

MySQL Workbench

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Schema: oltp_olap

Query 1 SQL File 3 SQL File 4

1 USE oltp_olap;

2

3 CREATE TABLE customers (

4 customer_id INT AUTO_INCREMENT PRIMARY KEY,

5 name VARCHAR(100),

6 email VARCHAR(100) UNIQUE,

7 registered_date DATE

8);

9 CREATE TABLE products (

10 product_id INT AUTO_INCREMENT PRIMARY KEY,

11 name VARCHAR(100),

12 category VARCHAR(50),

13 price DECIMAL(10,2)

14);

15 CREATE TABLE stores (

16 store_id INT AUTO_INCREMENT PRIMARY KEY,

17 name VARCHAR(100),

18 region VARCHAR(50)

19);

20 CREATE TABLE transactions (

21 transaction_id INT AUTO_INCREMENT PRIMARY KEY,

22 customer_id INT,

23 product_id INT,

24 store_id INT,

25 quantity INT NOT NULL,

Output

Action Output

Time	Action	Message	Duration / Fetch
1 09:11:46	CREATE DATABASE OLTP_OLAP	1 row(s) affected	0.031 sec
2 09:47:24	USE oltp_olap	Error Code: 1049: Unknown database 'oltp_olap'	0.079 sec
3 09:47:39	USE oltp_olap	0 row(s) affected	0.000 sec
4 09:48:06	USE oltp_olap	0 row(s) affected	0.000 sec

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Query 1 SQL File 3 SQL File 4

27 FOREIGN KEY (customer_id) REFERENCES customers(customer_id),

28 FOREIGN KEY (product_id) REFERENCES products(product_id),

29 FOREIGN KEY (store_id) REFERENCES stores(store_id)

30);

31

32

33

34

35 INSERT INTO customers (name, email, registered_date)

36 VALUES

37 ('Alice Smith', 'alice@example.com', '2025-01-10'),

38 ('Bob Brown', 'bob@example.com', '2025-02-01');

39 INSERT INTO products (name, category, price)

40 VALUES

41 ('T-Shirt', 'Apparel', 19.99),

42 ('Laptop', 'Electronics', 999.00);

43 INSERT INTO stores (name, region)

44 VALUES

45 ('Downtown Store', 'East'),

46 ('Mall Outlet', 'West');

47 INSERT INTO transactions (customer_id, product_id, store_id, quantity, transaction_date)

48 VALUES

49 (1, 1, 1, 2, '2025-05-01'),

50 (2, 2, 1, '2025-05-03');

Output

Action Output

Time	Action	Message	Duration / Fetch
4 09:48:06	USE oltp_olap	0 row(s) affected	0.000 sec
5 09:51:01	INSERT INTO transactions (customer_id, product_id, store_id, quantity, transaction_date) VALUES (1, 1, 1, 2, 2025-05-01)	Error Code: 1146: Table 'oltp_olap.transactions' doesn't exist	0.109 sec
6 09:51:52	USE oltp_olap	0 row(s) affected	0.000 sec
7 09:52:52	USE oltp_olap	0 row(s) affected	0.000 sec
8 09:53:00	CREATE TABLE customers (customer_id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), email VAR...	0 row(s) affected	0.125 sec
9 09:53:13	CREATE TABLE products (product_id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), category VA...	0 row(s) affected	0.031 sec
10 09:53:18	CREATE TABLE stores (store_id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), region VARCHAR(50)	0 row(s) affected	0.032 sec
11 09:53:32	CREATE TABLE transactions (transaction_id INT AUTO_INCREMENT PRIMARY KEY, customer_id INT, product_id I...	0 row(s) affected	0.047 sec
12 09:53:46	INSERT INTO customers (name, email, registered_date) VALUES ('Alice Smith', 'alice@example.com', '2025-01-10'), ('Bob...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
13 09:53:52	INSERT INTO products (name, category, price) VALUES ('T-Shirt', 'Apparel', 19.99), ('Laptop', 'Electronics', 999.00)	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.009 sec
14 09:54:00	INSERT INTO stores (name, region) VALUES ('Downtown Store', 'East'), ('Mall Outlet', 'West')	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
15 09:54:04	INSERT INTO transactions (customer_id, product_id, store_id, quantity, transaction_date) VALUES (1, 1, 1, 2, 2025-05-01)...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec

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Schema: retail_db

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Query Completed

Query 1 SQL File 3

Limit to 1000 rows

```
54 CREATE TABLE dim_date (
55     date_id INT AUTO_INCREMENT PRIMARY KEY,
56     full_date DATE,
57     day INT,
58     month INT,
59     year INT
60 );
61 CREATE TABLE dim_product (
62     product_id INT PRIMARY KEY,
63     name VARCHAR(100),
64     category VARCHAR(50)
65 );
66 CREATE TABLE dim_store (
67     store_id INT PRIMARY KEY,
68     name VARCHAR(100),
69     region VARCHAR(50)
70 );
71 CREATE TABLE fact_sales (
72     product_id INT,
73     store_id INT,
74     date_id INT,
75     quantity_sold INT,
76     revenue DECIMAL(10,2)
77 );
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
8	09:53:00	CREATE TABLE customers (customer_id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), email VAR...	0 rows affected	0.125 sec
9	09:53:13	CREATE TABLE products (product_id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), category VA...	0 rows affected	0.031 sec
10	09:53:18	CREATE TABLE stores (store_id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), region VARCHAR...	0 rows affected	0.032 sec
11	09:53:32	CREATE TABLE transactions (transaction_id INT AUTO_INCREMENT PRIMARY KEY, customer_id INT, product_id I...	0 rows affected	0.047 sec
12	09:53:46	INSERT INTO customers (name, email, registered_date) VALUES ('Alice Smith', 'alice@example.com', '2025-01-10'); (Bob...	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
13	09:53:52	INSERT INTO products (name, category, price) VALUES ('T-Shirt', 'Apparel', 19.99); ('Laptop', 'Electronics', 999.00);	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.003 sec
14	09:54:00	INSERT INTO stores (name, region) VALUES ('Downtown Store', 'East'); ('Mall Outlet', 'West');	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
15	09:54:04	INSERT INTO transactions (customer_id, product_id, store_id, quantity, transaction_date) VALUES ((1, 1, 1, 2, '2025-05-01'...	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
16	09:55:34	CREATE TABLE dim_date (date_id INT AUTO_INCREMENT PRIMARY KEY, full_date DATE, day INT, month INT...	0 rows affected	0.031 sec
17	09:55:43	CREATE TABLE dim_product (product_id INT PRIMARY KEY, name VARCHAR(100), category VARCHAR(50))	0 rows affected	0.032 sec
18	09:55:51	CREATE TABLE dim_store (store_id INT PRIMARY KEY, name VARCHAR(100), region VARCHAR(50))	0 rows affected	0.016 sec
19	09:55:57	CREATE TABLE fact_sales (product_id INT, store_id INT, date_id INT, quantity_sold INT, revenue DECIMAL(10...	0 rows affected	0.032 sec

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Query Completed

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Schema: retail_db

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Query interrupted

Query 1 SQL File 4

Limit to 1000 rows

```
65 );
66 CREATE TABLE dim_store (
67     store_id INT PRIMARY KEY,
68     name VARCHAR(100),
69     region VARCHAR(50)
70 );
71 CREATE TABLE fact_sales (
72     product_id INT,
73     store_id INT,
74     date_id INT,
75     quantity_sold INT,
76     revenue DECIMAL(10,2)
77 );
78
79
80
81 INSERT INTO dim_date (full_date, day, month, year)
82 VALUES
83 (
84     ('2025-05-01', 1, 5, 2025),
85     ('2025-05-03', 3, 5, 2025)
86 );
87 INSERT INTO dim_product (product_id, name, category)
88 SELECT product_id, name, category FROM products;
89 INSERT INTO dim_store (store_id, name, region)
90 SELECT store_id, name, region FROM stores;
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
13	09:53:52	INSERT INTO products (name, category, price) VALUES ('T-Shirt', 'Apparel', 19.99); ('Laptop', 'Electronics', 999.00);	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.000 sec
14	09:54:00	INSERT INTO stores (name, region) VALUES ('Downtown Store', 'East'); ('Mall Outlet', 'West');	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
15	09:54:04	INSERT INTO transactions (customer_id, product_id, store_id, quantity, transaction_date) VALUES ((1, 1, 1, 2, '2025-05-01'...	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
16	09:55:34	CREATE TABLE dim_date (date_id INT AUTO_INCREMENT PRIMARY KEY, full_date DATE, day INT, month INT...	0 rows affected	0.031 sec
17	09:55:43	CREATE TABLE dim_product (product_id INT PRIMARY KEY, name VARCHAR(100), category VARCHAR(50))	0 rows affected	0.032 sec
18	09:55:51	CREATE TABLE dim_store (store_id INT PRIMARY KEY, name VARCHAR(100), region VARCHAR(50))	0 rows affected	0.016 sec
19	09:55:57	CREATE TABLE fact_sales (product_id INT, store_id INT, date_id INT, quantity_sold INT, revenue DECIMAL(10...	0 rows affected	0.032 sec
20	09:57:02	INSERT INTO dim_date (full_date, day, month, year) VALUES ('2025-05-01', 1, 5, 2025); ('2025-05-03', 3, 5, 2025);	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.000 sec
21	09:57:07	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
22	09:57:14	INSERT INTO dim_store (store_id, name, region) SELECT store_id, name, region FROM stores	2 rows affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
23	09:57:19	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062 Duplicate entry '1' for key 'dim_product PRIMARY'	0.015 sec
24	09:57:25	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062 Duplicate entry '1' for key 'dim_product PRIMARY'	0.016 sec

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Query interrupted

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Query Completed

Query 1 SQL File 3 SQL File 4

Limit to 1000 rows

```
96 t.store_id,
97 d.date_id,
98 t.quantity,
99 t.quantity * p.price AS revenue
100 FROM
101 transactions t
102 JOIN
103 products p ON t.product_id = p.product_id
104 JOIN
105 dim_date d ON t.transaction_date = d.full_date;
106
107
108
109
110 SELECT d.month, SUM(fs.revenue) AS total_revenue
111 FROM fact_sales fs
112 JOIN dim_date d ON fs.date_id = d.date_id
113 GROUP BY d.month
114 ORDER BY d.month;
```

Result Grid

month total_revenue

5 3038.98

Result 1

Output

Action Output

Time	Action	Message	Duration / Fetch
15 09:54:04	INSERT INTO transactions (customer_id, product_id, store_id, quantity, transaction_date) VALUES ((1, 1, 1, 2, '2025-05-01'),	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
16 09:55:04	CREATE TABLE dim_date (date_id INT AUTO_INCREMENT PRIMARY KEY, full_date DATE, day INT, month IN...	0 row(s) affected	0.031 sec
17 09:55:43	CREATE TABLE dim_product (product_id INT PRIMARY KEY, name VARCHAR(100), category VARCHAR(50))	0 row(s) affected	0.032 sec
18 09:55:51	CREATE TABLE dim_store (store_id INT PRIMARY KEY, name VARCHAR(100), region VARCHAR(50))	0 row(s) affected	0.016 sec
19 09:55:57	CREATE TABLE fact_sales (product_id INT, store_id INT, date_id INT, quantity_sold INT, revenue DECIMAL(1...	0 row(s) affected	0.032 sec
20 09:57:02	INSERT INTO dim_date (full_date, day, month, year) VALUES ('2025-05-01', 1, 5, 2025), ('2025-05-03', 3, 5, 2025)	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.000 sec
21 09:57:07	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
22 09:57:14	INSERT INTO dim_store (store_id, name, region) SELECT store_id, name, region FROM stores	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
23 09:57:19	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062 Duplicate entry '1' for key 'dim_product PRIMARY'	0.015 sec
24 09:57:25	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062 Duplicate entry '1' for key 'dim_product PRIMARY'	0.016 sec
25 09:58:54	INSERT INTO fact_sales (product_id, store_id, date_id, quantity_sold, revenue) SELECT 1, product_id, 1, store_id, d.da...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.047 sec
26 09:59:25	SELECT d.month, SUM(fs.revenue) AS total_revenue FROM fact_sales fs JOIN dim_date d ON fs.date_id = d.date_id GROU...	1 row(s) returned	0.015 sec / 0.000 sec

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Query Completed

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Schema: retail_db

Query 1 SQL File 3 SQL File 4

```
98 t.quantity,
99 t.quantity * p.price AS revenue
100 FROM
101 transactions t
102 JOIN
103 products p ON t.product_id = p.product_id
104 JOIN
105 dim_date d ON t.transaction_date = d.full_date;
106
107
108
109 SELECT d.month, SUM(fs.revenue) AS total_revenue
110 FROM fact_sales fs
111 JOIN dim_date d ON fs.date_id = d.date_id
112 GROUP BY d.month
113 ORDER BY d.month;
114 SELECT dp.name, SUM(fs.quantity_sold) AS total_units
115 FROM fact_sales fs
```

Result Grid

	name	total_units
1	Laptop	1

Result 2

Output

Action Output

#	Time	Action	Message	Duration / Fetch
15	09:55:34	CREATE TABLE dim_date (date_id INT AUTO_INCREMENT PRIMARY KEY, full_date DATE, day INT, month IN...	0 row(s) affected	0.021 sec
17	09:55:43	CREATE TABLE dim_product (product_id INT PRIMARY KEY, name VARCHAR(100), category VARCHAR(50))	0 row(s) affected	0.032 sec
18	09:55:51	CREATE TABLE dim_store (store_id INT PRIMARY KEY, name VARCHAR(100), region VARCHAR(50))	0 row(s) affected	0.016 sec
19	09:55:57	CREATE TABLE fact_sales (product_id INT, store_id INT, date_id INT, quantity_sold INT, revenue DECIMAL(1...	0 row(s) affected	0.032 sec
20	09:57:02	INSERT INTO dim_date (full_date, day, month, year) VALUES (2025-05-01, 1, 5, 2025), (2025-05-02, 2, 5, 2025)	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.000 sec
21	09:57:07	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
22	09:57:14	INSERT INTO dim_store (store_id, name, region) SELECT store_id, name, region FROM stores	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
23	09:57:19	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062. Duplicate entry '1' for key 'dim_product PRIMARY'	0.015 sec
24	09:57:25	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062. Duplicate entry '1' for key 'dim_product PRIMARY'	0.016 sec
25	09:58:54	INSERT INTO fact_sales (product_id, store_id, date_id, quantity_sold, revenue) SELECT 1, product_id, 1, store_id, d.da...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.047 sec
26	09:59:25	SELECT d.month, SUM(fs.revenue) AS total_revenue FROM fact_sales fs JOIN dim_date d ON fs.date_id = d.date_id GROU...	1 row(s) returned	0.015 sec / 0.000 sec
27	10:00:04	SELECT dp.name, SUM(fs.quantity_sold) AS total_units FROM fact_sales fs JOIN dim_product dp ON fs.product_id = dp.prod...	2 row(s) returned	0.000 sec / 0.000 sec

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Schema: retail_db

Setup sample_data olap_schema oltp_schema analytical_queries dim Populate erl

```
1 CREATE DATABASE OLTP_OLAP;
2 USE OLTP_OLAP;
```

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#	Time	Action	Message	Duration / Fetch
17	09:55:43	CREATE TABLE dim_product (product_id INT PRIMARY KEY, name VARCHAR(100), category VARCHAR(50))	0 row(s) affected	0.032 sec
18	09:55:51	CREATE TABLE dim_store (store_id INT PRIMARY KEY, name VARCHAR(100), region VARCHAR(50))	0 row(s) affected	0.016 sec
19	09:55:57	CREATE TABLE fact_sales (product_id INT, store_id INT, date_id INT, quantity_sold INT, revenue DECIMAL(1...	0 row(s) affected	0.032 sec
20	09:57:02	INSERT INTO dim_date (full_date, day, month, year) VALUES (2025-05-01, 1, 5, 2025), (2025-05-02, 2, 5, 2025)	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.000 sec
21	09:57:07	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.016 sec
22	09:57:14	INSERT INTO dim_store (store_id, name, region) SELECT store_id, name, region FROM stores	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.015 sec
23	09:57:19	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062. Duplicate entry '1' for key 'dim_product PRIMARY'	0.015 sec
24	09:57:25	INSERT INTO dim_product (product_id, name, category) SELECT product_id, name, category FROM products	Error Code: 1062. Duplicate entry '1' for key 'dim_product PRIMARY'	0.016 sec
25	09:58:54	INSERT INTO fact_sales (product_id, store_id, date_id, quantity_sold, revenue) SELECT 1, product_id, 1, store_id, d.da...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0	0.047 sec
26	09:59:25	SELECT d.month, SUM(fs.revenue) AS total_revenue FROM fact_sales fs JOIN dim_date d ON fs.date_id = d.date_id GROU...	1 row(s) returned	0.015 sec / 0.000 sec
27	10:00:04	SELECT dp.name, SUM(fs.quantity_sold) AS total_units FROM fact_sales fs JOIN dim_product dp ON fs.product_id = dp.prod...	2 row(s) returned	0.000 sec / 0.000 sec
28	10:11:35	CREATE DATABASE retail_db	Error Code: 1007. Can't create database 'retail_db'; database exists	0.076 sec

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