Lab Record

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)

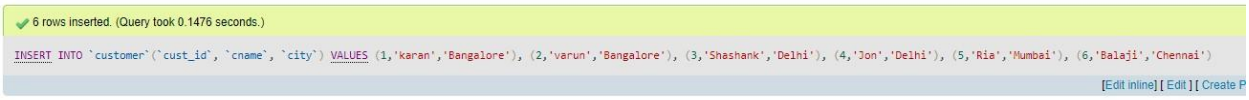
WAREHOUSE (warehouse #: int, city: String)

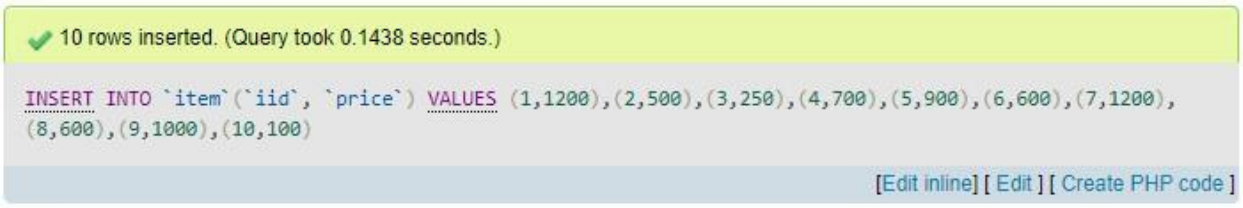
SHIPMENT (order #: int, warehouse #: int, ship-date: date)

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

Table	Action	Rows	Type	Collation	Size	Overhead
customer	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
item	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
order1	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
orderitem	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
shipment	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
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

2. Enter at least five tuples for each relation.





10 rows inserted. (Query took 0.1377 seconds.)

```
INSERT INTO `orders`(`oid`, `odate`, `cid`, `oamt`) VALUES (1,'2021-03-05',1,2000), (2,'2021-03-08',1,1600), (3,'2021-03-10',3,1500), (4,'2021-03-09',2,2200), (5,'2021-03-06',3,3000), (6,'2021-03-08',4,2500), (7,'2021-03-12',4,4000), (8,'2021-03-06',5,3000), (9,'2021-03-11',1,1500), (10,'2021-03-12',5,3000)
```

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

16 rows inserted. (Query took 0.1315 seconds.)

```
INSERT INTO `orderitem`(`oid`, `iid`, `qty`) VALUES (1,9,2),(2,9,1),(2,8,1),(3,2,3),(4,7,1),(4,3,4),(5,10,10),(6,2,3),(6,3,2),(7,9,4),(8,1,1),(8,7,1),(8,8,1),(9,8,1),(9,5,1),(10,2,6)
```

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

6 rows inserted. (Query took 0.1420 seconds.)

```
INSERT INTO `warehouse`(`war`, `city`) VALUES (1,'Mumbai'), (2,'Bangalore'), (3,'Chennai'), (4,'Delhi'), (5,'Kolkata'), (6,'Pune')
```

10 rows inserted. (Query took 0.0826 seconds.)

```
INSERT INTO `shipment`(`oid`, `war`, `sdate`) VALUES (1,1,'2021-03-10'),(2,3,'2021-03-11'),(3,6,'2021-03-21'),(4,2,'2021-03-10'),(5,2,'2021-03-17'),(6,4,'2021-03-10'),(7,5,'2021-03-22'),(8,6,'2021-03-07'),(9,5,'2021-03-16'),(10,1,'2021-03-13')
```

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

3. 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 0.0033 seconds.) [cname: **JON... - VARUN...**]

```
SELECT c.cname, COUNT(o.oid) AS oforders, AVG(o.oamt) FROM customer c,orders o WHERE c.cid=o.cid group by c.cname order BY c.cname ASC
```

Profiling [Edit

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

+ Options

cname	oforders	AVG(o.oamt)
Jon	2	3250.0000
karan	3	1700.0000
Ria	2	3000.0000
Shashank	2	2250.0000
varun	1	2200.0000

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

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

+ Options

oid	iid	qty
1	9	2
2	9	1
2	8	1
3	2	3
4	7	1
4	3	4
5	10	10
6	2	3
6	3	4
7	9	4
8	1	1
8	7	1
8	8	1
9	8	1
9	NULL	1
10	2	6
5	9	2

oid ▲ 1	iid	qty
1	9	2
2	9	1
2	8	1
3	2	3
4	7	1
4	3	4
5	9	2
5	10	10
6	2	3
6	3	4
7	9	4
8	1	1
8	7	1
8	8	1
9	8	1
9	5	1
10	2	6

PROGRAM 7. BOOK DEALER DATABASE

The following tables are maintained by a book dealer:

AUTHOR(author-id: int, name: String, city: String, country: String)

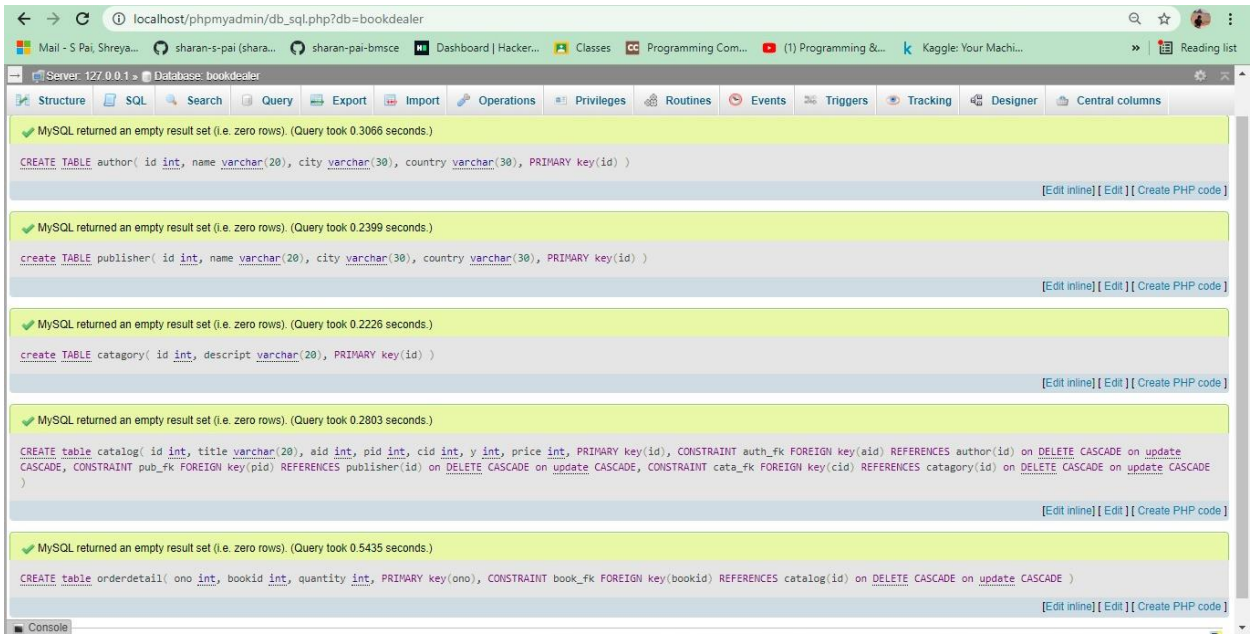
PUBLISHER(publisher-id: int, name: String, city: String, country: String)

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)

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



2. Enter at least five tuples for each relation.

Show query box

5 rows inserted. (Query took 0.1340 seconds.)

```
INSERT INTO `catagory`(`id`, `descript`) VALUES (1,'Sci-Fic'), (2,'Fiction'), (3,'Fantasy'), (4,'Documentary'), (5,'Auto biography')
```

Show query box

7 rows inserted. (Query took 0.1400 seconds.)

```
INSERT INTO `catalog`(`id`, `title`, `aid`, `pid`, `cid`, `y`, `price`) VALUES (1,'Harry Potter Order of Phenoix',5,2,2,2010,600), (2,'Game Of Thrones',1,1,1,1997,800), (3,'The Accidental PM',4,3,5,2014,400), (4,'Divergent',2,4,2,2010,500), (5,'Insurgent',2,4,2,2012,500), (6,'The Red Wedding',1,1,1,2004,900), (7,'Harry Potter Goblet of Fire',5,2,2,2007,400)
```

[Edit inline] [Edit] [Create PHP cod

Warning: #1265 Data truncated for column 'title' at row 1

Warning: #1265 Data truncated for column 'title' at row 7

Show query box

5 rows inserted. (Query took 0.0976 seconds.)

```
INSERT INTO `orderdetail`(`ono`, `bookid`, `quantity`) VALUES (1,1,4), (2,7,6), (3,3,10), (4,4,2), (5,2,14)
```

3. 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 - 1 (2 total, Query took 0.0414 seconds.)

```
select * from author WHERE id IN (SELECT aid from catalog WHERE y>2000 group by aid having count(*)>=2)
```

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

+ Options

	id	name	city	country
Edit Copy Delete	2	Veronica Roth	New York	USA
Edit Copy Delete	5	JK Rowling	London	Britain

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

Showing rows 0 - 1 (2 total, Query took 0.0041 seconds.)

```
SELECT * FROM `author` WHERE id in ( SELECT aid FROM catalog c WHERE id in (SELECT bookid FROM orderdetail WHERE quantity = (SELECT MAX(quantity) FROM orderdetail)))
```

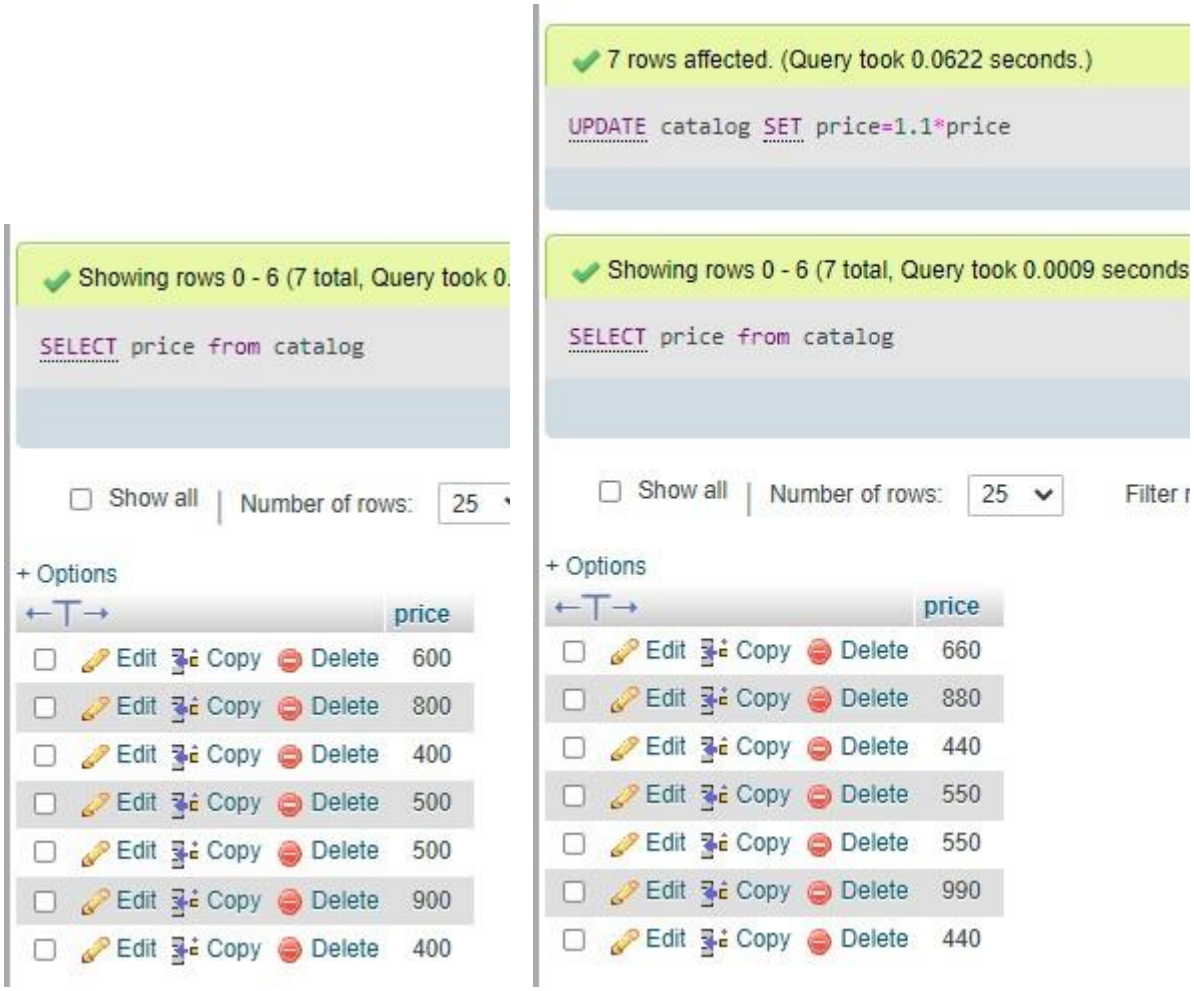
Profiling [Edit inline] [Edit] [Explain

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

+ Options

	id	name	city	country
Edit Copy Delete	1	George RR Martin	London	Britain
Edit Copy Delete	4	Sanjaya Baru	New Delhi	India

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



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)

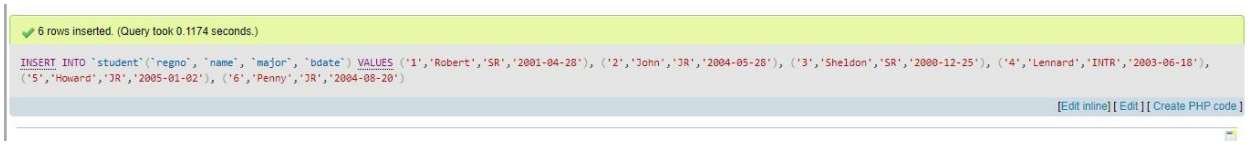
TEXT(book-ISBN:int, book-title:String, publisher:String, author:String)

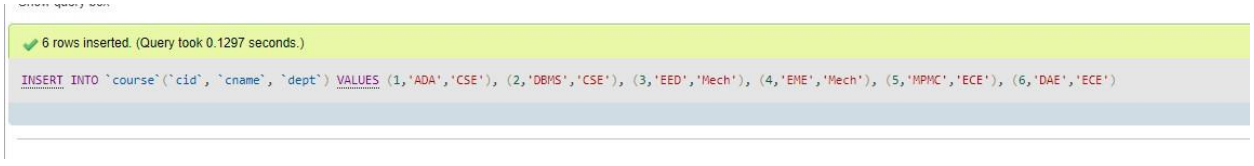
1. Create the above tables by properly specifying the primary keys and the foreign keys.

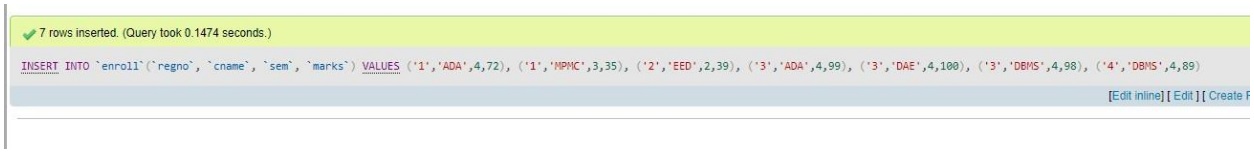
Table	Action	Rows	Type	Collation	Size	Overhead
book	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
course	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
enroll	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
student	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
textbook	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
5 tables	Sum	0	InnoDB	utf8mb4_general_ci	160.0 KiB	0 B

Check all With selected:

2. Enter at least five tuples for each relation.







6 rows inserted. (Query took 0.1717 seconds.)

```
INSERT INTO `textbook`(`isbn`, `title`, `pub`, `auth`) VALUES (1,'Algorithm Design','Pearson','Levtin'), (2,'Database System','Pearson','Elmasri'), (3,'Engg Drawing','Scholastic','Antonio'), (4,'Machine Interior','Bloomberg','John'), (5,'Electric Circuits','Pearson','Varun'), (6,'8086 Microprocessor','Bloomberg','Burchandi')
```

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

6 rows inserted. (Query took 0.1743 seconds.)

```
INSERT INTO `book`(`cid`, `sem`, `isbn`) VALUES ('2',3,7), ('2',4,2), ('1',3,1), ('1',4,1), ('3',3,3), ('4',1,4)
```

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

Show query box

1 row inserted. (Query took 0.1768 seconds.)

```
insert INTO textbook VALUES (8,'Analysis of Complex Algo','Pearson','Krishnamurthy')
```

Warning: #1265 Data truncated for column 'title' at row 1

1 row inserted. (Query took 0.0400 seconds.)

```
INSERT into book VALUES (1,4,8)
```

4. 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.

Showing rows 0 - 4 (5 total, Query took 0.0078 seconds.) [cname: ADA... - DBMS...]

```
SELECT DISTINCT c.cid,c.cname,b.sem,b.isbn,t.title FROM course c,book b,textbook t WHERE c.cid=b.cid AND b.isbn=t.isbn AND c.dept='CSE' AND c.cid IN (SELECT cid FROM book group by cid having COUNT(isbn)>=2) ORDER BY c.cname
```

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

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

+ Options

cid	cname	sem	isbn	title
1	ADA	4	1	Algorithm Design
1	ADA	3	1	Algorithm Design
1	ADA	4	8	Analysis of Complex
2	DBMS	4	2	Database System
2	DBMS	3	7	DBMS Design

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

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

```
SELECT DISTINCT c.dept FROM course c WHERE c.dept in(SELECT c.dept FROM course c,book b,textbook t WHERE c.cid=b.cid AND t.isbn=b.isbn AND t.pub='Pearson')AND c.dept NOT IN(SELECT c.dept FROM course c,book b,textbook t WHERE c.cid=b.cid AND t.isbn=b.isbn AND t.pub<>'Pearson')
```

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

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

+ Options

	dept
Edit Copy Delete	CSE

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)

RATING(Mov_id, Rev_Stars)

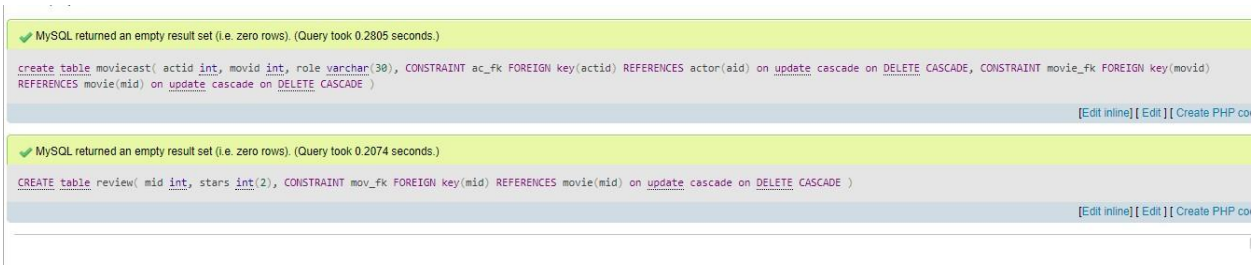
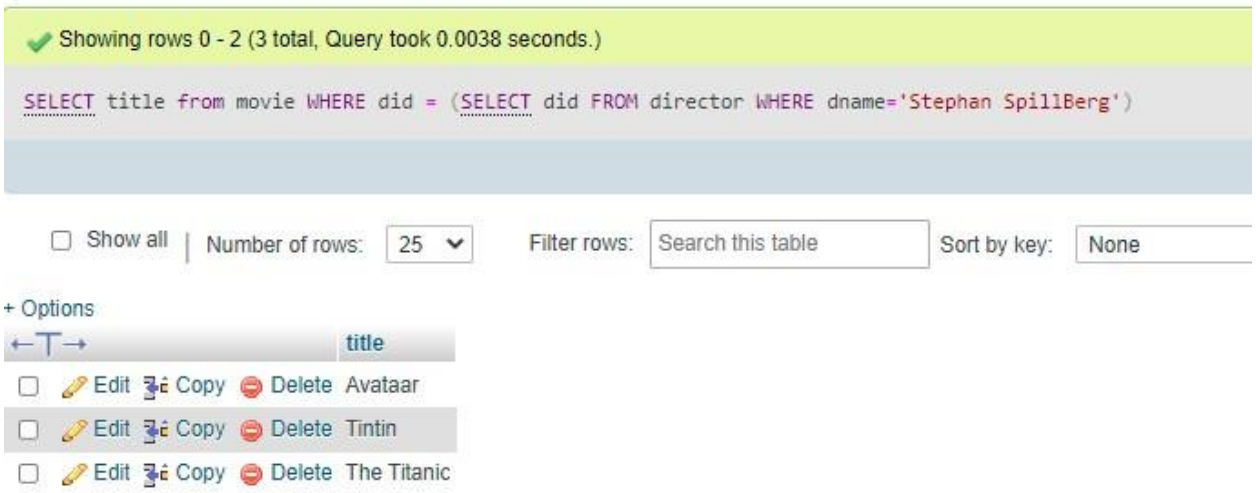


Table	Action	Rows	Type	Collation	Size	Overhead
actor	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
director	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
movie	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
moviecast	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
review	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
5 tables	Sum	0	InnoDB	utf8mb4_general_ci	144.0 KiB	0 B

1. List the titles of all movies directed by 'Hitchcock'.



2. Find the movie names where one or more actors acted in two or more movies.

Showing rows 0 - 4 (5 total, Query took 0.0222 seconds.)

```
SELECT title from movie m,moviecast c WHERE m.mid=c.movid AND actid IN (SELECT actid from moviecast GROUP BY actid having count(actid)>1)
```

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

+ Options

title
The Titanic
Inception
The Shutter Island
Avengers:Endgame
The Pulp Fiction

3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation).

Showing rows 0 - 3 (4 total, Query took 0.0192 seconds.)

```
SELECT DISTINCT a.aname,m.myear FROM ((actor a JOIN moviecast mc ON a.aid=mc.actid)JOIN movie m ON m.mid=mc.movid) WHERE m.myear 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

aname	myear
Leonardo Dicaprio	1997
Sam L Jackson	2019
Sam L Jackson	1996
Scarlet Johhanson	2019

4. 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.

Showing rows 0 - 6 (7 total, Query took 0.0046 seconds.) [title: **AVATAAR... - TINTIN...**]

```
SELECT title,MAX(stars) FROM movie m,review r WHERE m.mid=r.mid GROUP by m.title having MAX(stars)>0 ORDER BY m.title
```

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

+ Options

title ▲ 1	MAX(stars)
Avataar	5
Avengers:Endgame	5
Green Lantern	2.5
Inception	5
The Shutter Island	5
The Titanic	4.5
Tintin	4.5

5. Update rating of all movies directed by ‘Steven Spielberg’ to 5.

3 rows affected. (Query took 0.0736 seconds.)

```
UPDATE review set stars=5 WHERE mid in (SELECT mid from movie WHERE did=(SELECT did FROM director WHERE dname='Stephan Spillberg'))
```

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

Showing rows 0 - 10 (11 total, Query took 0.0014 seconds.)

```
SELECT * from review
```

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

+ Options

mid	stars
1	5
2	5
3	2.5
4	5
5	5
6	4
1	5
5	5
6	5
7	5

PROGRAM 10:COLLEGE DATABASE

Consider the schema for College Database:

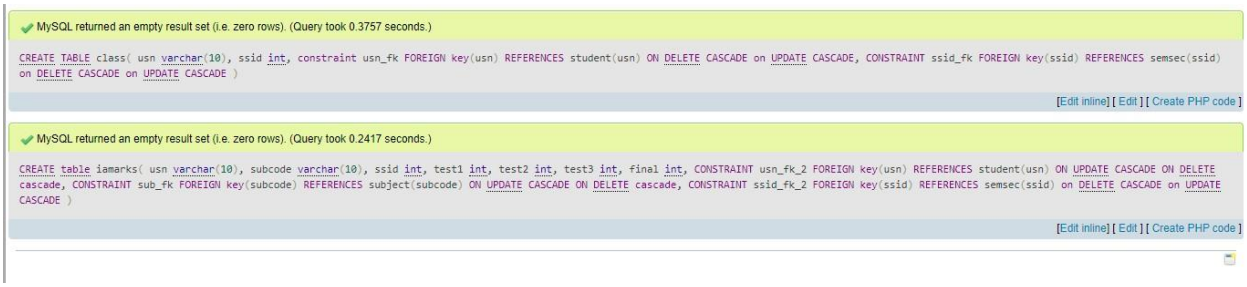
STUDENT(USN, SName, Address, Phone, Gender)

SEMSEC(SSID, Sem, Sec)

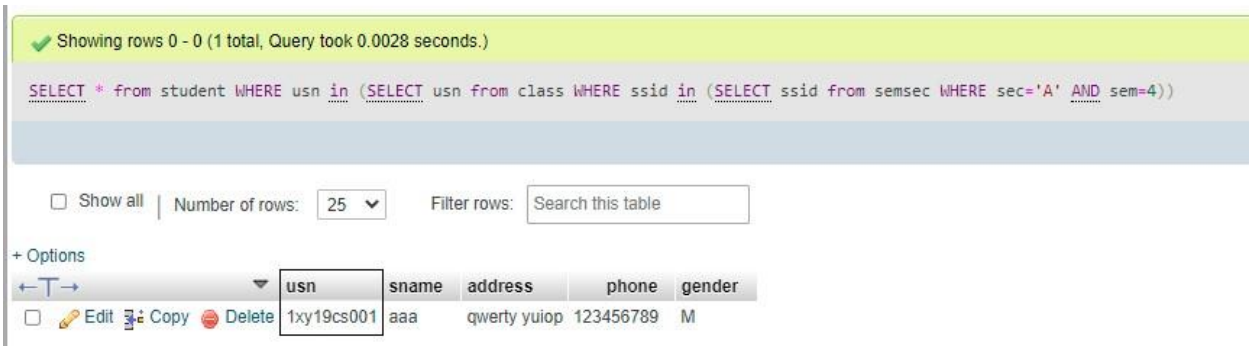
CLASS(USN, SSID)

SUBJECT(Subcode, Title, Sem, Credits)

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



1. List all the student details studying in fourth semester ‘C’ section.



2. Compute the total number of male and female students in each semester and in each section.

3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.