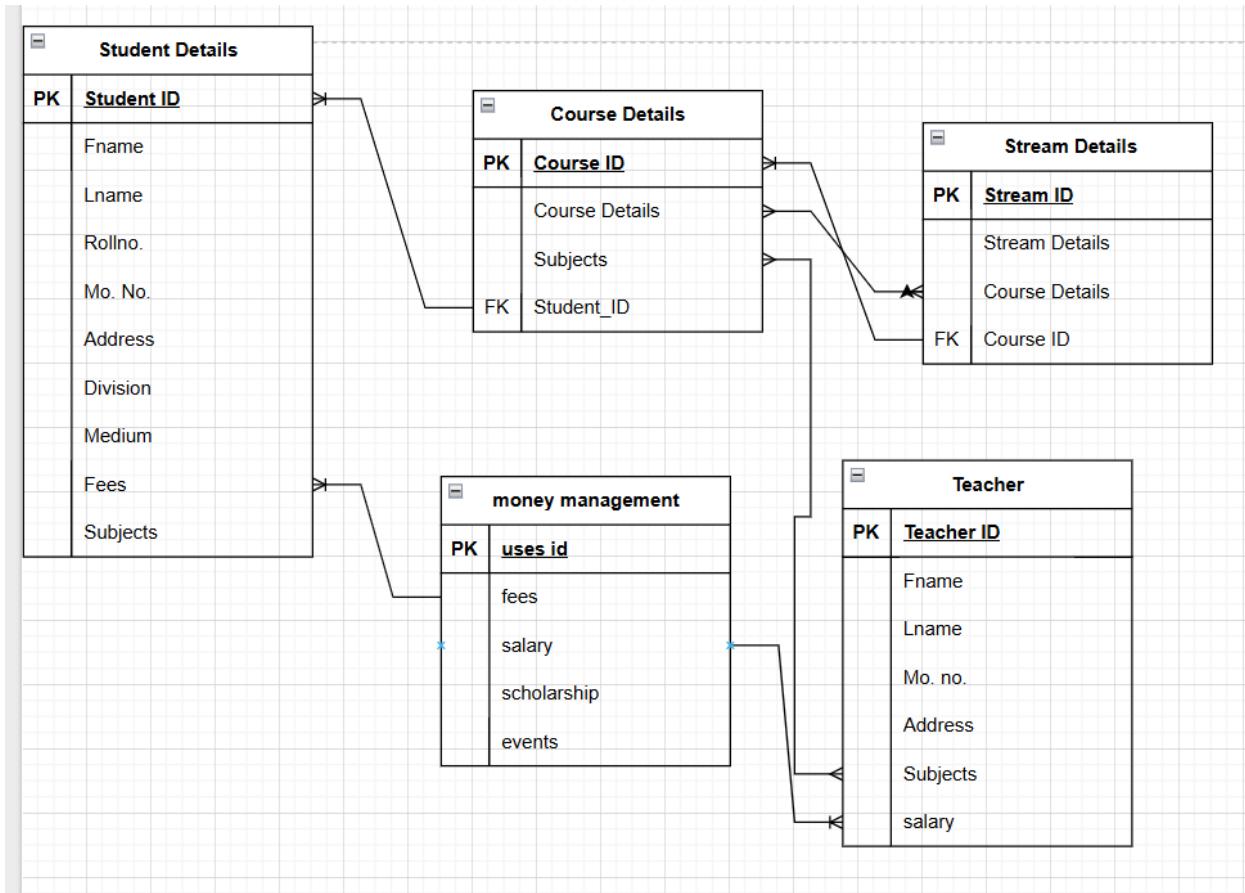


Q-1. Design an entity-relationship diagram for a School Management System and translate it into a relational database schema.



MySQL Workbench

unconnected

File Edit View Query Database Server Tools Scripting Help

Navigator: SCHEMAS Filter objects Not connected

sql* x

```
4
5  -- Create Student Table
6  -- Q-1
7 • CREATE TABLE Student (Student_ID INT PRIMARY KEY,Name VARCHAR(255),Lname VARCHAR(255),Rollno INT,Mo_No VARCHAR(15),Address TEXT,Division VARCHAR(50),Medium VARCHAR(50),Fees DECIMAL(10, 2));
8 • SELECT * FROM students;
9
10 -- Create Course Table
11 • CREATE TABLE Course (Course_ID INT PRIMARY KEY,Course_Details TEXT,Subjects TEXT,Student_ID INT,FOREIGN KEY (Student_ID) REFERENCES Student(Student_ID));
12 • SELECT * FROM course;
13
14 -- Create Stream Table
15 • CREATE TABLE Stream (Stream_ID INT PRIMARY KEY,Stream_Details TEXT,Course_Details TEXT,Course_ID INT,FOREIGN KEY (Course_ID) REFERENCES Course(Course_ID));
16 • SELECT * FROM stream;
17
18 -- Create MoneyManagement Table
19 • CREATE TABLE MoneyManagement (Uses_ID INT PRIMARY KEY,Fees DECIMAL(10, 2),Salary DECIMAL(10, 2),Scholarship DECIMAL(10, 2),Events TEXT);
20 • SELECT * FROM moneymanagement;
21
22 -- Create Teacher Table
23 • CREATE TABLE Teacher (Teacher_ID INT PRIMARY KEY,Name VARCHAR(255),Lname VARCHAR(255),Mo_No VARCHAR(15),Address TEXT,Subjects TEXT,Salary DECIMAL(10, 2));
24 • SELECT * FROM Teacher;
25
26
```

Administration Schemas Information

Object Info Session

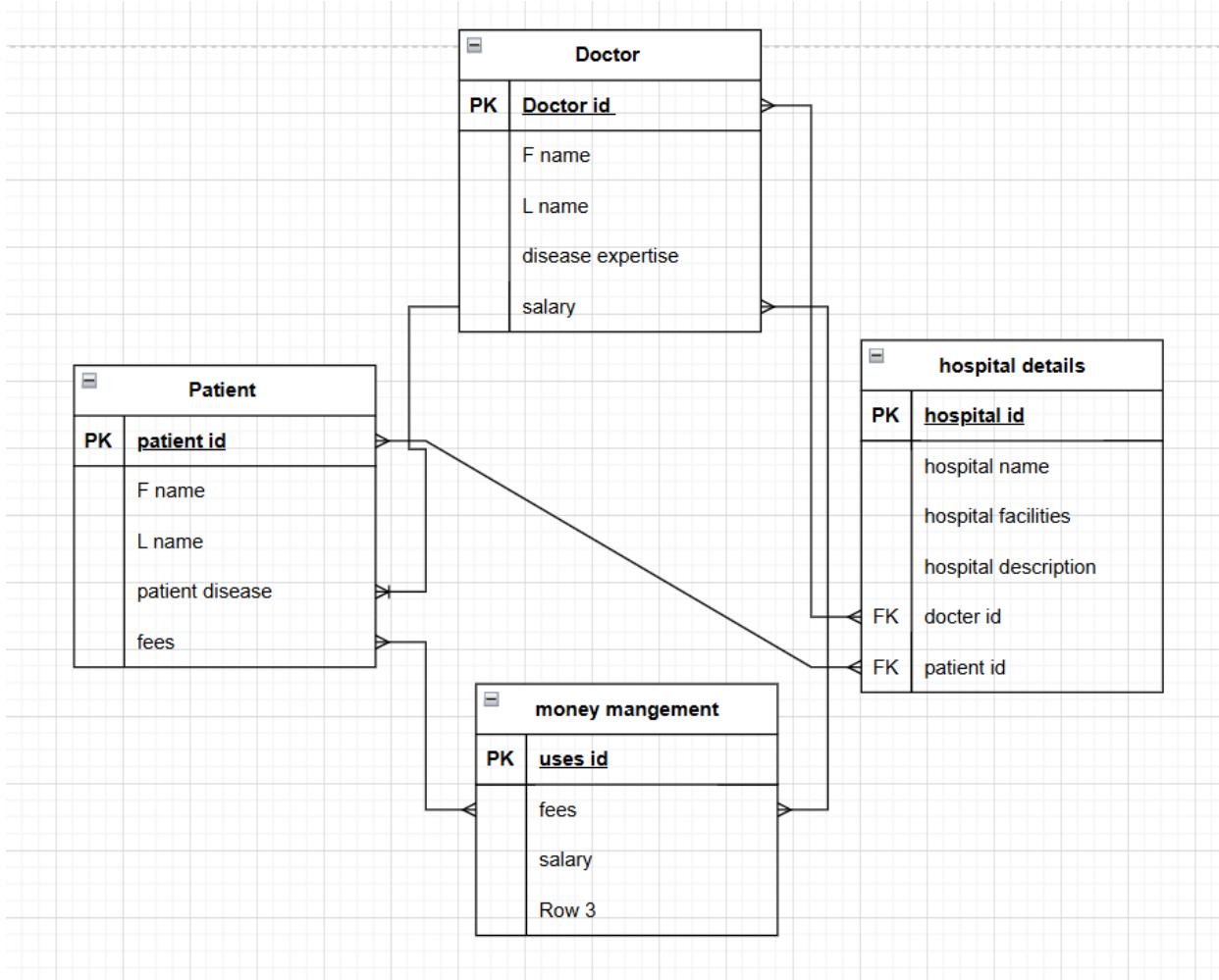
Action Output

#	Time	Action	Message	Duration / Fetch
1				

Message

ENG IN 11:45 AM 4/13/2025

Q-2. Design an entity-relationship diagram (ER) diagram for a Hospital Management System and translate it into a relational database schema.



MySQL Workbench

unconnected

File Edit View Query Database Server Tools Scripting Help

Schemas

Filter objects

Not connected

28
29 -- Q-2
30 -- Create Doctor Table
31 • CREATE TABLE Doctor (Doctor_ID INT PRIMARY KEY,Fname VARCHAR(255),Lname VARCHAR(255),Disease_Expertise TEXT,Salary DECIMAL(10, 2));
32
33 -- Create Patient Table
34 • CREATE TABLE Patient (Patient_ID INT PRIMARY KEY,Fname VARCHAR(255),Lname VARCHAR(255),Patient_Disease_Fees DECIMAL(10, 2));
35
36 -- Create HospitalDetails Table
37 • CREATE TABLE HospitalDetails (Hospital_ID INT PRIMARY KEY,Hospital_Name VARCHAR(255),Hospital_Facilities TEXT,Hospital_Description TEXT,Doctor_ID INT,Patient_ID INT,FOREIGN KEY
38
39 -- Create MoneyManagement Table
40 • CREATE TABLE MoneyManagement (Users_ID INT PRIMARY KEY,Fees DECIMAL(10, 2),Salary DECIMAL(10, 2),Row3 TEXT);
41
42 -- Select all doctors
43 • SELECT * FROM Doctor;
44
45 -- Select all patients
46 • SELECT * FROM Patient;
47
48 -- Select all hospital details
49 • SELECT * FROM HospitalDetails;
50
51 -- Select all money management records
52 • SELECT * FROM MoneyManagement;

Administration Schemas

Information

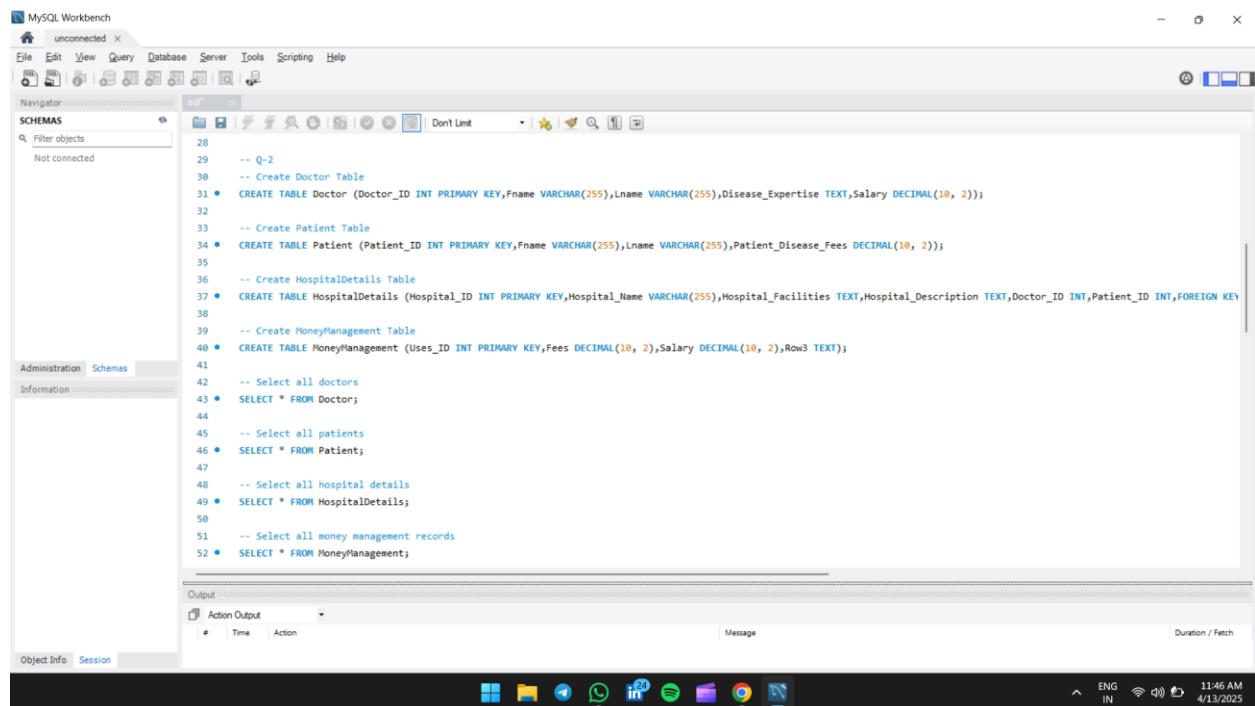
Output

Action Output

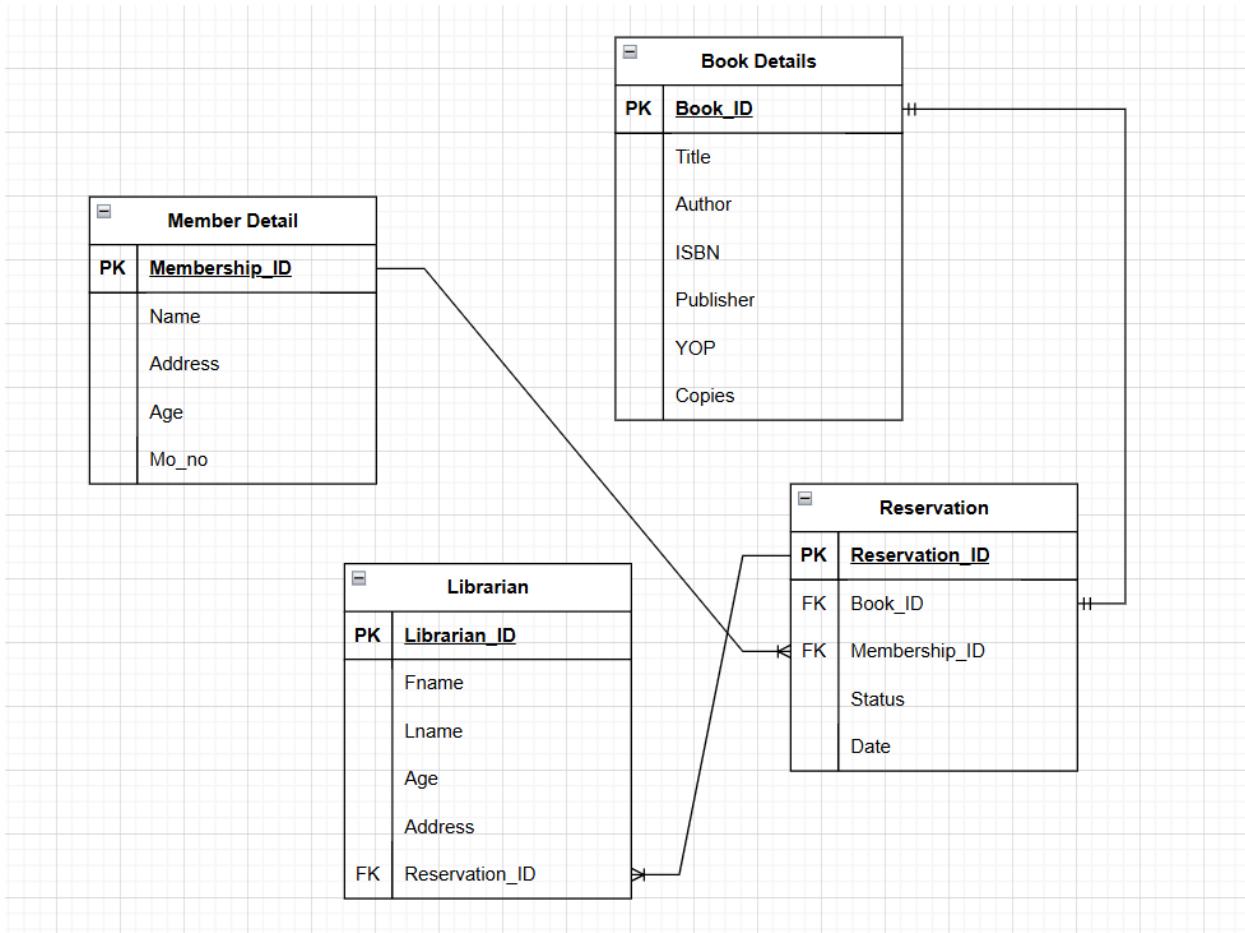
Time Action Message Duration / Fetch

Object Info Session

ENG IN 11:46 AM 4/13/2025



Q-3. Design an entity-relationship (ER) diagram for a Library Management System and translate it into a relational database schema.



MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

Filter objects: Not connected

sql* x

```
56 -- Q-3
57 -- Create Book Details table
58 • CREATE TABLE Book_Details (Book_ID INT PRIMARY KEY,Title VARCHAR(255),Author VARCHAR(255),ISBN VARCHAR(20),Publisher VARCHAR(255),YOP INT,Copies INT);
59
60 -- Create Member Detail table
61 • CREATE TABLE Member_Detail (Membership_ID INT PRIMARY KEY,Name VARCHAR(255),Address VARCHAR(255),Age INT,Mo_no VARCHAR(15));
62
63 -- Create Reservation table
64 • CREATE TABLE Reservation (Reservation_ID INT PRIMARY KEY,Book_ID INT,Membership_ID INT,Status VARCHAR(50),Date DATE);
65
66 -- Create Librarian table
67 • CREATE TABLE Librarian (Librarian_ID INT PRIMARY KEY,Fname VARCHAR(255),Lname VARCHAR(255),Age INT,Address VARCHAR(255),Reservation_ID INT);
68
69 -- Select Queries
70 • SELECT * FROM Book_Details;
71 • SELECT * FROM Member_Detail;
72 • SELECT * FROM Reservation;
73 • SELECT * FROM Librarian;
74
75
76
77
78
79
80
```

Administration Schemas

Information

Output

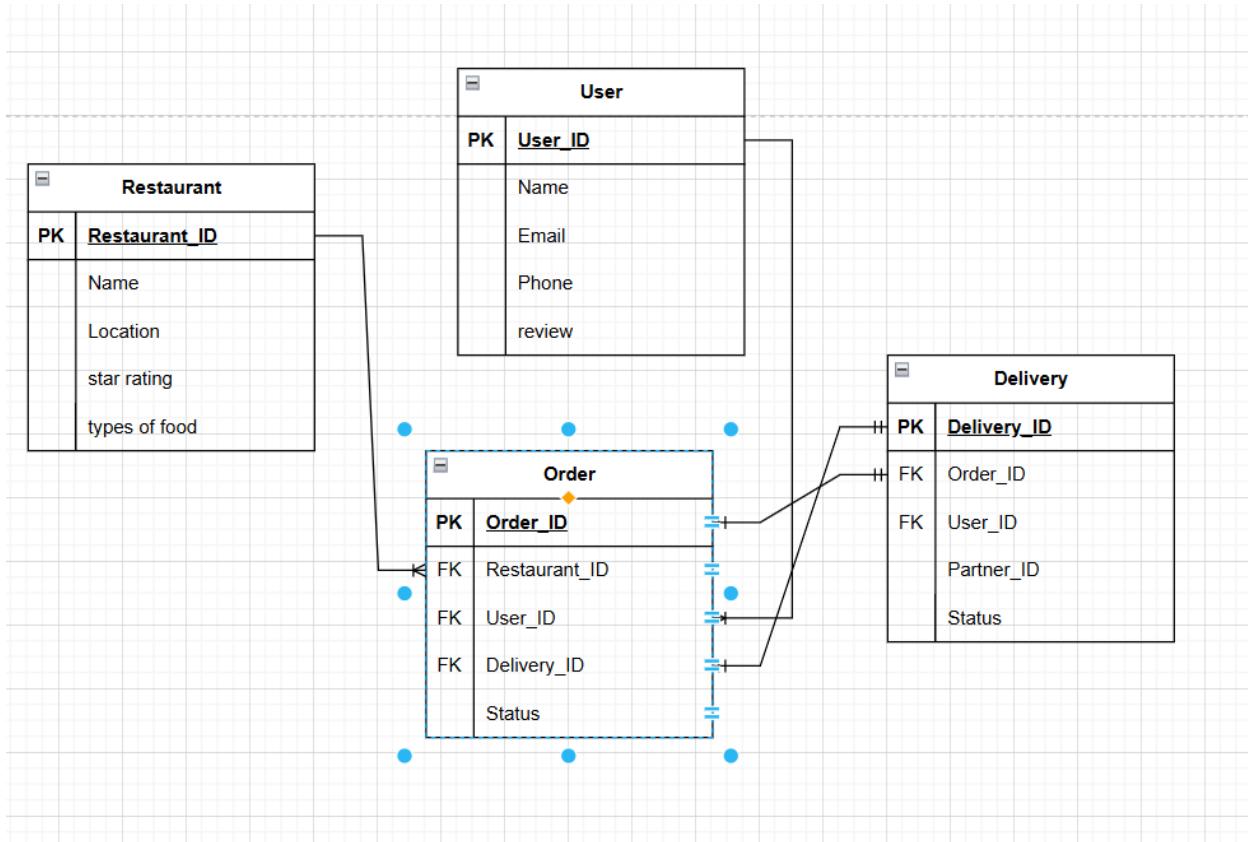
Action Output

Time Action Message Duration / Fetch

Object Info Session

ENG IN 11:46 AM 4/13/2025

Q-4. Design an entity-relationship (ER) diagram for a Zomato services system and translate it into a relational database schema.



MySQL Workbench

unconnected

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

Not connected

sql

79
80
81 -- Q-4
82 -- Create Restaurant table
83 • CREATE TABLE Restaurant (Restaurant_ID INT PRIMARY KEY,Name VARCHAR(255),Location VARCHAR(255),Star_Rating DECIMAL(2,1),Types_of_Food VARCHAR(255));
84
85 -- Create User table
86 • CREATE TABLE User (User_ID INT PRIMARY KEY,Name VARCHAR(255),Email VARCHAR(255),Phone VARCHAR(20),Review TEXT);
87
88 -- Create Order table
89 • CREATE TABLE Order_Table (Order_ID INT PRIMARY KEY,Restaurant_ID INT,User_ID INT,Delivery_ID INT,Status VARCHAR(50));
90
91 -- Create Delivery table
92 • CREATE TABLE Delivery (Delivery_ID INT PRIMARY KEY,Order_ID INT,User_ID INT,Partner_ID INT,Status VARCHAR(50));
93
94 -- Simple SELECT Query
95 • SELECT * FROM Restaurant;
96 • SELECT * FROM User;
97 • SELECT * FROM Order_Table;
98 • SELECT * FROM Delivery;
99
100
101
102
103

Administration Schemas

Information

Output

Action Output

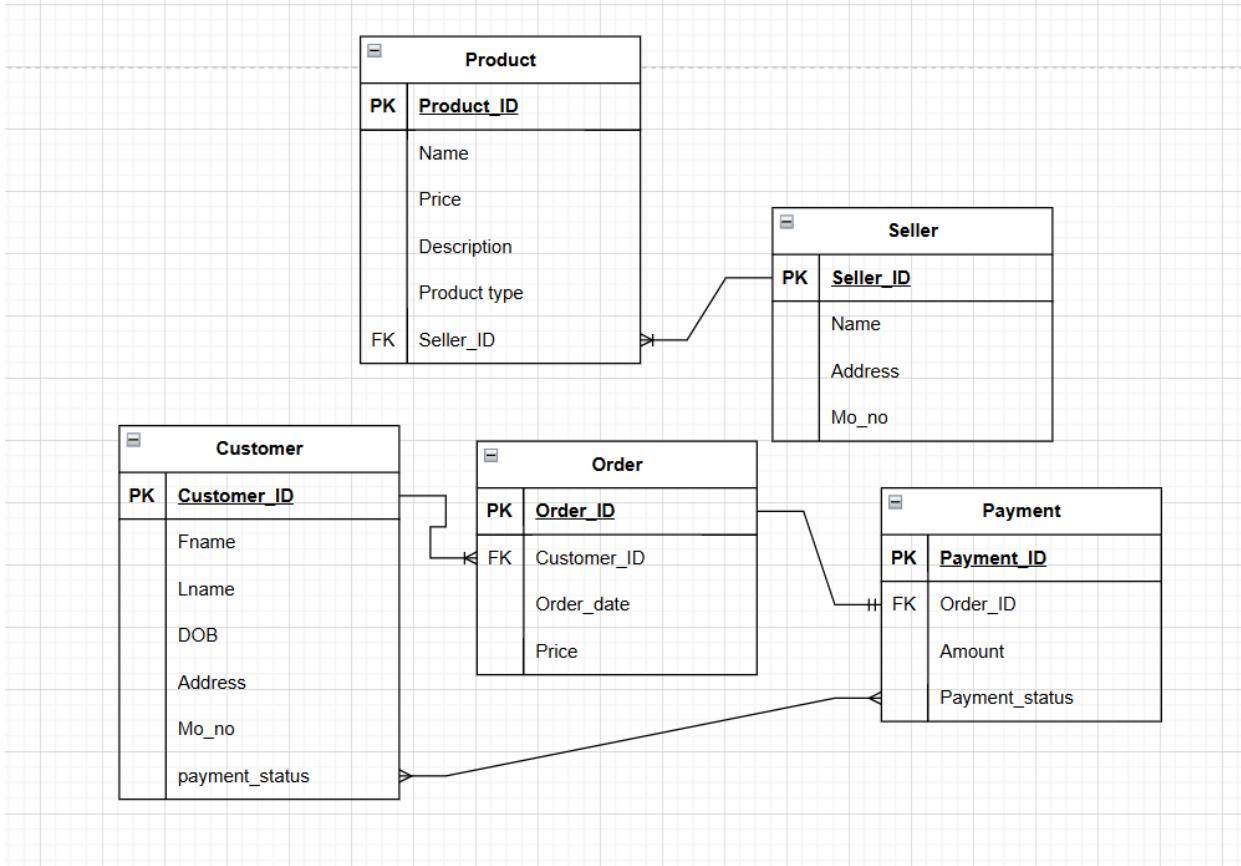
Time Action Message Duration / Fetch

Object Info Session

ENG IN 11:46 AM 4/13/2025

The screenshot shows the MySQL Workbench interface with a SQL editor tab open. The code in the editor creates four tables: Restaurant, User, Order_Table, and Delivery. It also includes several simple SELECT statements. The interface includes a Navigator pane, an Administration pane, and an Information pane. The bottom right corner displays system status icons and the date/time.

Q-5. Design an entity-relationship (ER) diagram for an Amazon services system and translate it into a relational database schema.



MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: SCHEMAS

Filter objects

Not connected

sql* x

105 |

106 |

107 -- Q-5

108 -- Create Seller table

109 • CREATE TABLE Seller (Seller_ID INT PRIMARY KEY,Name VARCHAR(255),Address VARCHAR(255),Mo_no VARCHAR(15));

110

111 -- Create Product table

112 • CREATE TABLE Product (Product_ID INT PRIMARY KEY,Name VARCHAR(255),Price DECIMAL(10,2),Description TEXT,Product_Type VARCHAR(100),Seller_ID INT);

113

114 -- Create Customer table

115 • CREATE TABLE Customer (Customer_ID INT PRIMARY KEY,Fname VARCHAR(255),Lname VARCHAR(255),DOB DATE,Address VARCHAR(255),Mo_no VARCHAR(15),Payment_Status VARCHAR(50));

116

117 -- Create Order table

118 • CREATE TABLE Order_Table (Order_ID INT PRIMARY KEY,Customer_ID INT,Order_Date DATE,Price DECIMAL(10,2));

119

120 -- Create Payment table

121 • CREATE TABLE Payment (Payment_ID INT PRIMARY KEY,Order_ID INT,Amount DECIMAL(10,2),Payment_Status VARCHAR(50));

122

123 -- Simple SELECT Query

124 • SELECT * FROM Seller;

125 • SELECT * FROM Product;

126 • SELECT * FROM Customer;

127 • SELECT * FROM Order_Table;

128 • SELECT * FROM Payment;

129

Output

Action Output

Time Action Message Duration / Fetch

Object Info Session

ENG IN 11:46 AM 4/13/2025

```
105 |
106 |
107 -- Q-5
108 -- Create Seller table
109 • CREATE TABLE Seller (Seller_ID INT PRIMARY KEY,Name VARCHAR(255),Address VARCHAR(255),Mo_no VARCHAR(15));
110
111 -- Create Product table
112 • CREATE TABLE Product (Product_ID INT PRIMARY KEY,Name VARCHAR(255),Price DECIMAL(10,2),Description TEXT,Product_Type VARCHAR(100),Seller_ID INT);
113
114 -- Create Customer table
115 • CREATE TABLE Customer (Customer_ID INT PRIMARY KEY,Fname VARCHAR(255),Lname VARCHAR(255),DOB DATE,Address VARCHAR(255),Mo_no VARCHAR(15),Payment_Status VARCHAR(50));
116
117 -- Create Order table
118 • CREATE TABLE Order_Table (Order_ID INT PRIMARY KEY,Customer_ID INT,Order_Date DATE,Price DECIMAL(10,2));
119
120 -- Create Payment table
121 • CREATE TABLE Payment (Payment_ID INT PRIMARY KEY,Order_ID INT,Amount DECIMAL(10,2),Payment_Status VARCHAR(50));
122
123 -- Simple SELECT Query
124 • SELECT * FROM Seller;
125 • SELECT * FROM Product;
126 • SELECT * FROM Customer;
127 • SELECT * FROM Order_Table;
128 • SELECT * FROM Payment;
129
```

Q-6. Design example of SQL clauses (WHERE) to filter, sort, and group data.

```

382
383 • use Takshay;
384 • select (count(*)) from customers
385   where firstname like 'b%' and lastname like 'v%';
386
387 • select * from customers
388   order by postalcode;
389
390 • select * from customers
391   where firstname like '_v%' and lastname like '%a';
392
393
394
395

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Result Grid

CustomerID	FirstName	LastName	Date_of_Birth	City	State	Country	PostalCode	Phone	Email	DateEntered
5001	Cleaning & Household	Yes	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL
5002	Kitchen, Garden & Pets	Yes	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL
5003	Foodgrains, Oil & Masala	Yes	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL
5004	Gourmet & World Food	Yes	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL
5005	Baby Care	No	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL
5006	Snacks & Branded Foods	Yes	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL
5007	Personal Care	Yes	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

customers 7 x Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	20:03:51	select * from customers where firstname like '_m%' and lastname like "%a"	0 row(s) returned	0.000 sec / 0.000 sec
6	20:03:55	select * from customers where firstname like '_m%' and lastname like "%a"	0 row(s) returned	0.000 sec / 0.000 sec
7	20:04:01	select * from customers where firstname like '_v%' and lastname like "%a"	1 row(s) returned	0.000 sec / 0.000 sec
8	20:04:28	select * from customers order by postalcode	536 row(s) returned	0.000 sec / 0.000 sec

```

397     -- sort
398
399 • select Category_id , Market_price
400   from products
401   order by sale_price desc;
402
403
404
405
406
407
408
409

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: | Result Grid

Category_id	Market_price
5002	12500
5002	10090
5008	10769
5002	12245
5002	9695
5002	10695
5002	6200

products 1 x Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
9	21:32:10	select Category_id , Market_price from products order by sale_prie desc	Error Code: 1054. Unknown column 'sale_prie' in 'order clause'	0.000 sec
10	21:32:50	select Category_id , Market_prie from products order by sale_prie desc	Error Code: 1054. Unknown column 'Market_prie' in field list'	0.000 sec
11	21:33:57	DEALLOCATE PREPARE stnt	OK	0.000 sec
12	21:34:22	select Category_id , Market_price from products order by sale_price desc	22088 row(s) returned	0.031 sec / 0.000 sec

MySQL Workbench

Local instance wampmysqld54

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL*

SCHEMAS: takshay

```

395 • select * from customers
396 where firstname like '_%k' and lastname like '%a';
397
398
399 -- sort
400
401 • select Category_id , Market_Price
402 from products
403 order by sale_price desc;
404
405 -- Group
406
407 • select *from customers
408 where phone like '_2%' and city like '%a';
409

```

Administration Schemas

Information: Schema: takshay

Result Grid | Export | Wrap Cell Content:

CustomerID	FirstName	LastName	DateOfBirth	City	State	Country	PostalCode	Phone	Email	DateEntered
57224	Debra	Nelson	1955-09-08	Denver	Colorado	United States	329286	8210480859	Debra.Nelson@gmail.com	2020-07-28
57321	Callum	Lennon	1977-04-01	Jajpur	Rajasthan	India	263944	6288062101	Callum.Lennon@gmail.com	2021-01-15
57334	Luca	Patricia	1963-08-05	Jajpur	Rajasthan	India	854599	6207332491	Luca.Patricia@gmail.com	2021-01-25

customers 2 x

Action Output

#	Time	Action	Message	Duration / Fetch
11	21:33:57	DEALLOCATE PREPARE stmt	OK	0.000 sec
12	21:34:22	select Category_id , Market_Price from products order by sale_price desc	22088 row(s) returned	0.031 sec / 0.000 sec
13	21:40:24	select *from customers where phone like '_2%' and city like '%a'	Error Code: 1146. Table 'takshay.customer' doesn't exist	0.000 sec
14	21:40:37	select *from customers where phone like '_2%' and city like '%a'	3 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

ENG IN 9:40 PM 4/12/2025

Q-7. Perform basic data manipulation operations such as inserting new records, updating existing records, and deleting records.

MySQL Workbench

Local instance wampmysqld54

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL*

SCHEMAS: takshay

```

411 -- Q-2
412
413 • create table Student_marks (student_id int primary key,
414 student_name varchar(50) NOT NULL,
415 English int,
416 Hindi int,
417 Maths int);
418
419 • Insert into Student_marks values (3,'Shubham', 1, 2, 3);
420
421
422
423
424
425
426
427
428
429
430
431
432
433

```

Administration Schemas

Information: No object selected

Action Output

#	Time	Action	Message	Duration / Fetch
1	22:03:13	use Takshay	0 row(s) affected	0.000 sec
2	22:03:17	Insert into Student_marks values (3,'Shubham', 1, 2, 3)	1 row(s) affected	0.015 sec

Object Info Session

ENG IN 10:03 PM 4/12/2025

MySQL Workbench

Local instance wampmysqld64 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL* ×

SCHEMAS

assignment sakila student sys takshay

Tables category customers orderdetails products sem2 stu_info student_details_1 student_details_2 student_marks

Views

Administration Schemas Information

No object selected

```
411 -- Q-2
412
413 • create table Student_marks (student_id int primary key,
414     student_name varchar(50) NOT NULL,
415     English int,
416     Hindi int,
417     Maths int);
418
419 • Insert into Student_marks values (3,'Shubham', 1, 2, 3);
420
421
422 -- update
423
424 • update student_marks
425 set maths = 9
426 where student_id = 3;
427
428
429
430
431
432
433
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	22:03:13	use Takshay	0 row(s) affected	0.00 sec
2	22:03:17	Insert into Student_marks values (3,'Shubham', 1, 2, 3)	1 row(s) affected	0.015 sec
3	22:06:34	update student_marks set maths = 9 where student_id = 3	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.015 sec

Object Info Session

ENG IN 10:06 PM 4/12/2025

MySQL Workbench

Local instance wampmysqld64 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL* ×

SCHEMAS

assignment sakila student sys takshay

Tables category customers orderdetails products sem2 stu_info student_details_1 student_details_2 student_marks

Views

Administration Schemas Information

No object selected

```
423
424 • update student_marks
425 set maths = 9
426 where student_id = 3;
427
428 -- delete
429
430 • delete from student_marks
431 where student_id = 3;
432
433
434
435
436
437
438
439
440
441
442
443
444
445
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	22:03:17	Insert into Student_marks values (3,'Shubham', 1, 2, 3)	1 row(s) affected	0.015 sec
2	22:06:34	update student_marks set maths = 9 where student_id = 3	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.015 sec
3	22:09:51	delete from student_marks where student_id = 3	1 row(s) affected	0.015 sec

Object Info Session

ENG IN 10:09 PM 4/12/2025

Q-8. Make a list of DDL, DML, DCL, and DQL commands.

✓ 1. DDL (Data Definition Language)

Used to define and modify database structure (schemas, tables, etc.)

Command	Description
CREATE	Creates database objects like tables, views, etc.
ALTER	Modifies existing database objects
DROP	Deletes database objects
TRUNCATE	Removes all records from a table (faster than DELETE, no rollback)
RENAME	Renames a table or a column
COMMENT	Adds comments to the data dictionary

✓ 2. DML (Data Manipulation Language)

Used to manage data within tables (insert, update, delete records)

Command	Description
INSERT	Inserts data into a table
UPDATE	Updates existing data in a table
DELETE	Deletes data from a table
MERGE	Combines INSERT and UPDATE operations
CALL	Calls a stored procedure

✓ 3. DCL (Data Control Language)

Used to control access to data in the database

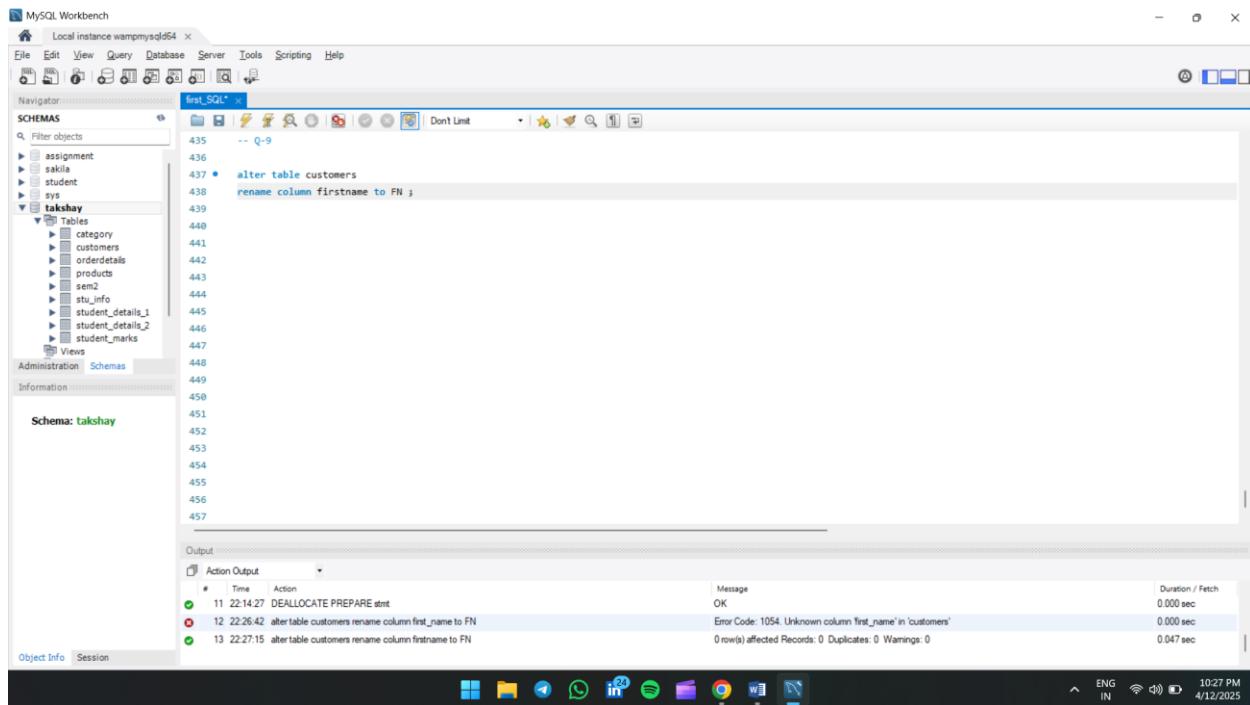
Command	Description
GRANT	Gives user access privileges to database
REVOKE	Removes user access privileges

✓ 4. DQL (Data Query Language)

Used to query and fetch data from a database

Command	Description
SELECT	Retrieves data from one or more tables

Q-9. Apply to alter command in table and change the column name, drop data, change the datatype of the column, and add the column in Table.



The screenshot shows the MySQL Workbench interface. In the SQL editor tab, titled 'first_SQL*', the following SQL code is visible:

```
435 -- Q-9
436
437 • alter table customers
438     rename column firstname to FN ;
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
```

The 'Output' pane shows the execution results:

Action	Time	Message	Duration / Fetch
DEALLOCATE PREPARE stmt	11 22:14:27	OK	0.000 sec
alter table customers rename column first_name to FN	12 22:26:42	Error Code: 1054. Unknown column 'first_name' in 'customers'	0.000 sec
alter table customers rename column firstname to FN	13 22:27:15	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.047 sec

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigators:

SCHEMAS

first_SQL*

```
439
440
441 • select *from customers;
442 • alter table customers
443 drop column FN;
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
```

No object selected

Information

Object Info Session

Action Output

#	Time	Action	Message	Duration / Fetch
1	22:32:48	use Takshay	0 row(s) affected	0.000 sec
2	22:32:53	alter table customers drop column FN;	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigators:

SCHEMAS

first_SQL*

```
442 drop column FN;
443
444 • alter table customers
445 modify column postcode bigint;
446
447 • use Takshay;
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
```

No object selected

Information

Action Output

#	Time	Action	Message	Duration / Fetch
1	10:14:34	use Takshay	0 row(s) affected	0.000 sec
2	10:14:37	alter table customers modify column postcode bigint	536 row(s) affected Records: 536 Duplicates: 0 Warnings: 0	0.062 sec

Object Info Session

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL

SCHEMAS: assignment, sakila, student, sys, takshay

Tables: category, customers, orderdetails, orders, products, sem2, stu_info, student_details_1, student_details_2, student_marks

No object selected

```

448
449 • alter table customers
450 add total_c int;
451
452
453
454
455
456
457
458
459
460
461 • use Takshay;
462
463
464
465
466
467
468
469
470

```

Output:

#	Time	Action	Message	Duration / Fetch
1	10:14:34	use Takshay	0 row(s) affected	0.000 sec
2	10:14:37	alter table customers modify column postalcode bigint	536 row(s) affected Records: 536 Duplicates: 0 Warnings: 0	0.062 sec
3	10:19:13	alter table customers add total_c int	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec

Object Info Session

ENG IN 10:19 AM 4/13/2025

10. Practice using SQL clauses (ORDER BY) to filter, sort, and group data.

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL

SCHEMAS: assignment, sakila, student, sys, takshay

Tables: category, customers, orderdetails, orders, products, sem2, stu_info, student_details_1, student_details_2, student_marks

No object selected

```

451
452
453 -- Q-10
454
455 • select customerid , city
456   from customers
457   where state = 'new york'
458   having city = 'new york'
459   order by city desc;
460
461
462
463
464

```

Result Grid:

customerid	city
57081	New York
57082	New York
57154	New York
57157	New York
57169	New York
57196	New York
57215	New York

customers 3

Output:

#	Time	Action	Message	Duration / Fetch
4	10:25:13	select *from customers	536 row(s) returned	0.000 sec / 0.000 sec
5	10:30:53	select *from customers	536 row(s) returned	0.000 sec / 0.000 sec
6	10:33:25	select customerid , city from customers where state = 'new york' having city = 'new york' order by city desc	12 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

ENG IN 10:33 AM 4/13/2025

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL*

SCHEMAS: assignment, sakila, student, sys, takshay

Tables: category, customers, orderdetails, orders, products, sem2, stu_info, student_details_1, student_details_2, student_marks

first_SQL*:

```

462
463 -- use of group
464
465 • select city, count(*) from customers
466   group by city
467   order by city desc;
468
469
470
471
472
473
474
475

```

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid Form Editor Read Only

No object selected

city	count(*)
Zurich	24
Yekaterinburg	4
Wroclaw	7
Wollongong	1
Woerden	1
Wijk bij Duurstede	1
Wellington	5

Result 5 x

Action Output

#	Time	Action	Message	Duration / Fetch
7	10:44:41	select city, count(*) from customers group by city	138 row(s) returned	0.000 sec / 0.000 sec
8	10:45:10	select city, count(*) from customers group by city order by customers desc	Error Code: 1054. Unknown column 'customers' in 'order clause'	0.015 sec
9	10:45:32	select city, count(*) from customers group by city order by city desc	138 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

ENG IN 10:45 AM 4/13/2025

Q-11. Explore different JOIN operations (INNER JOIN) to retrieve data from multiple related tables.

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL*

SCHEMAS: assignment, sakila, student, sys, takshay

Tables: category, customers, orderdetails, orders, products, sem2, stu_info, student_details_1, student_details_2, student_marks

first_SQL*:

```

469
470 -- Q-11
471
472 • select * from student_details_1 as a
473   inner join student_details_2 as b
474   on a.student_id = b.student_id;
475
476
477
478
479
480
481
482 • use Takshay;
483

```

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid Form Editor Read Only

No object selected

student_id	student_name	English	student_id	hind
1	Devanshi	99	1	90
3	Neel	100	3	88

Result 6 x

Action Output

#	Time	Action	Message	Duration / Fetch
8	10:45:10	select city, count(*) from customers group by city order by customers desc	Error Code: 1054. Unknown column 'customers' in 'order clause'	0.015 sec
9	10:45:32	select city, count(*) from customers group by city order by city desc	138 row(s) returned	0.000 sec / 0.000 sec
10	10:48:59	select * from student_details_1 as a inner join student_details_2 as b on a.student_id = b.student_id	2 row(s) returned	0.015 sec / 0.000 sec

Object Info Session

ENG IN 10:49 AM 4/13/2025

Q-12. Explore different JOIN operations (LEFT JOIN) to retrieve data from multiple related tables.

The screenshot shows the MySQL Workbench interface with a query editor window titled 'first_SQL*'. The code entered is:

```

475
476
477 -- Q-12
478
479 * select * from student_details_1 as a
480 left join student_details_2 as b
481 on a.student_id = b.student_id;
482
483
484
485
486 * use Takshay;
487
488

```

The 'Result Grid' shows the following data:

student_id	student_name	English	student_id	hind
1	Devanshi	99	1	90
2	shubham	98		
3	Neel	100	3	88

The 'Result 7' pane shows the execution log:

Action	Time	Action	Message	Duration / Fetch
select city, count(*) from customers group by city order by city desc	9 10:45:32		138 row(s) returned	0.000 sec / 0.000 sec
select * from student_details_1 as a inner join student_details_2 as b on a.student_id = b.student_id;	10 10:48:59		2 row(s) returned	0.015 sec / 0.000 sec
select * from student_details_1 as a left join student_details_2 as b on a.student_id = b.student_id;	11 10:52:21		3 row(s) returned	0.000 sec / 0.000 sec

Q-13. Explore different JOIN operations (RIGHT JOIN) to retrieve data from multiple related tables.

The screenshot shows the MySQL Workbench interface with a query editor window titled 'first_SQL*'. The code entered is:

```

482
483
484
485 * select * from student_details_1 as a
486 right join student_details_2 as b
487 on a.student_id = b.student_id;
488
489
490
491
492 * use Takshay;
493
494
495

```

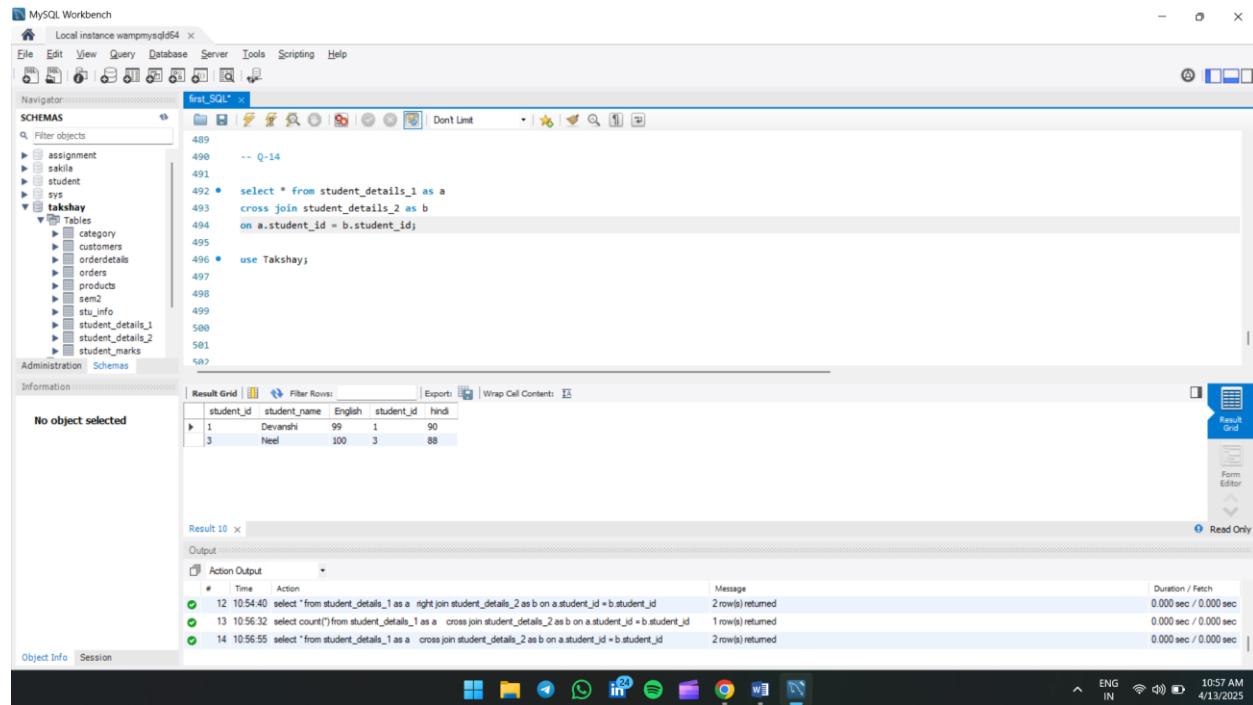
The 'Result Grid' shows the following data:

student_id	student_name	English	student_id	hind
1	Devanshi	99	1	90
3	Neel	100	3	88

The 'Result 8' pane shows the execution log:

Action	Time	Action	Message	Duration / Fetch
select * from student_details_1 as a inner join student_details_2 as b on a.student_id = b.student_id;	10 10:48:59		2 row(s) returned	0.015 sec / 0.000 sec
select * from student_details_1 as a left join student_details_2 as b on a.student_id = b.student_id;	11 10:52:21		3 row(s) returned	0.000 sec / 0.000 sec
select * from student_details_1 as a right join student_details_2 as b on a.student_id = b.student_id;	12 10:54:40		2 row(s) returned	0.000 sec / 0.000 sec

Q-14. Explore different JOIN operations (CROSS JOIN) to retrieve data from multiple related tables.



The screenshot shows the MySQL Workbench interface with a query editor window titled "first_SQL*". The code entered is:

```

489 -- Q-14
490
491 • select * from student_details_1 as a
492 cross join student_details_2 as b
493 on a.student_id = b.student_id;
494
495
496 • use Takshay;
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521 • use Takshay;
522

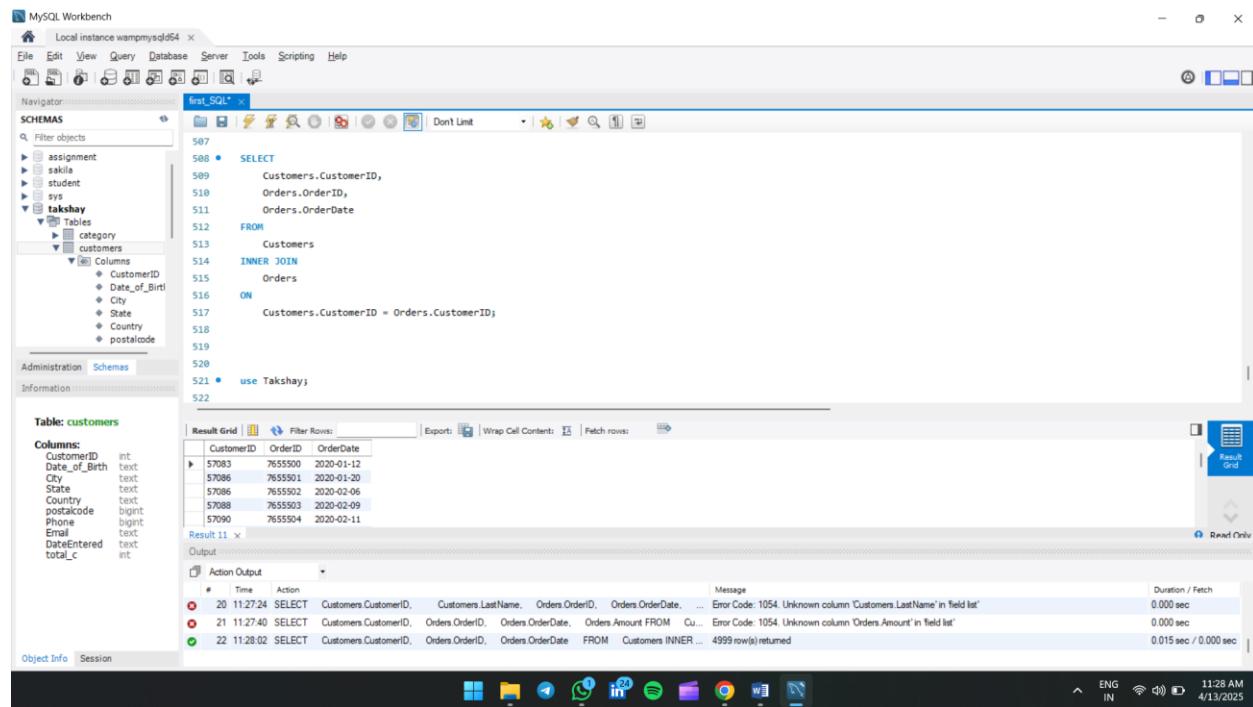
```

The result grid shows the following data:

student_id	student_name	English	student_id	Hindi
1	Devanshi	99	1	90
3	Neel	100	3	88

The status bar at the bottom right indicates: ENG IN 10:57 AM 4/13/2025.

Q-15. Explore different JOIN operations (INNER JOIN, LEFT JOIN, RIGHT JOIN) to retrieve data from multiple related tables.



The screenshot shows the MySQL Workbench interface with a query editor window titled "first_SQL*". The code entered is:

```

507
508 • SELECT
509     Customers.CustomerID,
510     Orders.OrderID,
511     Orders.OrderDate
512 FROM
513     Customers
514     INNER JOIN
515         Orders
516     ON
517         Customers.CustomerID = Orders.CustomerID;
518
519
520
521 • use Takshay;
522

```

The result grid shows the following data:

CustomerID	OrderID	OrderDate
57083	765500	2020-01-12
57086	765501	2020-01-20
57086	765502	2020-02-06
57088	765503	2020-02-09
57090	765504	2020-02-11

The status bar at the bottom right indicates: ENG IN 11:28 AM 4/13/2025.

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL*

```

521 •   SELECT
522     Customers.CustomerID,
523     Orders.OrderID,
524     Orders.OrderDate
525
526   FROM
527     Customers
528   LEFT JOIN
529     Orders
530   ON
531     Customers.CustomerID = Orders.CustomerID;
532
533
534
535

```

Table: customers

Columns:

CustomerID	int
Date_of_Birth	text
City	text
State	text
Country	text
postalcode	bigint
Phone	bigint
Email	text
DateEntered	text
total_c	int

Result Grid | Filter Rows: Export: Wrap Cell Contents: Fetch rows: Result Grid Read Only

CustomerID	OrderID	OrderDate
57081	7659816	2021-11-20
57081	765786	2021-07-07
57081	7656575	2021-03-27
57081	7655984	2020-10-22
57081	7655923	2020-10-06

Action Output

#	Time	Action	Message	Duration / Fetch
21	11:27:40	SELECT	Customers.CustomerID, Orders.OrderID, Orders.OrderDate, Orders.Amount FROM Customers INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;	0.00 sec
22	11:28:02	SELECT	Customers.CustomerID, Orders.OrderID, Orders.OrderDate FROM Customers INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;	0.015 sec / 0.000 sec
23	11:30:38	SELECT	Customers.CustomerID, Orders.OrderID, Orders.OrderDate FROM Customers LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;	0.015 sec / 0.000 sec

Object Info Session

ENG IN 11:30 AM 4/13/2025

MySQL Workbench

Local instance wampmysqld64

File Edit View Query Database Server Tools Scripting Help

Navigator: first_SQL*

```

531     Customers.CustomerID = Orders.CustomerID;
532
533
534
535 •   SELECT
536     Customers.CustomerID,
537     Orders.OrderID,
538     Orders.OrderDate
539   FROM
540     Customers
541   RIGHT JOIN
542     Orders
543   ON
544     Customers.CustomerID = Orders.CustomerID;
545
546

```

Table: customers

Columns:

CustomerID	int
Date_of_Birth	text
City	text
State	text
Country	text
postalcode	bigint
Phone	bigint
Email	text
DateEntered	text
total_c	int

Result Grid | Filter Rows: Export: Wrap Cell Contents: Fetch rows: Result Grid Read Only

CustomerID	OrderID	OrderDate
57083	765590	2020-01-12
57086	7655901	2020-01-20
57088	7655902	2020-02-06
57088	7655903	2020-02-09
57090	7655904	2020-02-11

Action Output

#	Time	Action	Message	Duration / Fetch
22	11:28:02	SELECT	Customers.CustomerID, Orders.OrderID, Orders.OrderDate FROM Customers INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID;	0.015 sec / 0.000 sec
23	11:30:38	SELECT	Customers.CustomerID, Orders.OrderID, Orders.OrderDate FROM Customers LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;	0.015 sec / 0.000 sec
24	11:31:39	SELECT	Customers.CustomerID, Orders.OrderID, Orders.OrderDate FROM Customers RIGHT JOIN Orders ON Customers.CustomerID = Orders.CustomerID;	0.016 sec / 0.000 sec

Object Info Session

ENG IN 11:31 AM 4/13/2025