

MySQL Workbench

Local instance MySQL80 x MySQL Model' x EER Diagram x EER Diagram2 x

File Edit View Arrange Model Database Tools Scripting Help

Bird's Eye

Zoom: 100%

Catalog Tree

- mydb
 - Tables
 - Views
 - Routine Groups
 - employee
 - aircargo

Description Editor

route_details: Table

Diagram

customer

- customer_id INT
- first_name TEXT
- last_name TEXT
- date_of_birth TEXT
- gender TEXT

ticket_details

- p_date TEXT
- customer_id INT
- aircraft_id TEXT
- class_id TEXT
- no_of_tickets INT
- a_code TEXT
- Price_per_ticket INT
- brand TEXT

routes

- route_id INT
- flight_num INT
- origin_airport TEXT
- destination_airport TEXT
- aircraft_id TEXT
- distance_miles INT

passengers_on_flights

- customer_id INT
- aircraft_id TEXT
- route_id INT
- depart TEXT
- arrival TEXT
- seat_num TEXT
- class_id TEXT
- travel_date TEXT
- flight_num INT

route_details

- route_id INT
- flight_num INT
- origin_airport CHAR(3)
- destination_airport CHAR(3)
- aircraft_id VARCHAR(20)
- distance_miles VARCHAR(10)

Modeling Additions

- timestamps**
create_time, update_time
- user**
username, email, password...
- category**
category_id, name

14:20 02/12/2024

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Navigator: ScienceQtech Employee Perfor... SQL File 5* customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

SCHEMAS

Filter objects

aircargo

- Tables
 - customer
 - passengers_on_flights
 - Columns
 - Indexes
 - Foreign Keys
 - Triggers
 - routes
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- Views
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- employee

Administration Schemas

Information

Schema: aircargo

Result Grid

Filter Rows: Export: Wrap Cell Contents: Limit to 1000 rows

20

21 # 3. Write a query to display all the passengers (customers) who have travelled in routes 01 to 25. Take data from the passengers_on_flights table.

22

23 SELECT * FROM passengers_on_flights WHERE route_id <= 25;

24

	customer_id	aircraft_id	route_id	depart	arrival	seat_num	class_id	travel_date	flight_num
2	767-301ER	4	JFK	LAX	01E	Economy	02-09-2018	1114	
1	ERJ142	9	DEN	LAX	01EP	Economy Plus	26-12-2019	1119	
5	767-301ER	12	ABI	ADK	02B	Bussiness	02-07-2018	1122	
5	ERJ142	18	ANI	BGR	02E	Economy	06-05-2020	1128	
4	767-301ER	5	LAX	JFX	02FC	First Class	06-04-2020	1115	
7	767-301ER	20	AVL	BOI	03B	Bussiness	08-07-2020	1130	
5	ERJ142	22	BGR	BJI	03E	Economy	31-05-2020	1132	
4	767-301ER	4	JFK	LAX	03FC	First Class	30-04-2020	1114	
11	767-301ER	5	LAX	JFX	04B	Bussiness	12-11-2020	1115	
17	A321	13	ABI	ADK	04EP	Economy Plus	03-06-2019	1115	
9	767-301ER	15	CAK	ANI	04FC	First Class	10-09-2020	1125	
11	767-301ER	4	JFK	LAX	05B	Bussiness	09-11-2020	1114	
10	A321	10	HNL	DEN	05E	Economy	11-10-2020	1120	
15	A321	14	BQN	CAK	06B	Bussiness	02-11-2018	1124	
13	A321	13	ADK	BQN	06FC	First Class	05-01-2019	1123	
22	ERJ142	22	BGR	BJI	07EP	Economy Plus	09-02-2020	1132	
24	A321	14	BQN	CAK	08B	Bussiness	22-07-2019	1124	
25	767-301ER	23	BLV	BFL	09B	Bussiness	07-03-2019	1133	
50	A321	21	BFL	BET	10EP	Economy Plus	15-08-2020	1131	
29	ERJ142	9	DEN	LAX	11B	Bussiness	03-05-2018	1119	
44	767-301ER	15	CAK	ANI	11FC	First Class	06-10-2020	1125	

passengers_on_flights 25 x

Output

Object Info Session

Query Completed

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Navigator: ScienceQtech Employee Perform... SQL File 5* customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

SCHEMAS

Filter objects

aircargo

Tables

customer

passengers_on_flights

Columns

Indexes

Foreign Keys

Triggers

routes

ticket_details

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Stored Procedures

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employee

Administration Schemas

Information

Schema: aircargo

Limit to 1000 rows

24

25 # 4. Write a query to identify the number of passengers and total revenue in business class from the ticket_details table.

26

27 • SELECT * FROM ticket_details WHERE class_id = 'Business';

28

Result Grid

Filter Rows:

Export:

Wrap Cell Contents:

p_date	customer_id	aircraft_id	class_id	no_of_tickets	a_code	Price_per_ticket	brand
03-03-2020	21	CRJ900	Business	1	BOH	490	British Airways
07-07-2020	7	767-301ER	Business	1	BFS	430	Emirates
11-11-2020	11	767-301ER	Business	1	AGB	465	Emirates
03-03-2019	25	767-301ER	Business	1	BHX	499	Emirates
07-07-2019	24	A321	Business	1	CTM	480	Qatar Airways
22-10-2019	29	A321	Business	1	PEK	410	Qatar Airways
25-01-2019	2	A321	Business	1	YVR	505	Qatar Airways
01-04-2018	29	ERJ142	Business	1	EME	510	Jet Airways
01-07-2018	5	767-301ER	Business	1	BFS	430	Emirates
01-11-2018	15	A321	Business	1	BFS	430	Qatar Airways
12-03-2020	33	CRJ900	Business	1	BOH	490	British Airways
17-07-2020	49	767-301ER	Business	1	BFS	430	Emirates
08-11-2020	11	767-301ER	Business	1	AGB	465	Emirates

ticket_details 27 x

Output

Query Completed

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Navigator SCHEMAS

Filter objects

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Schema: aircargo

SQL File 5* customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

Limit to 1000 rows

```
26
27 • SELECT * FROM ticket_details WHERE class_id = 'Business';
28
29 • SELECT SUM(price_per_ticket) FROM ticket_details WHERE class_id = 'Business';
30
```

Result Grid

SUM(price_per_ticket)
6034

Result 28 x Read Only

Output

Query Completed

MySQL Workbench

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File Edit View Query Database Server Tools Scripting Help

Navigator SCHEMAS

Filter objects

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Schema: aircargo

SQL File 5' x customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

Limit to 1000 rows

30

31 # 5. Write a query to display the full name of the customer by extracting the first name and last name from the customer table.

32

33 • SELECT first_name, last_name FROM customer;

34

Result Grid

Filter Rows:

Export:

Wrap Cell Contents:

first_name	last_name
Jule	Sam
Steve	Ryan
Morris	Lois
Cathenna	Emilly
Aaron	Kim
Alexander	Scot
Anderson	Stewart
Floyd	Ted
Leo	Travis
Melvin	Tracy
Roger	Walson
Shirley	Wally
Solomon	Walter
Carol	Vernon
Linda	William
Christine	Willis
Catherine	Shad
Gloria	Riche
Joyce	Paul
Sara	Oliver
Chiretu	Ineh

customer 20 x

Output

Read Only

Object Info Session

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Schema: aircargo

ScienceQtech Employee Perfor...SQL File 5*customer - Tablepassengers_on_flights - Tableroutes - Tablepassengers_on_flights - Tablecustomer - Tableticket_details - Table

Limit to 1000 rows

6. Write a query to extract the customers who have registered and booked a ticket. Use data from the customer and ticket_details tables.

SELECT * FROM ticket_details;

7. Write a query to identify the customer's first name and last name based on their customer ID and brand (Emirates) from the ticket_details table.

Result Grid

p_date	customer_id	aircraft_id	class_id	no_of_tickets	a_code	Price_per_ticket	brand
26-12-2018	27	767-301ER	Economy	1	DAL	130	Emirates
02-02-2020	22	ERJ142	Economy Plus	1	AGB	220	Jet Airways
03-03-2020	21	CRJ900	Bussiness	1	BOH	490	Bristish Airways
04-04-2020	4	767-301ER	First Class	1	AGB	390	Emirates
05-05-2020	5	ERJ142	Economy	1	CTM	120	Jet Airways
07-07-2020	7	767-301ER	Bussiness	1	BFS	430	Emirates
08-08-2020	8	A321	Economy Plus	1	DAL	275	Qatar Airways
09-09-2020	9	767-301ER	First Class	1	BOH	380	Emirates
10-10-2020	10	A321	Economy	1	MCO	135	Qatar Airways
11-11-2020	11	767-301ER	Bussiness	1	AGB	465	Emirates
12-12-2020	19	CRJ900	Economy Plus	1	DEN	225	Bristish Airways
01-01-2019	13	A321	First Class	1	YVR	395	Qatar Airways
02-02-2019	14	ERJ142	Economy	1	CTM	120	Jet Airways
03-03-2019	25	767-301ER	Bussiness	1	BHX	499	Emirates
04-04-2019	16	CRJ900	First Class	1	YVR	395	Bristish Airways
03-05-2019	17	A321	Economy Plus	1	BFS	250	Qatar Airways
06-06-2019	18	767-301ER	Economy	1	YVR	190	Emirates
07-07-2019	24	A321	Bussiness	1	CTM	480	Qatar Airways
09-08-2019	20	CRJ900	First Class	1	MCO	365	Bristish Airways
21-09-2019	25	767-301ER	Economy	1	BOH	150	Emirates
22-10-2019	29	A321	Bussiness	1	DFK	410	Qatar Airways

ticket_details 30 x

Output

Object InfoSession

Query Completed

Read Only

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SCHEMAS

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Administration Schemas

Information

Schema: aircargo

Result Grid

Filter Rows: Exports: Wrap Cell Content: I

	customer_id	first_name	last_name	date_of_birth	gender	p_date	customer_id	aircraft_id	class_id	no_of_tickets	a_code	Price_per_ticket	brand
27	Cherly	Vernon	19-03-1992	F	26-12-2018	27	767-301ER	Economy	1	DAL	130	Emirates	
4	Cathenna	Emily	14-09-1977	F	04-04-2020	4	767-301ER	First Class	1	AGB	390	Emirates	
7	Anderson	Stewart	11-01-1992	M	07-07-2020	7	767-301ER	Bussiness	1	BFS	430	Emirates	
9	Leo	Travis	22-03-1994	M	09-09-2020	9	767-301ER	First Class	1	BOH	380	Emirates	
11	Roger	Walson	24-05-1996	M	11-11-2020	11	767-301ER	Bussiness	1	AGB	465	Emirates	
25	Moss	Morris	18-02-2011	M	03-03-2019	25	767-301ER	Bussiness	1	BHX	499	Emirates	
18	Gloria	Richie	04-12-1989	F	06-06-2019	18	767-301ER	Economy	1	YVR	190	Emirates	
25	Moss	Morris	18-02-2011	M	21-09-2019	25	767-301ER	Economy	1	BOH	150	Emirates	
14	Carol	Vernon	27-08-1999	F	24-12-2019	14	767-301ER	Economy	1	BHX	170	Emirates	
19	Joyce	Paul	02-06-1990	F	01-02-2018	19	767-301ER	Economy	1	AGB	100	Emirates	
18	Gloria	Richie	04-12-1989	F	01-03-2018	18	767-301ER	First Class	1	BFS	375	Emirates	
5	Aaron	Kim	18-02-1991	M	01-07-2018	5	767-301ER	Bussiness	1	BFS	430	Emirates	
2	Steve	Ryan	03-04-1983	M	01-09-2018	2	767-301ER	Economy	1	DAL	130	Emirates	
31	James	Robert	12-04-1994	M	19-12-2018	31	767-301ER	Economy	1	DAL	130	Emirates	
4	Cathenna	Emily	14-09-1977	F	29-04-2020	4	767-301ER	First Class	1	AGB	390	Emirates	
49	Russell	Peter	01-06-1996	M	17-07-2020	49	767-301ER	Bussiness	1	BFS	430	Emirates	
44	Bily	Brian	26-10-2002	M	05-09-2020	44	767-301ER	First Class	1	BOH	380	Emirates	
11	Roger	Walson	24-05-1996	M	08-11-2020	11	767-301ER	Bussiness	1	AGB	465	Emirates	

Result 31 x Read Only

Output

Object Info Session

Query Completed

MySQL Workbench

Local instance MySQL80 x MySQL Model x EER Diagram x EER Diagram2 x

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Navigator

SCHEMAS

Filter objects

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Administration Schemas

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Schema: aircargo

Object Info Session

Query Completed

ScienceQtech Employee Perform... SQL File 5* customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

Limit to 1000 rows

8. Write a query to identify the customers who have travelled by Economy Plus class using Group By and Having clause on the passengers_on_flights table.

9. Write a query to identify whether the revenue has crossed 10000 using the IF clause on the ticket_details table.

SELECT customer_id, class_id FROM passengers_on_flights WHERE class_id = 'economy plus' GROUP BY customer_id HAVING class_id = 'economy plus';

Result Grid

customer_id	class_id
1	Economy Plus
8	Economy Plus
11	Economy Plus
17	Economy Plus
19	Economy Plus
22	Economy Plus
32	Economy Plus
47	Economy Plus
50	Economy Plus

passengers_on_flights 32 x

Output

Read Only

MySQL Workbench

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Schema: aircargo

SQL File 5*

Limit to 1000 rows

```
47 # 9. Write a query to identify whether the revenue has crossed 10000 using the IF clause on the ticket_details table.
48 Execute the selected portion of the script or everything, if there is no selection
49 • SELECT IF(SUM(price_per_ticket) > 10000, 'yes', 'no') FROM ticket_details;
50
51 # 10. Write a query to create and grant access to a new user to perform operations on a database.
```

Result Grid

Filter Rows:

Export:

Wrap Cell Contents:

IF(SUM(price_per_ticket) > 10000, 'yes', 'no')
yes

Result 33 x

Output

Read Only

Object Info Session

Query Completed

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Navigator SCHEMAS

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Schema: aircargo

SQL File 5* customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

Limit to 1000 rows

```
53 CREATE USER 'newuser'@'localhost' IDENTIFIED BY 'password';
54
55 # 11. Write a query to find the maximum ticket price for each class using window functions on the ticket_details table.
56
57 SELECT DISTINCT class_id, MAX(price_per_ticket) OVER (partition by class_id) FROM ticket_details;
```

Result Grid

class_id	MAX(price_per_ticket) OVER (partition by class_id)
Business	510
Economy	190
Economy Plus	295
First Class	395

Filter Rows: Export: Wrap Cell Contents

Result 34 x Read Only

Output

Query Completed

MySQL Workbench

Local instance MySQL80 x MySQL Model x EER Diagram x EER Diagram2 x

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Navigator

SCHEMAS

Filter objects

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Administration Schemas

Information

Schema: aircargo

SQL File 5*

Limit to 1000 rows

```
59 # 12. Write a query to extract the passengers whose route ID is 4 by improving the speed and performance of the passengers_on_flights table.
60
61 SELECT Customer_id, route_id FROM passengers_on_flights WHERE route_id = 4;
62
63 -- for the route ID 4, write a query to view the execution plan of the passengers_on_flights table.
```

Result Grid

Customer_id	route_id
2	4
4	4
11	4

passengers_on_flights 35 x

Output

Query Completed

MySQL Workbench

Local instance MySQL80 x MySQL Model x EER Diagram x EER Diagram2 x

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Navigator SCHEMAS

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Schema: aircargo

SQL File 5* customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

Limit to 1000 rows

```
62
63 -- For the route ID 4, write a query to view the execution plan of the passengers_on_flights table.
64
65 • EXPLAIN SELECT route_id FROM passengers_on_flights WHERE route_id = 4;
66
```

Result Grid

	id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
▶	1	SIMPLE	passengers_on_flights	NULL	ALL	NULL	NULL	NULL	NULL	50	10.00	Using where

Result 36 x Read Only

Output

Object Info Session

Query Completed

MySQL Workbench

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Navigator SCHEMAS

Filter objects

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Administration Schemas

Information

Schema: aircargo

SQL File 5*

Limit to 1000 rows

```
65 • EXPLAIN SELECT route_id FROM passengers_on_flights WHERE route_id = 4;
66
67 # 13. Write a query to calculate the total price of all tickets booked by a customer across different aircraft IDs using rollup function.
68
69 • SELECT customer_id, SUM(price_per_ticket) FROM ticket_details WHERE customer_id = 2 GROUP BY customer_id, price_per_ticket WITH ROLLUP;
```

Result Grid

customer_id	SUM(price_per_ticket)
2	130
2	505
2	635
NULL	635

Result 37 x

Output

Query Completed

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SQL File 5*

Limit to 1000 rows

70

71 # 14. Write a query to create a view with only business class customers along with the brand of airlines.

72

73 • CREATE VIEW business_customers AS SELECT customer_id, class_id, brand FROM ticket_details WHERE class_id = 'business';

74 • SELECT * FROM business_customers;

Result Grid

Filter Rows:

Exports

Wrap Cell Contents

customer_id	class_id	brand
21	Business	British Airways
7	Business	Emirates
11	Business	Emirates
25	Business	Emirates
24	Business	Qatar Airways
29	Business	Qatar Airways
2	Business	Qatar Airways
29	Business	Jet Airways
5	Business	Emirates
15	Business	Qatar Airways
33	Business	British Airways
49	Business	Emirates
11	Business	Emirates

business_customers38 x

Read Only

Output

Query Completed

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SQL File 5* customer - Table passengers_on_flights - Table routes - Table passengers_on_flights - Table customer - Table ticket_details - Table

Limit to 1000 rows

16. Write a query to extract the first record of the customer whose last name ends with Scott using a cursor from the customer table.

```
SELECT * FROM customer WHERE last_name LIKE '%scott';
```

Result Grid

customer_id	first_name	last_name	date_of_birth	gender
37	Samuel	Scott	01-2000	M
38	Alexis	Scott	01-10-2001	M

customer 39 x Apply

Output

Query Completed