

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.

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0010 seconds.)

```
use bookDealer
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.3290 seconds.)

```
CREATE TABLE author ( Author_id INT PRIMARY KEY, Name VARCHAR(20), City VARCHAR(20), Country VARCHAR(20) )
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2630 seconds.)

```
CREATE TABLE publisher( Publisher_id INT PRIMARY KEY, Name VARCHAR(20), City VARCHAR(20), Country VARCHAR(20) )
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.7960 seconds.)

```
CREATE TABLE category ( Category_id INT PRIMARY KEY, Description VARCHAR(30) )
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2740 seconds.)

```
Create TABLE catalogue( Book_id INT PRIMARY KEY, Book_title VARCHAR(30), Author_id INT, Publisher_id INT, Category_id INT, CYear INT, Price INT, FOREIGN KEY(author_id) REFERENCES author(author_id) on UPDATE cascade on DELETE cascade, FOREIGN KEY(publisher_id) REFERENCES publisher(publisher_id) on UPDATE cascade on DELETE cascade, FOREIGN KEY(category_id) REFERENCES category(category_id)on UPDATE cascade on DELETE CASCADE )
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.3600 seconds.)

```
CREATE TABLE orderdetails( Order_no INT PRIMARY KEY, Book_id INT, Quantity INT, FOREIGN KEY(book_id) REFERENCES catalogue(book_id) on UPDATE cascade on DELETE CASCADE )
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

| Table ▲ | Action | Rows | Type | Collation | Size | Overhead |
|---------------------------------------|---|------|--------|--------------------|-----------|----------|
| <input type="checkbox"/> author | ★ Browse Structure Search Insert Empty Drop | 0 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input type="checkbox"/> catalogue | ★ Browse Structure Search Insert Empty Drop | 0 | InnoDB | utf8mb4_general_ci | 64.0 KiB | - |
| <input type="checkbox"/> category | ★ Browse Structure Search Insert Empty Drop | 0 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| <input type="checkbox"/> orderdetails | ★ Browse Structure Search Insert Empty Drop | 0 | InnoDB | utf8mb4_general_ci | 32.0 KiB | - |
| <input type="checkbox"/> publisher | ★ Browse Structure Search Insert Empty Drop | 0 | InnoDB | utf8mb4_general_ci | 16.0 KiB | - |
| 5 tables | Sum | 0 | InnoDB | utf8mb4_general_ci | 144.0 KiB | 0 B |

ii. Enter at least five tuples for each relation.

✓ 1 row inserted. (Query took 0.0430 seconds.)

```
INSERT INTO author VALUES (1,'John McCarthy','Chicago','USA')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.1210 seconds.)

```
INSERT INTO author VALUES (2,'Dan','California','USA')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0420 seconds.)

```
INSERT INTO author VALUES (3,'Chetan Bhagat','Mumbai','India')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0470 seconds.)

```
INSERT INTO author VALUES (4,'John Green','Berlin','Germany')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0260 seconds.)

```
INSERT INTO author VALUES (5,'JK Rowling','London','England')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ Showing rows 0 - 4 (5 total, Query took 0.0030 seconds.)

`SELECT * FROM `author``

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

☐ Show all | Number of rows: 25 ▼ Filter rows: Sort by key: None ▼

+ Options



| | | | | Author_id | Name | City | Country |
|--------------------------|------|------|--------|-----------|---------------|------------|---------|
| <input type="checkbox"/> | Edit | Copy | Delete | 1 | John McCarthy | Chicago | USA |
| <input type="checkbox"/> | Edit | Copy | Delete | 2 | Dan | California | USA |
| <input type="checkbox"/> | Edit | Copy | Delete | 3 | Chetan Bhagat | Mumbai | India |
| <input type="checkbox"/> | Edit | Copy | Delete | 4 | John Green | Berlin | Germany |
| <input type="checkbox"/> | Edit | Copy | Delete | 5 | JK Rowling | London | England |

☐ Check all With selected: Edit Copy Delete Export

✓ 1 row inserted. (Query took 0.0550 seconds.)

```
INSERT INTO publisher VALUES (1,'Rupa','Delhi','India')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0830 seconds.)

```
INSERT INTO publisher VALUES (2,'Bloomsbury','London','England')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0440 seconds.)

```
INSERT INTO publisher VALUES (3,'Pearson','London','England')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0320 seconds.)

```
INSERT INTO publisher VALUES (4,'Scholastic','Washington','USA')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0300 seconds.)

```
INSERT INTO publisher VALUES (5,'stefan','Berlin','Germany')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]
















✓ Showing rows 0 - 4 (5 total, Query took 0.0030 seconds.)

```
SELECT * FROM `publisher`
```

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

☐ Show all | Number of rows: Filter rows: Sort by key:

+ Options

| | | | | Publisher_id | Name | City | Country |
|--------------------------|--|--|--|--------------|------------|------------|---------|
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 1 | Rupa | Delhi | India |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 2 | Bloomsbury | London | England |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 3 | Pearson | London | England |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 4 | Scholastic | Washington | USA |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 5 | stefan | Berlin | Germany |

 ☐ Check all With selected:  Edit  Copy  Delete  Export

✓ 1 row inserted. (Query took 0.0490 seconds.)

```
INSERT INTO `catalogue` VALUES (1,'Harry Potter 1',5,1,1,2002,600)
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ 1 row inserted. (Query took 0.0980 seconds.)

```
INSERT INTO `catalogue` VALUES (2,'Harry Potter 2',5,2,1,2005,650)
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ 1 row inserted. (Query took 0.0390 seconds.)

```
INSERT INTO `catalogue` VALUES (3,'Two States',3,4,1,2009,65)
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ 1 row inserted. (Query took 0.0290 seconds.)

```
INSERT INTO `catalogue` VALUES (4,'3 Mistakes of my life',3,4,1,2007,55)
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ 1 row inserted. (Query took 0.0340 seconds.)

```
INSERT INTO `catalogue` VALUES (5,'Da Vinci Code',2,3,1,2004,450)
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ 1 row inserted. (Query took 0.0340 seconds.)

```
INSERT INTO `catalogue` VALUES (6,'Angels and Demons',2,3,1,2003,350)
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ 1 row inserted. (Query took 0.0290 seconds.)

```
INSERT INTO `catalogue` VALUES (7,'Artificial Intelligence',1,2,2,1970,500)
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 6 (7 total, Query took 0.0020 seconds.)

`select * from catalogue`

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

☐ Show all | Number of rows: Filter rows: Sort by key:

+ Options

| | | | | Book_id | Book_title | Author_id | Publisher_id | Category_id | CYear | Price |
|--------------------------|--|--|--|---------|-------------------------|-----------|--------------|-------------|-------|-------|
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 1 | Harry Potter 1 | 5 | 1 | 1 | 2002 | 600 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 2 | Harry Potter 2 | 5 | 2 | 1 | 2005 | 650 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 3 | Two States | 3 | 4 | 1 | 2009 | 65 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 4 | 3 Mistakes of my life | 3 | 4 | 1 | 2007 | 55 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 5 | Da Vinci Code | 2 | 3 | 1 | 2004 | 450 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 6 | Angels and Demons | 2 | 3 | 1 | 2003 | 350 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 7 | Artificial Intelligence | 1 | 2 | 2 | 1970 | 500 |

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✓ 1 row inserted. (Query took 0.0510 seconds.)

```
Insert INTO category VALUES (1,'Fiction')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.1900 seconds.)

```
Insert INTO category VALUES (2,'Non-Fiction')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0520 seconds.)

```
Insert INTO category VALUES (3,'thriller')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0310 seconds.)

```
Insert INTO category VALUES (4,'action')
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ Showing rows 0 - 3 (4 total, Query took 0.0030 seconds.)

`SELECT * FROM `category``

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









☐ Show all

Number of rows: 25 ▼

Filter rows:

Sort by key: None ▼

+ Options

| | | | | Category_id | Description |
|--------------------------|--|--|---|-------------|-------------|
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 1 | Fiction |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 2 | Non-Fiction |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 3 | thriller |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 4 | action |



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 Delete

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✓ 1 row inserted. (Query took 0.0420 seconds.)

```
INSERT INTO orderdetails VALUES (101,1,5)
```

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✓ 1 row inserted. (Query took 0.0720 seconds.)

```
INSERT INTO orderdetails VALUES (102,2,7)
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0380 seconds.)

```
INSERT INTO orderdetails VALUES (103,3,15)
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0370 seconds.)

```
INSERT INTO orderdetails VALUES (104,4,11)
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0350 seconds.)

```
INSERT INTO orderdetails VALUES (105,5,9)
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0360 seconds.)

```
INSERT INTO orderdetails VALUES (106,6,8)
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.0350 seconds.)

```
INSERT INTO orderdetails VALUES (107,7,2)
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ 1 row inserted. (Query took 0.2310 seconds.)

```
INSERT INTO orderdetails VALUES (108,4,3)
```

✓ Showing rows 0 - 7 (8 total, Query took 0.0020 seconds.)

`SELECT * FROM `orderdetails``

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all

Number of rows: 25 ▼

Filter rows:

Sort by key:

None ▼

+ Options

| | | | | ▼ Order_no | Book_id | Quantity |
|--------------------------|--|--|--|------------|---------|----------|
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 101 | 1 | 5 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 102 | 2 | 7 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 103 | 3 | 15 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 104 | 4 | 11 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 105 | 5 | 9 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 106 | 6 | 8 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 107 | 7 | 2 |
| <input type="checkbox"/> |  Edit |  Copy |  Delete | 108 | 4 | 3 |



☐ Check all

With selected:

 Edit

 Copy

 Delete

 Export

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.

Showing rows 0 - 2 (3 total, Query took 0.0050 seconds.)

```
SELECT * FROM author WHERE author_id IN (SELECT author_id FROM catalogue WHERE CYear>2000 GROUP BY author_id HAVING COUNT(*)>=2)
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: Filter rows: Sort by key:

+ Options

| | | | | Author_id | Name | City | Country |
|--------------------------|------|------|--------|-----------|---------------|------------|---------|
| <input type="checkbox"/> | Edit | Copy | Delete | 2 | Dan | California | USA |
| <input type="checkbox"/> | Edit | Copy | Delete | 3 | Chetan Bhagat | Mumbai | India |
| <input type="checkbox"/> | Edit | Copy | Delete | 5 | JK Rowling | London | England |

☐ Check all | With selected: Edit Copy Delete Export

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

✓ Showing rows 0 - 0 (1 total, Query took 0.0060 seconds.)

```
SELECT 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:

+ Options

name

Chetan Bhagat

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

✓ 2 rows affected. (Query took 0.1050 seconds.)

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

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

✓ Showing rows 0 - 6 (7 total, Query took 0.0020 seconds.)

```
SELECT * FROM `catalogue`
```

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

☐ Show all

Number of rows: 25 ▾

Filter rows:

Search this table

Sort by key:

None ▾

+ Options

| | | | | Book_id | Book_title | Author_id | Publisher_id | Category_id | CYear | Price |
|--------------------------|------|------|--------|---------|-------------------------|-----------|--------------|-------------|-------|-------|
| <input type="checkbox"/> | Edit | Copy | Delete | 1 | Harry Potter 1 | 5 | 1 | 1 | 2002 | 600 |
| <input type="checkbox"/> | Edit | Copy | Delete | 2 | Harry Potter 2 | 5 | 2 | 1 | 2005 | 650 |
| <input type="checkbox"/> | Edit | Copy | Delete | 3 | Two States | 3 | 4 | 1 | 2009 | 72 |
| <input type="checkbox"/> | Edit | Copy | Delete | 4 | 3 Mistakes of my life | 3 | 4 | 1 | 2007 | 61 |
| <input type="checkbox"/> | Edit | Copy | Delete | 5 | Da Vinci Code | 2 | 3 | 1 | 2004 | 450 |
| <input type="checkbox"/> | Edit | Copy | Delete | 6 | Angels and Demons | 2 | 3 | 1 | 2003 | 350 |
| <input type="checkbox"/> | Edit | Copy | Delete | 7 | Artificial Intelligence | 1 | 2 | 2 | 1970 | 500 |



☐ Check all

With selected:

