

PROGRAM 6: ORDER PROCESSING DATABASE

Consider the following relations for an Order Processing database application in a company.

CUSTOMER (CUST #: int, cname: String, city: String)

ORDER (order #: int, odate: date, cust #: int, ord-Amt: int)

ITEM (item #: int, unit-price: int)

ORDER-ITEM (order #: int, item #: int, qty: int)

WAREHOUSE (warehouse #: int, city: String)

SHIPMENT (order #: int, warehouse #: int, ship-date: date)

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

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2888 seconds.)

```
create table customer( custNo int PRIMARY KEY, cname varchar(10), city varchar(20) )
```

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

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.1980 seconds.)

```
create table orderTable( orderNo int primary key, odate date, custNo int, ordAmt int, FOREIGN KEY(custNo) REFERENCES customer(custNo) on update cascade on delete set NULL )
```

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

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2680 seconds.)

```
create table item( itemNo int PRIMARY KEY, unitPrice int )
```

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

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.4220 seconds.)

```
create table orderItem( orderNo int, itemNo int, qty int, FOREIGN KEY(orderNo) REFERENCES orderTable(orderNo) on update cascade on delete set NULL, FOREIGN KEY(itemNo) REFERENCES item(itemNo) on update cascade on delete set NULL )
```

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

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2006 seconds.)

```
create table warehouse( warehouseNo int PRIMARY KEY, city varchar(20) )
```

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

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2612 seconds.)

```
create table shipment( orderNo int, warehouseNo int, shipdate date, FOREIGN KEY(orderNo) REFERENCES orderTable(orderNo) on update cascade on delete set NULL, FOREIGN KEY(warehouseNo) REFERENCES warehouse(warehouseNo) on update cascade on delete set NULL )
```

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

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> customer	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> item	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> orderitem	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
<input type="checkbox"/> ordertable	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
<input type="checkbox"/> shipment	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
<input type="checkbox"/> warehouse	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
6 tables	Sum	0	InnoDB	utf8mb4_general_ci	176.0 KiB	0 B

ii. Enter at least five tuples for each relation.

✓ 1 row inserted. (Query took 0.0472 seconds.)

```
INSERT INTO `customer` VALUES (1,'Jake','Bangalore')
```

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

✓ 1 row inserted. (Query took 0.1130 seconds.)

```
INSERT INTO `customer` VALUES (2,'Terry','Mumbai')
```

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

✓ 1 row inserted. (Query took 0.0700 seconds.)

```
INSERT INTO `customer` VALUES (3,'Charles','Jaipur')
```

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

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

```
INSERT INTO `customer` VALUES (4,'Rosa','Guwahati')
```

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

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


```
INSERT INTO `customer` VALUES (5,'Amy','Bangalore')
```

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

✓ 1 row inserted. (Query took 0.0330 seconds.)

```
INSERT INTO `customer` VALUES (6,'Holt','Mumbai')
```

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

←T→				▼	custNo	cname	city
<input type="checkbox"/>	 Edit	 Copy	 Delete		1	Jake	Bangalore
<input type="checkbox"/>	 Edit	 Copy	 Delete		2	Terry	Mumbai
<input type="checkbox"/>	 Edit	 Copy	 Delete		3	Charles	Jaipur
<input type="checkbox"/>	 Edit	 Copy	 Delete		4	Rosa	Guwahati
<input type="checkbox"/>	 Edit	 Copy	 Delete		5	Amy	Bangalore
<input type="checkbox"/>	 Edit	 Copy	 Delete		6	Holt	Mumbai

✓ 1 row inserted. (Query took 0.0678 seconds.)

```
INSERT INTO `ordertable` VALUES (1,'2021-06-01',1,1000)
```

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

✓ 1 row inserted. (Query took 0.1014 seconds.)

```
INSERT INTO `ordertable` VALUES (2,'2021-06-02',1,1500)
```

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

✓ 1 row inserted. (Query took 0.0562 seconds.)

```
INSERT INTO `ordertable` VALUES (3,'2021-06-03',3,1600)
```

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

✓ 1 row inserted. (Query took 0.0412 seconds.)

```
INSERT INTO `ordertable` VALUES (4,'2021-06-04',2,1700)
```

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

✓ 1 row inserted. (Query took 0.0532 seconds.)

```
INSERT INTO `ordertable` VALUES (5,'2021-06-05',4,1200)
```

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

✓ 1 row inserted. (Query took 0.0618 seconds.)

```
INSERT INTO `ordertable` VALUES (6,'2021-06-06',5,1100)
```

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

✓ 1 row inserted. (Query took 0.0400 seconds.)







```
INSERT INTO `ordertable` VALUES (7,'2021-06-07',2,1890)
```

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

✓ 1 row inserted. (Query took 0.2150 seconds.)

```
INSERT INTO `ordertable` VALUES (8,'2021-06-08',4,1999)
```

■ Console [Edit] [Create PHP code]

←T→				orderNo	odate	custNo	ordAmt
<input type="checkbox"/>	 Edit	 Copy	 Delete	1	2021-06-01	1	1000
<input type="checkbox"/>	 Edit	 Copy	 Delete	2	2021-06-02	1	1500
<input type="checkbox"/>	 Edit	 Copy	 Delete	3	2021-06-03	3	1600
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	2021-06-04	2	1700
<input type="checkbox"/>	 Edit	 Copy	 Delete	5	2021-06-05	4	1200
<input type="checkbox"/>	 Edit	 Copy	 Delete	6	2021-06-06	5	1100
<input type="checkbox"/>	 Edit	 Copy	 Delete	7	2021-06-07	2	1890
<input type="checkbox"/>	 Edit	 Copy	 Delete	8	2021-06-08	4	1999

```
INSERT INTO `item` VALUES (1,1000)
```

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

✓ 1 row inserted. (Query took 0.1390 seconds.)

```
INSERT INTO `item` VALUES (2,100)
```

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

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

```
INSERT INTO `item` VALUES (3,900)
```

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

✓ 1 row inserted. (Query took 0.0312 seconds.)

```
INSERT INTO `item` VALUES (4,700)
```

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

✓ 1 row inserted. (Query took 0.0426 seconds.)

```
INSERT INTO `item` VALUES (5,800)
```

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

✓ 1 row inserted. (Query took 0.0540 seconds.)

```
INSERT INTO `item` VALUES (6,750)
```

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

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

```
INSERT INTO `item` VALUES (7,850)
```

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

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

```
INSERT INTO `item` VALUES (8,950)
```

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

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
































```
INSERT INTO `item` VALUES (9,990)
```

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

✓ 1 row inserted. (Query took 0.0400 seconds.)

```
INSERT INTO `item` VALUES (10,999)
```

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

				▼ itemNo		unitPrice
<input type="checkbox"/>	 Edit	 Copy	 Delete	1		1000
<input type="checkbox"/>	 Edit	 Copy	 Delete	2		100
<input type="checkbox"/>	 Edit	 Copy	 Delete	3		900
<input type="checkbox"/>	 Edit	 Copy	 Delete	4		700
<input type="checkbox"/>	 Edit	 Copy	 Delete	5		800
<input type="checkbox"/>	 Edit	 Copy	 Delete	6		750
<input type="checkbox"/>	 Edit	 Copy	 Delete	7		850
<input type="checkbox"/>	 Edit	 Copy	 Delete	8		950
<input type="checkbox"/>	 Edit	 Copy	 Delete	9		990
<input type="checkbox"/>	 Edit	 Copy	 Delete	10		999

```
INSERT INTO `orderitem` VALUES (1,9,1)
```

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

✓ 1 row inserted. (Query took 0.0864 seconds.)

```
INSERT INTO `orderitem` VALUES (2,8,1)
```

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

✓ 1 row inserted. (Query took 0.0366 seconds.)

```
INSERT INTO `orderitem` VALUES (3,7,1)
```

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

✓ 1 row inserted. (Query took 0.0156 seconds.)

```
INSERT INTO `orderitem` VALUES (4,6,1)
```

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

✓ 1 row inserted. (Query took 0.0844 seconds.)

```
INSERT INTO `orderitem` VALUES (5,5,1)
```

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

✓ 1 row inserted. (Query took 0.0156 seconds.)

```
INSERT INTO `orderitem` VALUES (6,4,1)
```

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

✓ 1 row inserted. (Query took 0.0446 seconds.)

```
INSERT INTO `orderitem` VALUES (7,3,1)
```

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

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

```
INSERT INTO `orderitem` VALUES (8,10,1)
```

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

orderNo	itemNo	qty
1	9	1
2	8	1
3	7	1
4	6	1
5	5	1
6	4	1
7	3	1
8	10	1
8	1	1
7	2	8

✓ 1 row inserted. (Query took 0.0230 seconds.)

```
INSERT INTO `warehouse` VALUES (1,'Bengaluru')
```

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

✓ 1 row inserted. (Query took 0.1322 seconds.)

```
INSERT INTO `warehouse` VALUES (2,'Mumbai')
```

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

✓ 1 row inserted. (Query took 0.0366 seconds.)

```
INSERT INTO `warehouse` VALUES (3,'Delhi')
```

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

✓ 1 row inserted. (Query took 0.0488 seconds.)

```
INSERT INTO `warehouse` VALUES (4,'Chennai')
```

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

✓ 1 row inserted. (Query took 0.0156 seconds.)

```
INSERT INTO `warehouse` VALUES (5,'Delhi')
```

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

✓ 1 row inserted. (Query took 0.0376 seconds.)

```
INSERT INTO `warehouse` VALUES (6,'Bengaluru')
```

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

← T →				warehouseNo	city
<input type="checkbox"/>	 Edit	 Copy	 Delete	1	Bengaluru
<input type="checkbox"/>	 Edit	 Copy	 Delete	2	Mumbai
<input type="checkbox"/>	 Edit	 Copy	 Delete	3	Delhi
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	Chennai
<input type="checkbox"/>	 Edit	 Copy	 Delete	5	Delhi
<input type="checkbox"/>	 Edit	 Copy	 Delete	6	Bengaluru

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

```
INSERT INTO `shipment` VALUES (1,5,'2021-06-08')
```

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

✓ 1 row inserted. (Query took 0.1022 seconds.)

```
INSERT INTO `shipment` VALUES (2,2,'2021-06-08')
```

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

✓ 1 row inserted. (Query took 0.0400 seconds.)

```
INSERT INTO `shipment` VALUES (3,6,'2021-06-08')
```

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

✓ 1 row inserted. (Query took 0.0250 seconds.)

```
INSERT INTO `shipment` VALUES (4,1,'2021-06-08')
```

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

✓ 1 row inserted. (Query took 0.0540 seconds.)

```
INSERT INTO `shipment` VALUES (5,6,'2021-06-08')
```

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

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

```
INSERT INTO `shipment` VALUES (6,5,'2021-06-08')
```

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

✓ 1 row inserted. (Query took 0.0410 seconds.)

```
INSERT INTO `shipment` VALUES (7,4,'2021-06-08')
```

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

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

```
INSERT INTO `shipment` VALUES (8,3,'2021-06-08')
```

■ [Console](#)

+ Options

orderNo	warehouseNo	shipdate
1	5	2020-06-08
2	2	2020-06-08
3	6	2020-06-08
4	1	2020-06-08
5	6	2020-06-08
6	5	2020-06-08
7	4	2020-06-08
8	3	2020-06-08

iii. Produce a listing: CUSTNAME, #oforders, AVG_ORDER_AMT, where the middle column is the total numbers of orders by the customer and the last column is the average order amount for that customer.

✓ Showing rows 0 - 4 (5 total, Query took 0.0156 seconds.) [cname: AMY... - TERRY...]

```
select c.cname, count(o.orderNo) as Number_of_order, avg(o.ordamt) from customer c, orderTable o where c.custNo=o.custNo group by c.cname order by c.cname asc
```

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

☐ Show all | Number of rows: 25 ▼ Filter rows:

+ Options

				cname ▲ 1	Number_of_order	avg(o.ordamt)
<input type="checkbox"/>	Edit	Copy	Delete	Amy	1	1100.0000
<input type="checkbox"/>	Edit	Copy	Delete	Charles	1	1600.0000
<input type="checkbox"/>	Edit	Copy	Delete	Jake	2	1250.0000
<input type="checkbox"/>	Edit	Copy	Delete	Rosa	2	1599.5000
<input type="checkbox"/>	Edit	Copy	Delete	Terry	2	1795.0000

iv. List the order# for orders that were shipped from all warehouses that the company has in a specific city.

✓ Showing rows 0 - 2 (3 total, Query took 0.0090 seconds.)

```
select DISTINCT orderNo from shipment where warehouseNo in( SELECT warehouseNo from warehouse where city='Bengaluru')
```

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

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

+ Options

orderNo

3

4

5

v. Demonstrate how you delete item# 10 from the ITEM table and make that field null in the ORDER_ITEM table.

✓ 1 row affected. (Query took 0.1134 seconds.)

```
# On delete set null used at the end of foreign key definiton while creating order item table hence the item number deleted will  
automatically be set to null in order item delete from item where itemNo=10
```

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

✓ Showing rows 0 - 9 (10 total, Query took 0.0020 seconds.)

`SELECT * FROM `orderitem``

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

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

+ Options

orderNo	itemNo	qty
1	9	1
2	8	1
3	7	1
4	6	1
5	5	1
6	4	1
7	3	1
8	NULL	1
8	1	1
7	2	8

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

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)

- Create the above tables by properly specifying the primary keys and the foreign keys.
- Enter at least five tuples for each relation.
- 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.
- Find the author of the book which has maximum sales.
- Demonstrate how you increase the price of books published by a specific publisher by 10%.















Showing rows 0 - 4 (5 total, Query took 0.0011 seconds.)






`SELECT * FROM `author``

☐ 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

				Author_id	Name	City	Country
<input type="checkbox"/>	 Edit	 Copy	 Delete	1001	jk rowling	london	england
<input type="checkbox"/>	 Edit	 Copy	 Delete	1002	chetan bhagat	mumbai	india
<input type="checkbox"/>	 Edit	 Copy	 Delete	1003	john mcCarthy	chicago	usa
<input type="checkbox"/>	 Edit	 Copy	 Delete	1004	dan brown	california	usa
<input type="checkbox"/>	 Edit	 Copy	 Delete	1005	john green	berlin	germany

 ☐ Check all | With selected:  Edit  Copy  Delete  Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

✔ Showing rows 0 - 6 (7 total, Query took 0.0011 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	Year	Price
<input type="checkbox"/>	Edit	Copy	Delete	4001	HP and Goblet Of Fire	1001	2001	3001	2002	600
<input type="checkbox"/>	Edit	Copy	Delete	4002	HP and Order Of Phoenix	1001	2002	3001	2005	650
<input type="checkbox"/>	Edit	Copy	Delete	4003	Two States	1002	2004	3001	2009	65
<input type="checkbox"/>	Edit	Copy	Delete	4004	3 Mistakes of my life	1002	2004	3001	2007	55
<input type="checkbox"/>	Edit	Copy	Delete	4005	Da Vinci Code	1004	2003	3001	2004	450
<input type="checkbox"/>	Edit	Copy	Delete	4006	Angels and Demons	1004	2003	3001	2003	350
<input type="checkbox"/>	Edit	Copy	Delete	4007	Artificial Intelligence	1003	2002	3002	1970	500

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

✔ Showing rows 0 - 4 (5 total, Query took 0.0013 seconds.)

SELECT * FROM `category`

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

				Category_id	Description
<input type="checkbox"/>	Edit	Copy	Delete	3001	Fiction
<input type="checkbox"/>	Edit	Copy	Delete	3002	Non-Fiction
<input type="checkbox"/>	Edit	Copy	Delete	3003	thriller
<input type="checkbox"/>	Edit	Copy	Delete	3004	action
<input type="checkbox"/>	Edit	Copy	Delete	3005	fiction

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

✔ Showing rows 0 - 7 (8 total, Query took 0.0007 seconds.)

SELECT * FROM `orderdetails`

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

				Order_no	Book_id	Quantity
<input type="checkbox"/>	Edit	Copy	Delete	5001	4001	5
<input type="checkbox"/>	Edit	Copy	Delete	5002	4002	7
<input type="checkbox"/>	Edit	Copy	Delete	5003	4003	15
<input type="checkbox"/>	Edit	Copy	Delete	5004	4004	11
<input type="checkbox"/>	Edit	Copy	Delete	5005	4005	9
<input type="checkbox"/>	Edit	Copy	Delete	5006	4006	8
<input type="checkbox"/>	Edit	Copy	Delete	5007	4007	2
<input type="checkbox"/>	Edit	Copy	Delete	5008	4004	3

☐ Check all | With selected: Edit Copy Delete Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

✓ Showing rows 0 - 4 (5 total, Query took 0.0014 seconds.)

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

☐ 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

				Publisher_id	Name	City	Country
<input type="checkbox"/>				2001	Bloomsbury	London	England
<input type="checkbox"/>				2002	Scholastic	Washington	USA
<input type="checkbox"/>				2003	Pearson	London	England
<input type="checkbox"/>				2004	Rupa	Delhi	India
<input type="checkbox"/>				2005	stefan	Berlin	Germany

↑ ☐ Check all | With selected: Edit Copy Delete Export

3)

Show query box

✓ Showing rows 0 - 0 (1 total, Query took 0.1301 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	Name	City	Country
<input type="checkbox"/>				1001	jk rowling	london	england

↑ ☐ Check all | With selected: Edit Copy Delete Export

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

4)

Show query box

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

✓ Showing rows 0 - 0 (1 total, Query took 0.0153 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: Search this table

+ Options

name
chetan bhagat

5)

Show query box

✓ 2 rows affected. (Query took 0.0536 seconds.)

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

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

PROGRAM 8. STUDENT ENROLLMENT DATABASE

Consider the following database of student enrollment in courses and books adopted for each course.

STUDENT (regno: String, name: String, major: String, bdate: date)

COURSE (course #: int, cname: String, dept: String)

ENROLL (regno: String, cname: String, sem: int, marks: int)

BOOK_ADOPTION (course #: int, sem: int, book-ISBN: int)

TEXT(book-ISBN:int, book-title:String, publisher:String, author:String)

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. Demonstrate how you add a new text book to the database and make this book be adopted by some department.

iv. Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for courses offered by the 'CS' department that use more than two books.

v. List any department that has all its adopted books published by a specific publisher.

BOOK ADOPTION

Showing rows 0 - 7 (8 total, Query took 0.0011 seconds.)

SELECT * FROM `book_adoption`

☐ 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

				courseno	sem	book_isbn
<input type="checkbox"/>	Edit	Copy	Delete	111	5	900
<input type="checkbox"/>	Edit	Copy	Delete	111	5	903
<input type="checkbox"/>	Edit	Copy	Delete	111	5	904
<input type="checkbox"/>	Edit	Copy	Delete	112	3	901
<input type="checkbox"/>	Edit	Copy	Delete	113	3	10
<input type="checkbox"/>	Edit	Copy	Delete	113	5	902
<input type="checkbox"/>	Edit	Copy	Delete	114	5	905
<input type="checkbox"/>	Edit	Copy	Delete	115	3	906

☐ Check all | With selected: Edit Copy Delete Export

COUSRE

Showing rows 0 - 4 (5 total, Query took 0.0014 seconds.)

SELECT * FROM `course`

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

				courseno	cname	dept
<input type="checkbox"/>	Edit	Copy	Delete	111	os	cse
<input type="checkbox"/>	Edit	Copy	Delete	112	ec	cse
<input type="checkbox"/>	Edit	Copy	Delete	113	ss	ise
<input type="checkbox"/>	Edit	Copy	Delete	114	dbms	cse
<input type="checkbox"/>	Edit	Copy	Delete	115	signals	ece

Check all | With selected: Edit Copy Delete Export

ENROLL

Showing rows 0 - 4 (5 total, Query took 0.0012 seconds.)

SELECT * FROM `enroll`

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

				regno	courseno	sem	marks
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs001	115	3	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs002	114	5	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs003	113	5	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs004	111	5	100
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs005	112	3	100

Check all | With selected: Edit Copy Delete Export

STUDENT

Showing rows 0 - 4 (5 total, Query took 0.0009 seconds.)

SELECT * FROM `student`

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

				regno	name	major	bdate
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs001	a	sr	1993-12-30
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs002	b	sr	1993-09-24
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs003	c	sr	1993-11-27
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs004	d	sr	1993-04-13
<input type="checkbox"/>	Edit	Copy	Delete	1pe11cs005	e	jr	1993-08-24

Check all | With selected: Edit Copy Delete Export

TEXT

Showing rows 0 - 7 (8 total, Query took 0.0007 seconds.)

```
SELECT * FROM `text`
```

☐ 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_isbn	book_title	publisher	author
<input type="checkbox"/>	Edit	Copy	Delete	10	DATABASE SYSTEM	PEARSON	SCHIELD
<input type="checkbox"/>	Edit	Copy	Delete	900	OPERATING SYS	PEARSON	LELAND
<input type="checkbox"/>	Edit	Copy	Delete	901	CIRCUITS	PEARSON	BOB
<input type="checkbox"/>	Edit	Copy	Delete	902	SYSTEM SOFTWARE	PETERSON	JACOB
<input type="checkbox"/>	Edit	Copy	Delete	903	SCHEDULING	PEARSON	PATIL
<input type="checkbox"/>	Edit	Copy	Delete	904	DATABASE SYSTEMS	PEARSON	JACOB
<input type="checkbox"/>	Edit	Copy	Delete	905	DATABASE MANAGER	PEARSON	BOB
<input type="checkbox"/>	Edit	Copy	Delete	906	SIGNAL	HALL INDIA	SUMT

3)

Server: 127.0.0.1 » Database: student enrollment » Table: text

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Show query box

1 row inserted. (Query took 0.0439 seconds.)

```
insert into text values(907,'SCHEMA DIAGRAMS','HALL INDIA','RICHARD')
```

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

1 row inserted. (Query took 0.0300 seconds.)

```
insert into book_adoption values(114,4,907)
```

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

4)

Showing rows 0 - 2 (3 total, Query took 0.0148 seconds.) [book_title: DATABASE SYSTEMS... - SCHEDULING...]

```
SELECT c.courseno,t.book_isbn,t.book_title FROM course c,book_adoption ba,text t WHERE c.courseno=ba.courseno AND ba.book_isbn=t.book_isbn AND c.dept='CSE' AND 2<( SELECT COUNT(book_isbn) FROM book_adoption b WHERE c.courseno=b.courseno) ORDER BY t.book_title
```

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

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

+ Options

courseno	book_isbn	book_title
111	904	DATABASE SYSTEMS
111	900	OPERATING SYS
111	903	SCHEDULING

5)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0924 seconds.)

```
SELECT DISTINCT c.dept FROM course c WHERE c.dept IN ( SELECT c.dept FROM course c,book_adoption b,text t WHERE c.courseno=b.courseno AND t.book_isbn=b.book_isbn AND t.publisher='PEARSON') AND c.dept NOT IN (SELECT c.dept FROM course c,book_adoption b,text t WHERE c.courseno=b.courseno AND t.book_isbn=b.book_isbn AND t.publisher != 'PEARSON')
```

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

dept

PROGRAM 9: MOVIE DATABASE

Consider the schema for Movie Database:

ACTOR(Act_id, Act_Name, Act_Gender)

DIRECTOR(Dir_id, Dir_Name, Dir_Phone)

MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id)

MOVIE_CAST(Act_id, Mov_id, Role)

ATING(Mov_id, Rev_Stars)

Write SQL queries to

- List the titles of all movies directed by 'Hitchcock'.
- Find the movie names where one or more actors acted in two or more movies.
- List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation).
- Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title.
- Update rating of all movies directed by 'Steven Spielberg' to 5.

ACTOR

Options				ACTID	ACTNAME	ACTGENDER
<input type="checkbox"/>	Edit	Copy	Delete	301	anuskha	f
<input type="checkbox"/>	Edit	Copy	Delete	302	prabhas	m
<input type="checkbox"/>	Edit	Copy	Delete	303	punith	m
<input type="checkbox"/>	Edit	Copy	Delete	304	sudeep	m
<input type="checkbox"/>	Edit	Copy	Delete	305	akshay	m

DIRECTOR

Options				DIRID	DIRNAME	DIRPHONE
<input type="checkbox"/>	Edit	Copy	Delete	60	RAJAMOULI	919191919
<input type="checkbox"/>	Edit	Copy	Delete	61	HITCHCOCK	818181818
<input type="checkbox"/>	Edit	Copy	Delete	62	FARAN	717171717
<input type="checkbox"/>	Edit	Copy	Delete	63	STEVEN SPIELBERG	616161616
<input type="checkbox"/>	Edit	Copy	Delete	64	MANIRATHNAM	919191919

MOVIECAST

Options				ACTID	MOVID	ROLE
<input type="checkbox"/>	Edit	Copy	Delete	301	1001	HEROINE
<input type="checkbox"/>	Edit	Copy	Delete	301	1002	HEROINE
<input type="checkbox"/>	Edit	Copy	Delete	303	1002	GUEST
<input type="checkbox"/>	Edit	Copy	Delete	303	1003	HERO
<input type="checkbox"/>	Edit	Copy	Delete	304	1004	HERO

MOVIES

+ Options				MOVID	MOVTITLE	MOVYEAR	MOVLANG	DIRID
<input type="checkbox"/>	Edit	Copy	Delete	1001	BAHUBALI-2	2017	TELUGU	60
<input type="checkbox"/>	Edit	Copy	Delete	1002	BAHUBALI-1	2015	TELUGU	60
<input type="checkbox"/>	Edit	Copy	Delete	1003	AKASH	2008	KANNADA	61
<input type="checkbox"/>	Edit	Copy	Delete	1004	WAR HORSE	2011	ENGLISH	63
<input type="checkbox"/>	Edit	Copy	Delete	1005	TRAPKING	2017	ENGLISH	64

RATING

+ Options				MOVID	REVSTARS
<input type="checkbox"/>	Edit	Copy	Delete	1001	4
<input type="checkbox"/>	Edit	Copy	Delete	1002	2
<input type="checkbox"/>	Edit	Copy	Delete	1003	5
<input type="checkbox"/>	Edit	Copy	Delete	1004	4
<input type="checkbox"/>	Edit	Copy	Delete	1005	1

3)

Showing rows 0 - 0 (1 total, Query took 0.0036 seconds.)

SELECT MOVTITLE FROM MOVIES WHERE DIRID IN (SELECT DIRID FROM DIRECTOR WHERE DIRNAME='HITCHCOCK')

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

Show all

Number of rows: 25

Filter rows: Search this table

+ Options

MOVTITLE

AKASH

↑

☐ Check all

With selected:

Edit

Copy

Delete

Export

4)

Showing rows 0 - 0 (1 total, Query took 0.0062 seconds.)

SELECT MOVTITLE FROM MOVIES M,MOVIECAST MV WHERE M.MOVID=MV.MOVID AND ACTID IN (SELECT ACTID FROM MOVIECAST GROUP BY ACTID HAVING COUNT(ACTID)>1) GROUP BY MOVTITLE 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

MOVTITLE

BAHUBALI-1

5)

Showing rows 0 - 0 (1 total, Query took 0.0034 seconds.)

SELECT ACTNAME,MOVTITLE,MOVYEAR FROM ACTOR A JOIN MOVIECAST C ON A.ACTID=C.ACTID JOIN MOVIES M ON C.MOVID=M.MOVID WHERE M.MOVYEAR NOT BETWEEN 2000 AND 2015

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

Show all

Number of rows: 25

Filter rows: Search this table

+ Options

ACTNAME

MOVTITLE

MOVYEAR

anuska

BAHUBALI-2

2017

6)

✓ Showing rows 0 - 4 (5 total, Query took 0.0937 seconds.) [MOVTITLE: AKASH... - WAR HORSE...]

```
SELECT MOVTITLE, MAX(REVSTARS) FROM MOVIES INNER JOIN RATING USING (MOVID) GROUP BY MOVTITLE HAVING MAX(REVSTARS) > 0 ORDER BY MOVTITLE
```

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

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

+ Options

MOVTITLE	MAX(REVSTARS)
AKASH	5
BAHUBALI-1	2
BAHUBALI-2	4
TRAPKING	1
WAR HORSE	4

7)

Show query box

✓ 1 row affected. (Query took 0.0630 seconds.)

```
UPDATE RATING SET REVSTARS=5 WHERE MOVID IN (SELECT MOVID FROM MOVIES WHERE DIRID IN (SELECT DIRID FROM DIRECTOR WHERE DIRNAME='STEVEN SPIELBERG'))
```

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

PROGRAM 10:COLLEGE DATABASE

Consider the schema for College Database:

STUDENT(USN, SName, Address, Phone, Gender)

SEMSEC(SSID, Sem, Sec)

CLASS(USN, SSID)

SUBJECT(Subcode, Title, Sem, Credits)

IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA)

Write SQL queries to

- List all the student details studying in fourth semester 'C' section.
- Compute the total number of male and female students in each semester and in each section.
- Create a view of Test1 marks of student USN '1B15CS101' in all subjects.

Table class:

USN	SSID
1RN13CS020	CSE8A
1RN13CS062	CSE8A
1RN13CS066	CSE8B
1RN13CS091	CSE8C
1RN14CS010	CSE7A
1RN14CS025	CSE7A
1RN14CS032	CSE7A
1RN15CS011	CSE4A
1RN15CS029	CSE4A
1RN15CS045	CSE4B
1RN15CS091	CSE4C
1RN16CS045	CSE3A
1RN16CS088	CSE3B
1RN16CS122	CSE3C

Table iamarks

USN	SUBCODE	SSID	TEST1	TEST2	TEST3	FINALIA
1RN13CS091	10CS81	CSE8C	15	16	18	NULL
1RN13CS091	10CS82	CSE8C	12	19	14	NULL
1RN13CS091	10CS83	CSE8C	19	15	20	NULL
1RN13CS091	10CS84	CSE8C	20	16	19	NULL
1RN13CS091	10CS85	CSE8C	15	15	12	NULL

 Copy

 Delete

 Export

Table semsec

SSID	SEM	SEC
CSE1C	1	C
CSE2A	2	A
CSE2B	2	B
CSE2C	2	C
CSE3A	3	A
CSE3B	3	B
CSE3C	3	C
CSE4A	4	A
CSE4B	4	B
CSE4C	4	C
CSE5A	5	A
CSE5B	5	B
CSE5C	5	C
CSE6A	6	A
CSE6B	6	B
CSE6C	6	C
CSE7A	7	A
CSE7B	7	B
CSE7C	7	C
CSE8A	8	A
CSE8B	8	B
CSE8C	8	C

Table student

USN	SNAME	ADDRESS	PHONE	GENDER
1RN13CS020	AKSHAY	BELAGAVI	2147483647	M
1RN13CS062	SANDHYA	BENGALURU	2147483647	F
1RN13CS066	SUPRIYA	MANGALURU	2147483647	F
1RN13CS091	TEESHA	BENGALURU	2147483647	F
1RN14CS010	ABHAY	BENGALURU	2147483647	M
1RN14CS025	ASMI	BENGALURU	2147483647	F
1RN14CS032	BHASKAR	BENGALURU	2147483647	M
1RN15CS011	AJAY	TUMKUR	2147483647	M
1RN15CS029	CHITRA	DAVANGERE	2147483647	F
1RN15CS045	JEEVA	BELLARY	2147483647	M
1RN15CS091	SANTOSH	MANGALURU	2147483647	M
1RN16CS045	ISMAIL	KALBURGI	2147483647	M
1RN16CS088	SAMEERA	SHIMOGA	2147483647	F
1RN16CS122	VINAYAKA	CHIKAMAGALUR	2147483647	M

Table subject

Export	Import	Privileges	Operations	Triggers
SUBCODE	TITLE	SEM	CREDITS	
10CS71	OOAD	7	4	
10CS72	ECS	7	4	
10CS73	PTW	7	4	
10CS74	DWDM	7	4	
10CS75	JAVA	7	4	
10CS76	SAN	7	4	
10CS81	ACA	8	4	
10CS82	SSM	8	4	
10CS83	NM	8	4	
10CS84	CC	8	4	
10CS85	PW	8	4	
15CS31	M3	3	4	
15CS32	ADE	3	4	
15CS33	DSA	3	4	
15CS34	CO	3	4	
15CS35	USP	3	3	
15CS36	DMS	3	3	
15CS41	M4	4	4	
15CS42	SE	4	4	
15CS43	DAA	4	4	
15CS44	MPMC	4	4	
15CS45	OOC	4	3	
15CS46	DC	4	3	

1)

Showing rows 0 - 0 (1 total, Query took 0.0005 seconds.)

```
SELECT S.*, SS.SEM, SS.SEC FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C.USN AND SS.SSID = C.SSID AND SS.SEM = 4 AND SS.SEC='C'
```

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

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

+ Options

USN	SNAME	ADDRESS	PHONE	GENDER	SEM	SEC
1RN15CS091	SANTOSH	MANGALURU	2147483647	M	4	C

2)

✓ Showing rows 0 - 12 (13 total, Query took 0.0007 seconds.)

```
SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER) AS COUNT FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C.USN AND SS.SSID = C.SSID GROUP BY SS.SEM, SS.SEC, S.GENDER ORDER BY SEM
```

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

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

+ Options

SEM	SEC	GENDER	COUNT
3	A	M	1
3	B	F	1
3	C	M	1
4	A	F	1
4	A	M	1
4	B	M	1
4	C	M	1
7	A	F	1
7	A	M	2
8	A	F	1
8	A	M	1
8	B	F	1
8	C	F	1

3)

Show query box

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0668 seconds.)

```
CREATE VIEW STU_TEST1_MARKS_VIEW AS SELECT TEST1, SUBCODE FROM IAMARKS WHERE USN = '1BI15CS101'
```

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