city5','A_country5');
```

```
commit;

INSERT INTO Publisher VALUES('21','Publisher1','P_city1','P_country1');
commit;
INSERT INTO Publisher VALUES('22','Publisher2','P_city2','P_country2');
INSERT INTO Publisher VALUES('23','Publisher3','P_city3','P_country3');
INSERT INTO Publisher VALUES('24','Publisher4','P_city4','P_country4');
INSERT INTO Publisher VALUES('25','Publisher5','P_city5','P_country5');
commit;

INSERT INTO Category VALUES('31','Category1');
commit;
INSERT INTO Category VALUES('32','Category2');
INSERT INTO Category VALUES('33','Category3');
INSERT INTO Category VALUES('34','Category4');
INSERT INTO Category VALUES('35','Category5');
commit;

INSERT INTO Catalog VALUES('41','Book1','12','24','31','2001','248');
commit;
INSERT INTO Catalog VALUES('42','Book2','15','21','33','2020','3480');
INSERT INTO Catalog VALUES('43','Book3','11','23','31','1962','3569');
INSERT INTO Catalog VALUES('44','Book4','13','25','33','2012','4720');
INSERT INTO Catalog VALUES('45','Book5','14','24','35','2019','369');
commit;

INSERT INTO Order_Details VALUES('51','44','33');
commit;
INSERT INTO Order_Details VALUES('52','44','1');
INSERT INTO Order_Details VALUES('53','43','38');
INSERT INTO Order_Details VALUES('54','41','27');
INSERT INTO Order_Details VALUES('55','43','68');
commit;

-- ********** Query 1: ***********
-- 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 INNER JOIN Catalog ON Author.author_id =
Catalog.author_id where (year >2000 AND price > 2000);
```

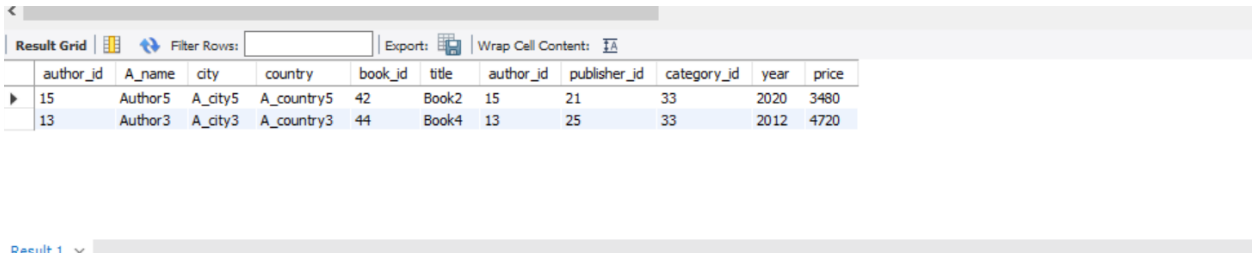
-- ********** Query 2: **********
-- Find the author of the book which has maximum sales.

SELECT * FROM Author INNER JOIN Catalog ON Author.author_id = Catalog.author_id AND book_id in(SELECT book_id FROM Order_Details WHERE quantity = (SELECT MAX(quantity) from Order_Details));

-- ********** Query 3: **********
-- Demonstrate how you increase the price of books published by a specific publisher by 10%.

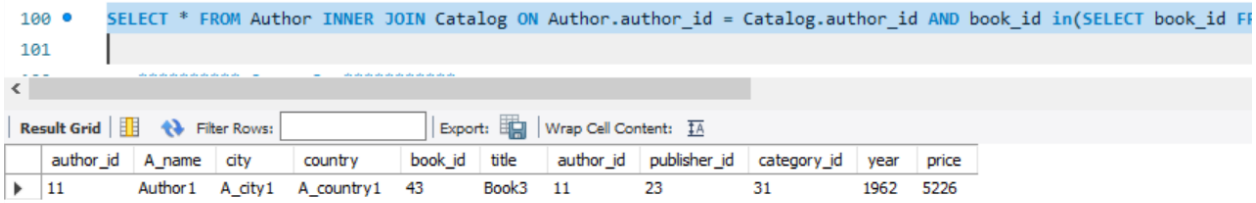
UPDATE Catalog SET price =(1+0.1)*price WHERE publisher_id in (SELECT publisher_id FROM Publisher WHERE P_name ="Publisher3");
SELECT * FROM Catalog;

Query 1---



author_id	A_name	city	country	book_id	title	author_id	publisher_id	category_id	year	price
15	Author5	A_city5	A_country5	42	Book2	15	21	33	2020	3480
13	Author3	A_city3	A_country3	44	Book4	13	25	33	2012	4720

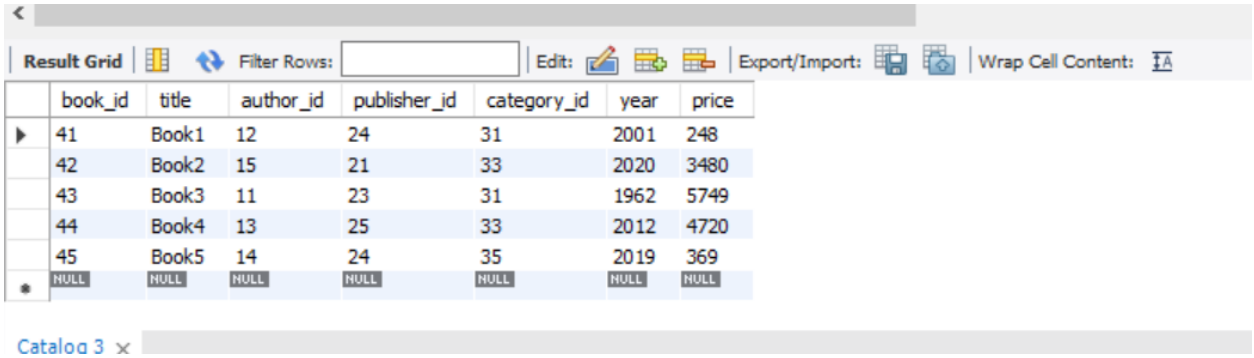
Query 2---



```
100 • SELECT * FROM Author INNER JOIN Catalog ON Author.author_id = Catalog.author_id AND book_id in(SELECT book_id FR
101
```

author_id	A_name	city	country	book_id	title	author_id	publisher_id	category_id	year	price
11	Author1	A_city1	A_country1	43	Book3	11	23	31	1962	5226

Query 3---



book_id	title	author_id	publisher_id	category_id	year	price
41	Book1	12	24	31	2001	248
42	Book2	15	21	33	2020	3480
43	Book3	11	23	31	1962	5749
44	Book4	13	25	33	2012	4720
45	Book5	14	24	35	2019	369
NULL	NULL	NULL	NULL	NULL	NULL	NULL