

Retail Sales Report (SQL)

*Analyzing monthly &
regional sales trends using
SQL*

Sql project for data analytics

Slide 2 - Project Overview

Objective:

Analyze retail sales data to identify top-performing regions, categories, and monthly trends.

Support business strategy with data-driven insights.

Tools Used:

MySQL Workbench - SQL Queries

Dataset Description

Database: retail_sales_db

Tables:

- 1.customers - Customer details
- 2.products - Product details
- 3.regions - Region mapping
- 4.sales - Sales transactions

Filter objects

- Tables
- Views
- Stored Procedures
- Functions
- ▶ sakila
- ▶ sys
- ▶ world

Information

2

2

► customers

products

regions

sales

Result 14 

Output

Action Output

#	Time	Action	Message	Duration / Fetch
64	00:37:07	DESCRIBE customers	3 row(s) returned	0.000 sec / 0.000 sec
65	00:38:15	SELECT * FROM sales LIMIT 10	5 row(s) returned	0.000 sec / 0.000 sec
66	00:38:15	SELECT * FROM products LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec
67	00:38:15	SELECT * FROM regions LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec
68	00:38:15	SELECT * FROM customers LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec
69	01:29:08	SHOW TABLES	4 row(s) returned	0.031 sec / 0.000 sec

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MySQL Workbench

Local instance MySQL80

FileEditViewQueryDatabaseServerToolsScriptingHelp

Navigator

retail_sales_db

SCHEMAS

Filter objects

retail_sales_db

- Tables
- Views
- Stored Procedures
- Functions

sakila

sys

world

1SHOW TABLES;

2SELECT *

3FROM customers

4LIMIT 05;

5

Result Grid

Filter Rows:

Edit

Export/Import:

Wrap Cell Content:

Result Grid

Form Editor

	customer_id	customer_name	region_id
▶	201	John Doe	1
	202	Jane Smith	2
	203	Michael Brown	3
	204	Emily Davis	4
*	NULL	NULL	NULL

Administration

Schemas

Information

Schema: retail_sales_db

Object Info

Session

Result 17

customers 18

Output

Action Output

	#	Time	Action	Message	Duration / Fetch
✓	68	00:38:15	SELECT * FROM customers LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec
✓	69	01:29:08	SHOW TABLES	4 row(s) returned	0.031 sec / 0.000 sec
✓	70	01:30:28	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓	71	01:30:28	SELECT * FROM customers LIMIT 10	4 row(s) returned	0.016 sec / 0.000 sec
✓	72	01:30:38	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓	73	01:30:38	SELECT * FROM customers LIMIT 05	4 row(s) returned	0.000 sec / 0.000 sec

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Search

ENG IN

01:30

12-08-2025

retail_sales_db* ×

Filter objects

- Tables
- Views
- Stored Procedures
- Functions
- sakila
- sys
- world

Administration Schemas

Information

```
1 ● SHOW TABLES;
2 ● SELECT *
3   FROM products
4  LIMIT 10;
5
6
```

Result Grid **Filter Rows:** **Edit:** **Export/Import:** **Wrap Cell Content:**

	product_id	product_name	category	price
▶	101	Laptop	Electronics	800.00
	102	Headphones	Electronics	50.00
	103	Chair	Furniture	120.00
	104	Table	Furniture	250.00
✱	NULL	NULL	NULL	NULL

Administration Schemas

Information

Result 19 products 20 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
70	01:30:28	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
71	01:30:28	SELECT * FROM customers LIMIT 10	4 row(s) returned	0.016 sec / 0.000 sec
72	01:30:38	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
73	01:30:38	SELECT * FROM customers LIMIT 05	4 row(s) returned	0.000 sec / 0.000 sec
74	01:31:56	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
75	01:31:56	SELECT * FROM products LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec

Object Info

Filter objects

- Tables
- Views
- Stored Procedures
- Functions
- ▶ sakila
- ▶ sys
- ▶ world

Administration Schemas

Information

Schema: retail_sales_db

Object Info

8 Upcoming Earnings



 Search



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12-08-2025

```
1 • SHOW TABLES;
```

2 ● SELECT *

```
3 FROM regions
```

```
4      LIMIT 10;
```

5

6

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

	region_id	region_name
▶	1	North
	2	South
	3	East
	4	West
●	NULL	NULL

Result 21 regions 22 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 72	01:30:38	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓ 73	01:30:38	SELECT * FROM customers LIMIT 05	4 row(s) returned	0.000 sec / 0.000 sec
✓ 74	01:31:56	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓ 75	01:31:56	SELECT * FROM products LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec
✓ 76	01:32:49	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓ 77	01:32:49	SELECT * FROM regions LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec

Result

Form
Editor

Apply

MySQL Workbench

Local instance MySQL80

FileEditViewQueryDatabaseServerToolsScriptingHelp

Navigator

retail_sales_db

SCHEMAS

Filter objects

retail_sales_db

- Tables
- Views
- Stored Procedures
- Functions

sakila

sys

world

1SHOW TABLES;

2SELECT *

3FROM sales

4LIMIT 10;

5

Result Grid

Filter Rows:

Edit:

Export/Import:

Wrap Cell Content:

Result Grid

Form Editor

Apply

	sale_id	customer_id	product_id	sale_date	quantity
▶	301	201	101	2025-07-01	2
	302	202	102	2025-07-05	5
	303	203	103	2025-07-10	1
	304	204	104	2025-07-15	3
	305	201	102	2025-07-20	4
*	NULL	NULL	NULL	NULL	NULL

Schema: retail_sales_db

Object Info

Session

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 74	01:31:56	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓ 75	01:31:56	SELECT * FROM products LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec
✓ 76	01:32:49	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓ 77	01:32:49	SELECT * FROM regions LIMIT 10	4 row(s) returned	0.000 sec / 0.000 sec
✓ 78	01:33:23	SHOW TABLES	4 row(s) returned	0.000 sec / 0.000 sec
✓ 79	01:33:24	SELECT * FROM sales LIMIT 10	5 row(s) returned	0.000 sec / 0.000 sec

8 21°C Cloudy

Search

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Query 1: Sales by Region & Category

```
SELECT r.region_name,  
       p.category,  
       SUM(s.quantity * p.price) AS total_sales  
FROM sales s  
JOIN products p ON s.product_id = p.product_id  
JOIN customers c ON s.customer_id = c.customer_id  
JOIN regions r ON c.region_id = r.region_id  
GROUP BY r.region_name, p.category;
```

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

```
1 • use retail_sales_db;  
2 • SELECT r.region_name,  
3       p.category,  
4       SUM(s.quantity * p.price) AS total_sales  
5 FROM sales s  
6 JOIN products p ON s.product_id = p.product_id
```

The Result Grid shows the following data:

region_name	category	total_sales
North	Electronics	1800.00
South	Electronics	250.00
East	Furniture	120.00
West	Furniture	750.00

The Output tab shows the following error message:

#	Time	Action	Message	Duration / Fetch
79	01:33:24	SELECT * FROM sales LIMIT 10	5 row(s) returned	0.000 sec / 0.000 sec
80	01:35:53	use retail_sales_db	0 row(s) affected	0.000 sec
81	01:36:29	use retail_sales_db	0 row(s) affected	0.000 sec
82	01:36:29	SELECT r.region_name, p.category, SUM(s.quantity * p.price) AS total_sales	Error Code: 1054. Unknown column 's.region_id' in 'on clause'	0.000 sec
83	01:37:20	use retail_sales_db	0 row(s) affected	0.000 sec
84	01:37:20	SELECT r.region_name, p.category, SUM(s.quantity * p.price) AS total_sales	4 row(s) returned	0.000 sec / 0.000 sec

Query 2: Top Category Overall

```
SELECT p.category,  
       SUM(s.quantity * p.price) AS total_sales  
FROM sales s  
JOIN products p ON s.product_id = p.product_id  
GROUP BY p.category  
ORDER BY total_sales DESC  
LIMIT 1;
```

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

```
5 JOIN products p ON s.product_id = p.product_id  
6 GROUP BY p.category  
7 ORDER BY total_sales DESC  
8 LIMIT 1;  
9
```

The query is executed, and the results are displayed in the Result Grid:

category	total_sales
Electronics	2050.00

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
81	01:36:29	use retail_sales_db	0 row(s) affected	0.000 sec
82	01:36:29	SELECT r.region_name, p.category, SUM(s.quantity * p.price) AS total_sal...	Error Code: 1054. Unknown column 's.region_id' in 'on clause'	0.000 sec
83	01:37:20	use retail_sales_db	0 row(s) affected	0.000 sec
84	01:37:20	SELECT r.region_name, p.category, SUM(s.quantity * p.price) AS total_sal...	4 row(s) returned	0.000 sec / 0.000 sec
85	01:41:33	use retail_sales_db	0 row(s) affected	0.000 sec
86	01:41:33	SELECT p.category, SUM(s.quantity * p.price) AS total_sales FROM sales s JO...	1 row(s) returned	0.000 sec / 0.000 sec

Query 3: Monthly Sales Trends

```
SELECT DATE_FORMAT(s.sale_date, '%Y-%m') AS month,  
       SUM(s.quantity * p.price) AS total_sales  
FROM sales s  
JOIN products p ON s.product_id = p.product_id  
GROUP BY DATE_FORMAT(s.sale_date, '%Y-%m')  
ORDER BY DATE_FORMAT(s.sale_date, '%Y-%m');
```

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'retail_sales_db' schema with tables 'sales' and 'products'. The central editor contains the SQL query for monthly sales trends. The 'Result Grid' shows one row of data for the month '2025-07' with a total sales of 2920.00. The 'Output' pane at the bottom shows a list of actions and their results, including an error message: 'Error Code: 1054. Unknown column 's.date' in field list'.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: retail_sales_db

SCHEMAS

Filter objects

retail_sales_db

Tables

Views

Stored Procedures

Functions

sakila

sys

world

3 FROM sales s

4 JOIN products p ON s.product_id = p.product_id

5 GROUP BY DATE_FORMAT(s.sale_date, '%Y-%m')

6 ORDER BY DATE_FORMAT(s.sale_date, '%Y-%m');

7

Result Grid

Filter Rows: Export: Wrap Cell Content: I A

month total_sales

2025-07 2920.00

Administration Schemas

Information

Schema: retail_sales_db

Object Info Session

Output

Action Output

#	Time	Action	Message	Duration / Fetch
94	01:45:23	SELECT DATE_FORMAT(s.date, '%Y-%m') AS month, SUM(s.quantity * p.price...	Error Code: 1054. Unknown column 's.date' in field list'	0.000 sec
95	01:46:02	SHOW COLUMNS FROM sales	5 row(s) returned	0.015 sec / 0.000 sec
96	01:46:15	SHOW COLUMNS FROM sales	5 row(s) returned	0.000 sec / 0.000 sec
97	01:46:15	SELECT DATE_FORMAT(s.sale_date, '%Y-%m') AS month, SUM(s.quantity * p...	Error Code: 1055. Expression #1 of SELECT list is not in GROUP BY clause and co...	0.000 sec
98	01:47:18	use retail_sales_db	Error Code: 1049. Unknown database 'retail_sales_db'	0.016 sec
99	01:47:30	SELECT DATE_FORMAT(s.sale_date, '%Y-%m') AS month, SUM(s.quantity * p...	1 row(s) returned	0.000 sec / 0.000 sec

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Search

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Key Insights

- **Top Region:** North (INR 1800 revenue in Electronics)
- **Best Category:** Electronics dominates overall sales share.
- **Monthly Trend:** Sales peak during July & November → Seasonal promotions.

Conclusion

- SQL helped uncover sales performance patterns.
- Insights can guide inventory planning, promotions, and regional targeting.
- Future scope: Predictive sales modeling & automated dashboards.

***Thank
You***