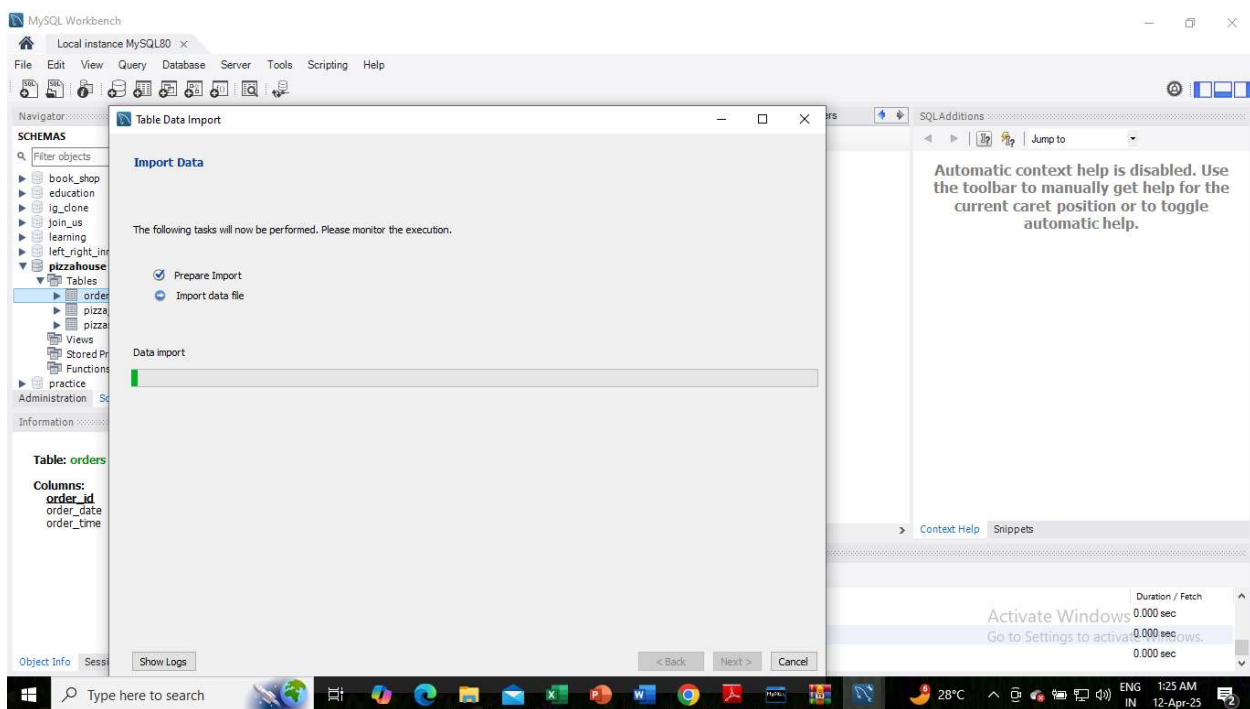
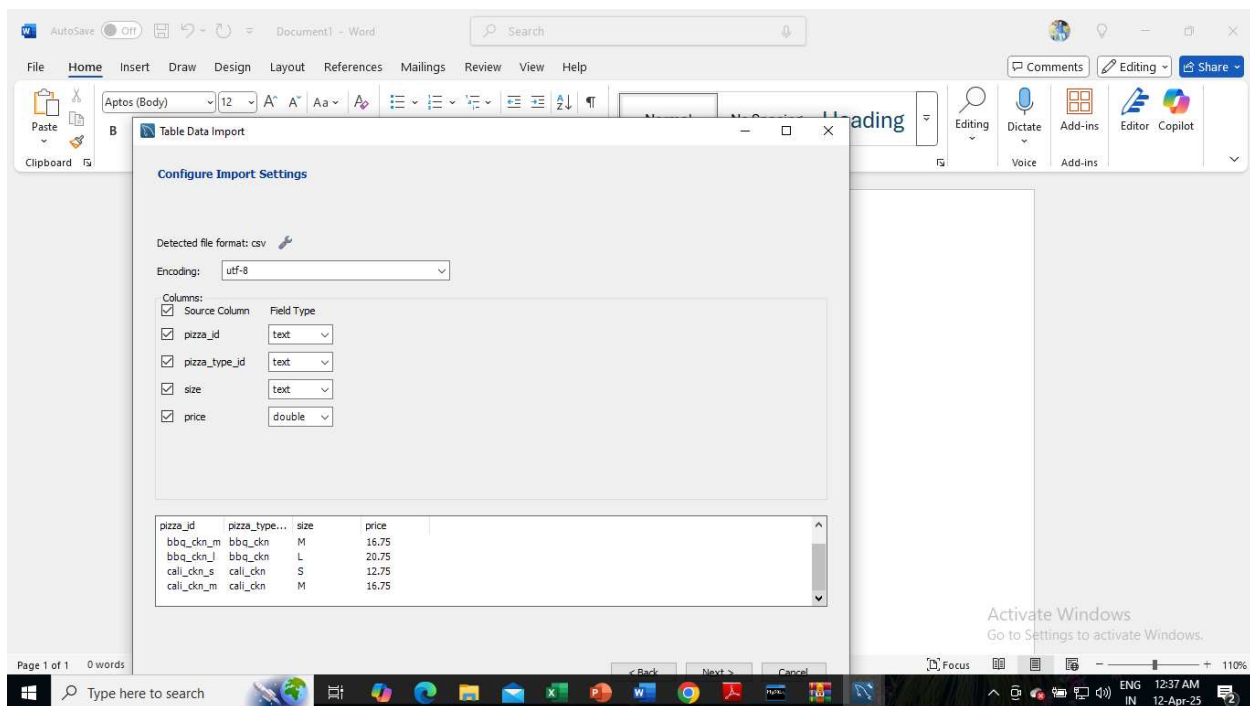
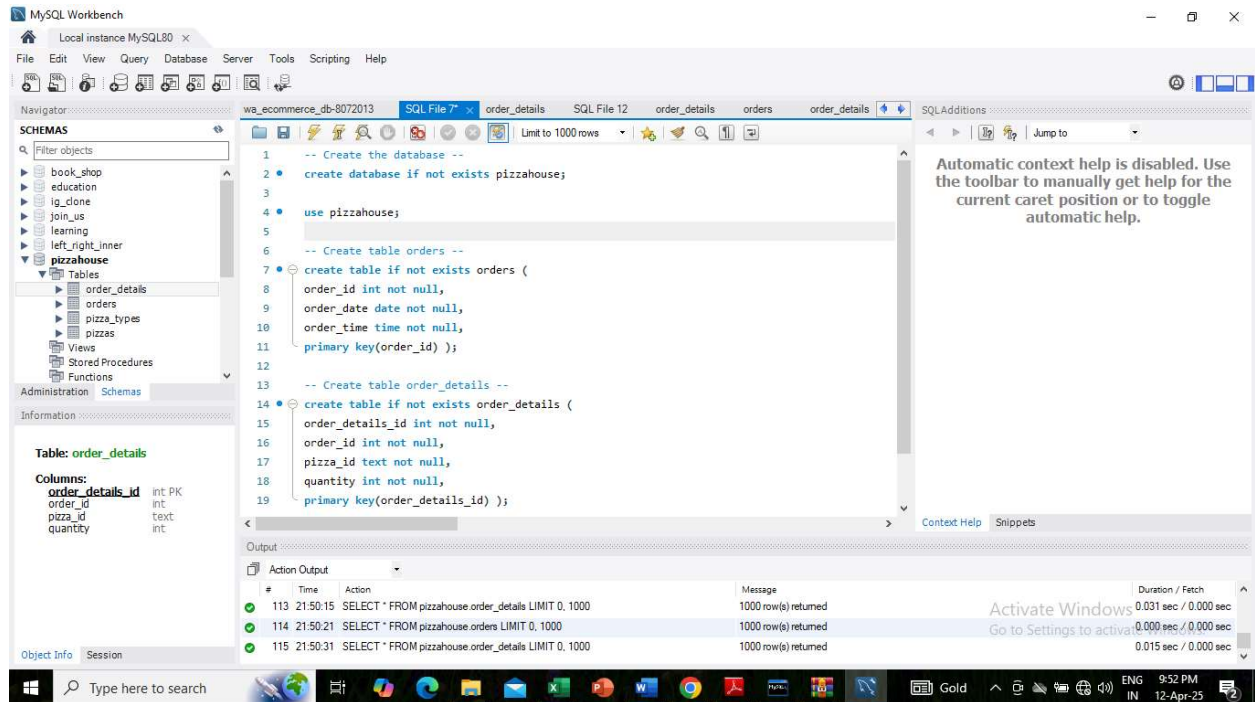


Loading data along with the table from excel using SQL workbench



As some datatypes are not available while we are trying to import data from a .csv file, we have created the tables using SQL workbench and then we will be directly loading the data onto it.



Below are the queries performed to analyse the data-

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'pizzahouse' database selected. The 'order_details' table is highlighted. The main editor window shows a query: `-- Retrieving total number of orders placed` followed by `select count(*) as total_orders from orders;`. The 'Result Grid' shows a single row with the value 21350. The 'Action Output' pane at the bottom shows the execution log with three entries, all successful.

#	Time	Action	Message	Duration / Fetch
116	21:57:48	SELECT * FROM pizzahouse.orders LIMIT 0, 1000	1000 row(s) returned	0.000 sec / 0.000 sec
117	21:58:38	select count(*) from orders LIMIT 0, 1000	1 row(s) returned	1.735 sec / 0.000 sec
118	22:01:54	select count(*) as total_orders from orders LIMIT 0, 1000	1 row(s) returned	0.016 sec / 0.000 sec

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'pizzahouse' database selected. The 'order_details' table is highlighted. The main editor window shows a query: `-- Calculate the total revenue generated from pizza sales.` followed by `select round(sum(p.price*o_d.quantity),2) as total from order_details as o_d left join pizzas as p on o_d.pizza_id=p.pizza_id;`. The 'Result Grid' shows a single row with the value 817860.05. The 'Action Output' pane at the bottom shows the execution log with three entries, all successful.

#	Time	Action	Message	Duration / Fetch
139	22:28:41	select o_d.*, p.*,sum(p.price*o_d.quantity) as total from order_details as o_d left join pizz...	Error Code: 1140. In aggregated query without GROUP BY, expression #1 of SELECT is...	0.360 sec
140	22:28:50	select sum(p.price*o_d.quantity) as total from order_details as o_d left join pizzas as p on...	1 row(s) returned	0.578 sec / 0.000 sec
141	22:31:52	select round(sum(p.price*o_d.quantity),2) as total from order_details as o_d left join pizz...	1 row(s) returned	0.516 sec / 0.000 sec

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- book_shop
- education
- ig_clone
- join_us
- learning
- left_right_inner
- pizzahouse
 - Tables
 - order_details
 - orders
 - pizza_types
 - pizzas
 - Views
 - Stored Procedures
 - Functions

Administration Schemas

Information

Table: **order_details**

Columns:

- order_details_id int PK
- order_id int
- pizza_id text
- quantity int

Object Info Session

SQL File 14* pizza_types

```
1 -- Identifying the highest-priced pizza.
2 SELECT
3     p_t.name, p.price
4 FROM
5     pizza_types AS p_t
6 LEFT JOIN
7     pizzas AS p ON p_t.pizza_type_id = p.pizza_type_id
8 ORDER BY p.price DESC
9 LIMIT 1;
```

Result Grid

name	price
The Greek Pizza	35.95

Result 10 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
151	07:41:31	select p_t.name,p.price from pizza_types as p_t left join pizzas as p on p_t.pizza_type_id...	96 row(s) returned	0.218 sec / 0.000 sec
152	07:41:43	select p_t.name,p.price from pizza_types as p_t left join pizzas as p on p_t.pizza_type_id...	96 row(s) returned	0.047 sec / 0.000 sec
153	07:41:55	select p_t.name,p.price from pizza_types as p_t left join pizzas as p on p_t.pizza_type_id...	1 row(s) returned	0.078 sec / 0.000 sec

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Activate Windows
Go to Settings to activate Windows.

25°C 7:44 AM 13-Apr-25

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- book_shop
- education
- ig_clone
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- learning
- left_right_inner
- pizzahouse
 - Tables
 - order_details
 - orders
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 - Stored Procedures
 - Functions

Administration Schemas

Information

Table: **order_details**

Columns:

- order_details_id int PK
- order_id int
- pizza_id text
- quantity int

Object Info Session

SQL File 15* orders

```
1 -- Identifying the most common pizza size ordered.
2 SELECT
3     p.size, count(*) as count
4 FROM
5     order_details AS o_d
6 LEFT JOIN
7     pizzas AS p ON o_d.pizza_id = p.pizza_id
8 group by p.size
9 order by count desc
10 limit 1;
```

Result Grid

size	count
L	18526

Result 17 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
171	08:48:00	SELECT p.size, count(*) as count FROM order_details AS o_d LEFT JOIN	4 row(s) returned	0.875 sec / 0.000 sec
172	08:48:14	SELECT p.size, count(*) as count FROM order_details AS o_d LEFT JOIN	5 row(s) returned	0.859 sec / 0.000 sec
173	08:48:25	SELECT p.size, count(*) as count FROM order_details AS o_d LEFT JOIN	1 row(s) returned	0.875 sec / 0.000 sec

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Activate Windows
Go to Settings to activate Windows.

8:54 AM 13-Apr-25

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Schemas

Filter objects

book_shop
education
ig_clone
join_us
learning
left_right_inner
pizzahouse
Tables
order_details
orders
pizza_types
pizzas
Views
Stored Procedures
Functions

Administration Schemas

Information

Table: **order_details**

Columns:

order_details_id int PK
order_id int
pizza_id text
quantity int

SQL File 14*

1 -- List the top 5 most ordered pizza types along with their quantities.
2
3 SELECT
4 p_t.name AS pizza_name,
5 SUM(o_d.quantity) AS ordered_quantity
6 FROM
7 order_details AS o_d
8 LEFT JOIN
9 pizzas AS p ON o_d.pizza_id = p.pizza_id
10 LEFT JOIN
11 pizza_types AS p_t ON p.pizza_type_id = p_t.pizza_type_id
12 GROUP BY pizza_name
13 ORDER BY ordered_quantity DESC
14 LIMIT 5

Result Grid

pizza_name	ordered_quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

Result 7 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
179	09:53:48	select p.pizza_type_id as pizza_type, sum(quantity) as ordered_quantity, p_t.name from ...	Error Code: 1055. Expression #3 of SELECT list is not in GROUP BY clause and contains ...	0.063 sec
180	10:03:06	select p_t.name as pizza_name, sum(o_d.quantity) as ordered_quantity from order_detail...	5 row(s) returned	1.718 sec / 0.000 sec
181	10:10:38	SELECT p_t.name AS pizza_name, SUM(o_d.quantity) AS ordered_quantity FROM ...	5 row(s) returned	1.250 sec / 0.000 sec

Object Info Session

Windows taskbar: Type here to search, 30°C, 10:10 AM 13-Apr-25

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Using a subquery-

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Schemas

Filter objects

learning
left_right_inner
pizzahouse
Tables
order_details
orders
pizza_types
pizzas
Views
Stored Procedures
Functions

Administration Schemas

Information

Table: **order_details**

Columns:

order_details_id int PK
order_id int
pizza_id text
quantity int

SQL File 23*

1 -- Group the orders by date and calculate the average number of pizzas ordered per day.
2
3 select round(avg(order_quantity)) from
4 (SELECT
5 o.order_date, SUM(o_d.quantity) AS order_quantity
6 FROM
7 order_details AS o_d
8 JOIN orders AS o ON o_d.order_id = o.order_id
9 GROUP BY o.order_date) as order_quantity_datetimes
10
11

Result Grid

round(avg(order_quantity))
138

Result 1 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
263	17:51:45	create index idx_order_date on orders (order_date)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	2.422 sec
264	17:51:55	show indexes from orders	2 row(s) returned	0.062 sec / 0.000 sec
265	18:12:35	select round(avg(order_quantity)) from (SELECT o.order_date, SUM(o_d.quantity) as order_quantity_datetimes	1 row(s) returned	0.608 sec / 0.000 sec

Object Info Session

Windows taskbar: Type here to search, 6:12 PM 13-Apr-25

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

book_shop
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left_right_inner
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Tables
order_details
orders
pizza_types
pizzas
Views
Stored Procedures
Functions

Administration Schemas

Table: **order_details**

Columns:

order_details_id int PK
order_id int
pizza_id text
quantity int

SQL File 15* orders order_details SQL File 16* SQL File 17* pizzas SQL File 18* x SQLAdditions

Limit to 1000 rows

1 -- Determine the distribution of orders by hour of the day.
2
3
4 SELECT
5 HOUR(order_time) AS hour_of_order,
6 COUNT(order_id) order_count
7
8 FROM
9 orders
10 GROUP BY hour_of_order;

Result Grid

hour_of_order	order_count
11	1231
12	2520
13	2455
14	1472
15	1468

Result 6 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
190	12:03:57	select hour(order_time) as hour_of_order, count(order_id) from orders group by hour_of_order	15 row(s) returned	0.156 sec / 0.000 sec
191	12:04:11	select hour(order_time) as hour_of_order, count(order_id) count from orders group by hour_of_order	15 row(s) returned	0.063 sec / 0.000 sec
192	12:05:29	select hour(order_time) as hour_of_order, count(order_id) order_count from orders group by hour_of_order	15 row(s) returned	0.047 sec / 0.000 sec

Object Info Session

Windows taskbar: Type here to search, 37°C, 12:06 PM 13-Apr-25

Creating view to reduce the effort of writing the tedious codes and call the view whenever required-

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

book_shop
education
ig_clone
join_us
learning
left_right_inner
pizzahouse
Tables
order_details
orders
pizza_types
pizzas
Views
Stored Procedures
Functions

Administration Schemas

Table: **order_details**

Columns:

order_details_id int PK
order_id int
pizza_id text
quantity int

SQL File 17* pizzas SQL File 18* SQL File 19* pizza_types SQL File 20* x orders order_details

Limit to 1000 rows

1 -- Group the orders by date and calculate the average number of pizzas ordered per day.
2
3
4 create view order_quantity_datewise as
5
6 SELECT
7 o.order_date, SUM(o_d.quantity) AS order_quantity
8
9 FROM
10 order_details AS o_d
11 JOIN orders AS o ON o_d.order_id = o.order_id
12 GROUP BY o.order_date;
13
14 select round(avg(order_quantity)) from order_quantity_datewise;

Result Grid

round(avg(order_quantity))
138

Result 27 x

Read Only

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
236	16:46:46	select avg(order_quantity) from order_quantity_datewise LIMIT 0, 1000	1 row(s) returned	0.485 sec / 0.000 sec
237	16:47:09	select round(avg(order_quantity)) from order_quantity_datewise LIMIT 0, 1000	1 row(s) returned	0.515 sec / 0.000 sec
238	16:47:17	select round(avg(order_quantity)) from order_quantity_datewise LIMIT 0, 1000	1 row(s) returned	0.500 sec / 0.000 sec

Object Info Session

Windows taskbar: Type here to search, 38°C, 4:48 PM 13-Apr-25

Using where clause-

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
-- Find the count of orders which were ordered after 6 pm
select count(order_id) from orders where hour(order_time)>17;
```

The result grid shows a single row with the count of 7939.

The Information tab shows the table structure for **order_details**:

Column	PK	int	PK
order_details_id			
order_id			
pizza_id			
quantity			

The Action Output tab shows the execution results:

#	Time	Action	Message	Duration / Fetch
249	17:05:07	select hour(order_time),count(order_id) as hour_of_order from orders where hour(order_time)>17	Error Code: 1140. In aggregated query without GROUP BY, expression #1 of SELECT is not in GROUP BY clause	0.047 sec
250	17:05:23	select count(order_id) as hour_of_order from orders where hour(order_time)>17 LIMIT 0, 1000	1 row(s) returned	0.360 sec / 0.000 sec
251	17:05:37	select count(order_id) from orders where hour(order_time)>17 LIMIT 0, 1000	1 row(s) returned	0.016 sec / 0.000 sec

Process of creating index which will be useful when doing the search operations.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
-- Using index
create index idx_order_date
on orders (order_date);
show indexes from orders;
```

The result grid shows the index creation results:

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null
orders	0	PRIMARY	1	order_id	A	21320			
orders	1	idx_order_date	1	order_date	A	358			

The Action Output tab shows the execution results:

#	Time	Action	Message	Duration / Fetch
262	17:38:42	create index idx_pizza_id on order_details(pizza_id)	Error Code: 1170. BLOB/TEXT column 'pizza_id' used in key specification without a key length	0.344 sec
263	17:51:45	create index idx_order_date on orders (order_date)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	2.422 sec
264	17:51:55	show indexes from orders	2 row(s) returned	0.062 sec / 0.000 sec

