

# **CUSTOMER SALES ANALYSIS WITH POWER BI**

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# Problem Statement

**Nexonic Devices**, a computer hardware supplier based in Delhi, has been facing challenges in managing sales and operational efficiency across regions. The Director, Mr. Rajeev Kumar, often receives vague updates from regional managers, making it difficult to pinpoint actual business issues.

To overcome these challenges, the company decided to adopt a data-driven approach by implementing interactive dashboards using SQL and Power BI. This would enable clearer insights, faster decision-making, and better business visibility—true to the saying, "A picture is worth a thousand words."

- .

# Teams Involved

- **Orions Team** (Software Engineers):

Responsible for managing the MySQL sales system and ensuring data availability and consistency.

- **VisionX Analysts** (Data Analysts):

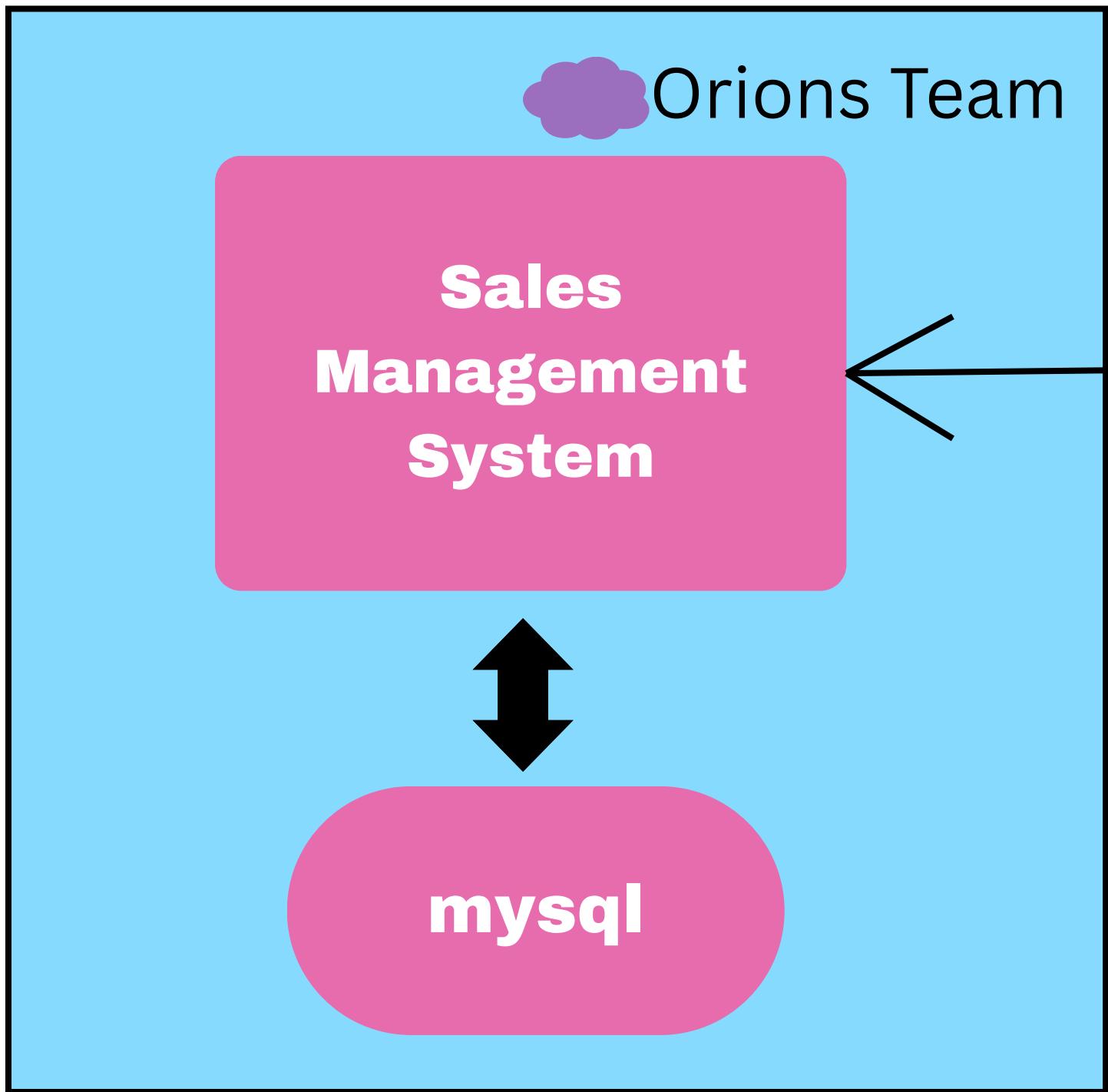
In charge of building insightful dashboards using Power BI based on the data extracted from the sales database.

- **DataNex Architects** (Data Warehouse Team)

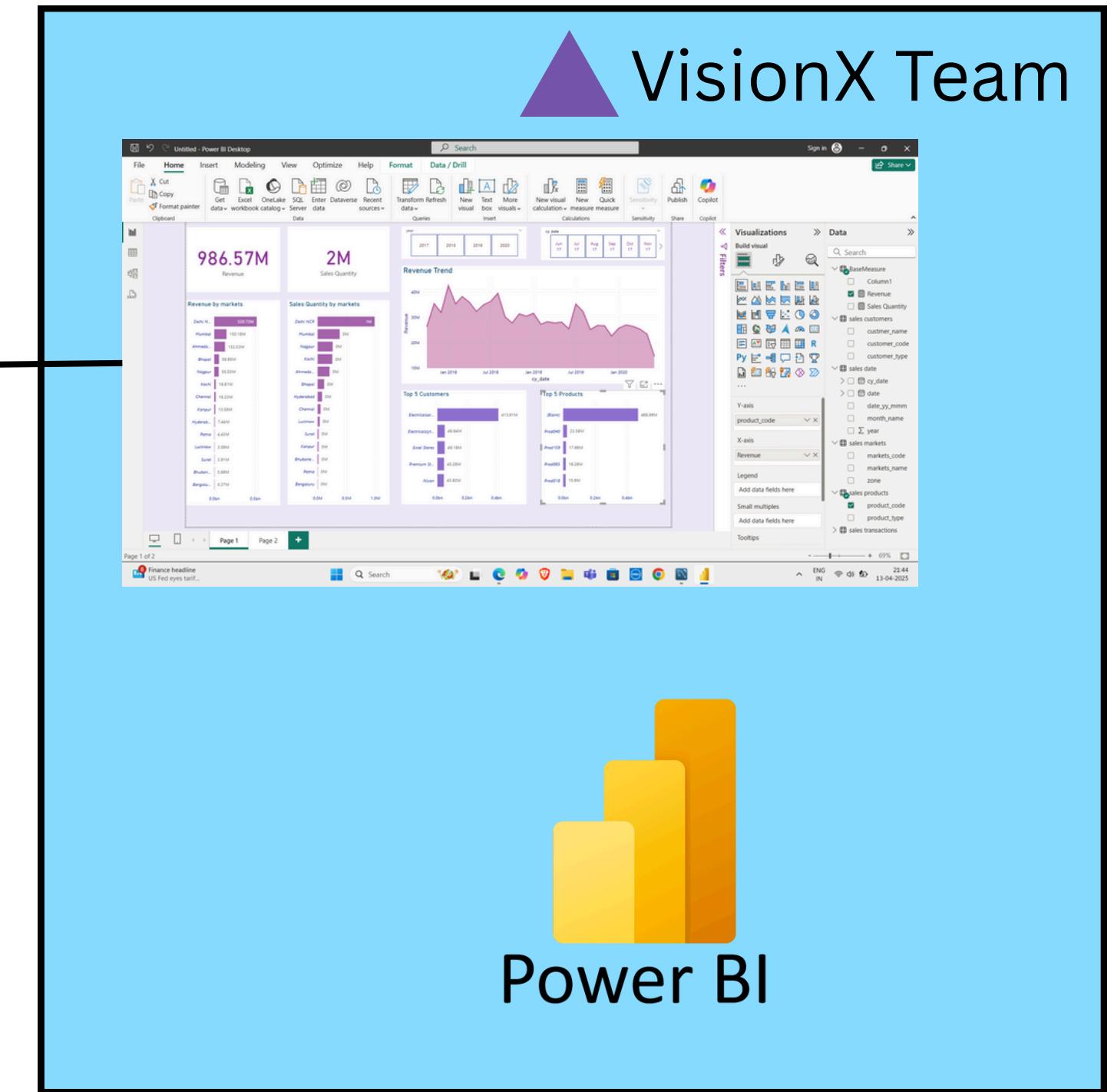
\* Not involved in current implementation

While not directly involved in this project, this team handles long-term storage and advanced reporting systems for other business needs.

ETL- Extract Transform Load



**Orions Team**  
(Software Engineers)



**VisionX Team**  
(Data Analysts)

# PROJECT OVERVIEW

The "Customer Sales Insights with POWER BI" project aims to analyze customer sales data using Power BI dashboards. It focuses on delivering visual insights into key sales metrics, customer trends, and performance. This helps sales teams and decision-makers make data-driven strategies for improved results. MySQL was used for data extraction and Power BI for visual analysis.

## TOOLS USED:

Power BI

MySQL Workbench

DAX

Power Query Editor

# MYSQL Connection and Query Execution

## Content:

This section focuses on the successful integration of MySQL Workbench and the analysis of data using SQL queries. The key steps include:

- Opening MySQL Workbench and accessing the welcome screen.
- Establishing a successful connection to the local MySQL instance.
- Viewing the workspace with all the imported table names visible.
- Running a query to display the transaction table.
- Combined ‘transaction’ and ‘date’ tables using JOIN and AND conditions to filter data for the year 2020 and market code ‘MARK001’.

Edit View Database Tools Scripting Help

# Welcome to MySQL Workbench

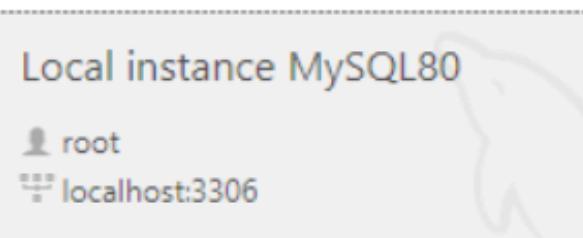
MySQL Workbench is the official graphical user interface (GUI) tool for MySQL. It allows you to design, create and browse your database schemas, work with database objects and insert data as well as design and run SQL queries to work with stored data. You can also migrate schemas and data from other database vendors to your MySQL database.

[Browse Documentation >](#)

[Read the Blog >](#)

[Discuss on the Forums >](#)

## MySQL Connections

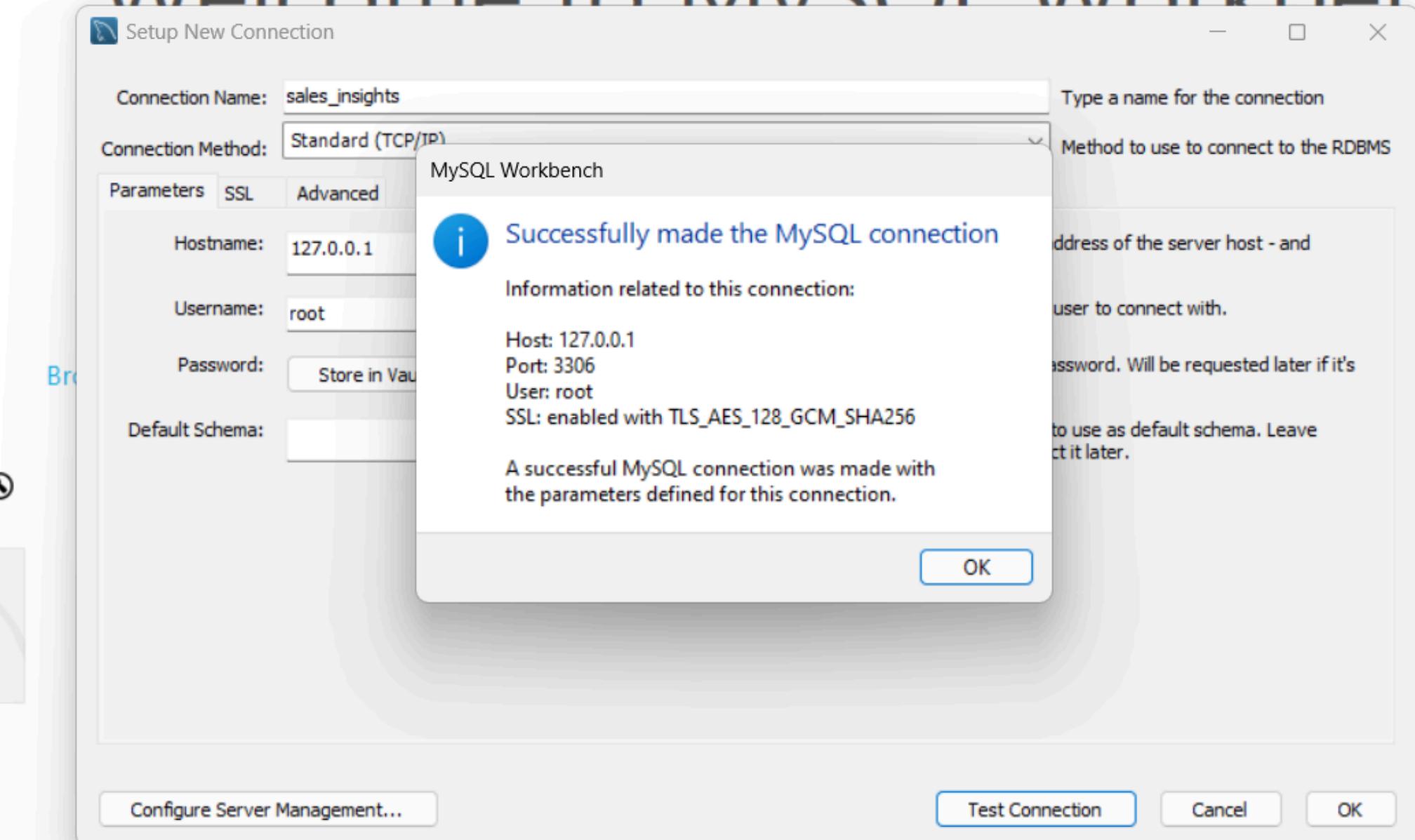


Welcome Screen of MySQL Workbench default connection to local instance MySQL



## MySQL Connections

Local instance MySQL80  
 root  
localhost:3306



Successfully connected to the local MySQL instance

MySQL Workbench

sales\_insights

File Edit View Query Database Server Tools Scripting Help

SQL

Navigator

SCHEMAS

Filter objects

new  
sakila  
**sales**

Tables

customers  
date  
markets  
products  
transactions

Views  
Stored Procedures  
Functions

sys  
world  
xyz

Administration Schemas

Information

Schema: sales

Output

Action Output

# Time Action Message Duration / Feti

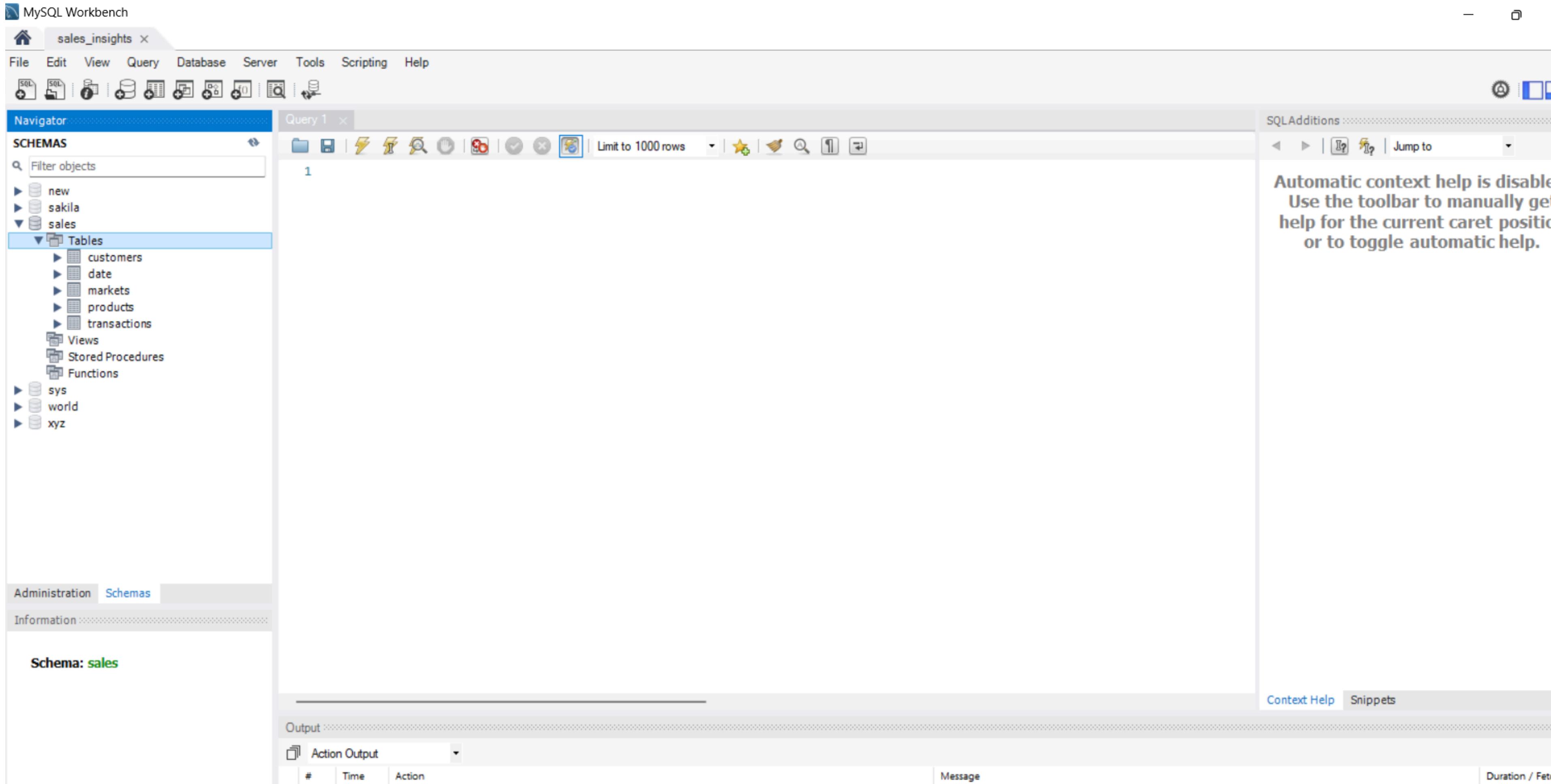
Query 1

Limit to 1000 rows

SQLAdditions

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

Context Help Snippets



MYSQL workspace with imported tables preview

MySQL Workbench

sales\_insights

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

new  
sakila  
sales  
Tables  
customers  
date  
markets  
products  
transactions  
Views  
Stored Procedures  
Functions

sys  
world  
xyz

Administration Schemas

Information

Table: transactions

Columns:

product_code	varchar(45)
customer_code	varchar(45)
market_code	varchar(45)
order_date	date
sales_qty	int
sales_amount	double
currency	varchar(45)

Object Info Session

Query 1 customers date markets products transactions

1 • `SELECT * FROM sales.transactions;`

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

product_code	customer_code	market_code	order_date	sales_qty	sales_amount	currency
Prod001	Cus001	Mark001	2017-10-10	100	41241	INR
Prod001	Cus002	Mark002	2018-05-08	3	-1	INR
Prod002	Cus003	Mark003	2018-04-06	1	875	INR
Prod002	Cus003	Mark003	2018-04-11	1	583	INR
Prod002	Cus004	Mark003	2018-06-18	6	7176	INR
Prod003	Cus005	Mark004	2017-11-20	59	500	USD
Prod003	Cus005	Mark004	2017-11-22	36	250	USD
Prod003	Cus005	Mark004	2017-11-23	39	21412	INR
Prod003	Cus005	Mark004	2017-11-27	35	19213	INR
Prod003	Cus005	Mark004	2017-11-28	310	170185	INR
Prod003	Cus005	Mark004	2017-11-29	184	101194	INR
Prod003	Cus005	Mark004	2017-11-30	35	19213	INR
Prod004	Cus005	Mark004	2017-11-29	17	9426	INR
Prod004	Cus005	Mark004	2017-12-19	1	218	INR
Prod005	Cus005	Mark004	2018-08-07	5	3093	INR
Prod003	Cus006	Mark004	2017-12-04	58	30306	INR
Prod005	Cus006	Mark004	2018-06-29	38	52319	INR

transactions 1 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
4	12:46:17	SELECT * FROM sales.products LIMIT 0, 1000	279 row(s) returned	0.031 sec / 0.000 sec
5	12:46:19	SELECT * FROM sales.transactions LIMIT 0, 1000	1000 row(s) returned	0.031 sec / 0.000 sec

SQLAdditions

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

The screenshot shows the MySQL Workbench interface with the 'sales\_insights' database selected. In the central pane, a query window displays the result of the SQL command 'SELECT \* FROM sales.transactions;'. The results are presented in a grid with columns: product\_code, customer\_code, market\_code, order\_date, sales\_qty, sales\_amount, and currency. The data consists of 1000 rows, showing various transaction details like product codes Prod001 through Prod005, customer codes Cus001 through Cus006, and market codes Mark001 through Mark004. The currency column indicates values in INR and USD. Below the main results, there is an 'Action Output' section showing the execution log for the query, including the number of rows returned and execution time.

Executed 'SELECT \* FROM sales.transactions' query

MySQL Workbench

sales\_insights

File Edit View Query Database Server Tools Scripting Help

Schemas: sales

Tables: customers, date, markets, products, transactions

Views, Stored Procedures, Functions

sys, world, xyz

Administration Schemas

Information

Schema: sales

Object Info Session

Navigator: Query 1, customers, date, markets, products, transactions

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

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

product\_code customer\_code market\_code order\_date sales\_qty sales\_amount currency date cy\_date year month\_name date\_yy\_mmm

product_code	customer_code	market_code	order_date	sales_qty	sales_amount	currency	date	cy_date	year	month_name	date_yy_mmm
Prod040	Cus001	Mark001	2020-01-17	40	25116	INR	2020-01-17	2020-01-01	2020	January	20-Jan
Prod040	Cus001	Mark001	2020-01-21	80	56083	INR	2020-01-21	2020-01-01	2020	January	20-Jan
Prod040	Cus001	Mark001	2020-01-28	40	25116	INR	2020-01-28	2020-01-01	2020	January	20-Jan
Prod040	Cus001	Mark001	2020-02-13	40	25116	INR	2020-02-13	2020-02-01	2020	February	20-Feb
Prod040	Cus001	Mark001	2020-04-15	40	28042	INR	2020-04-15	2020-04-01	2020	April	20-Apr
Prod040	Cus001	Mark001	2020-04-23	40	28042	INR	2020-04-23	2020-04-01	2020	April	20-Apr
Prod040	Cus001	Mark001	2020-05-15	40	28042	INR	2020-05-15	2020-05-01	2020	May	20-May
Prod040	Cus001	Mark001	2020-06-11	40	28042	INR	2020-06-11	2020-06-01	2020	June	20-Jun
Prod040	Cus001	Mark001	2020-06-18	40	25116	INR	2020-06-18	2020-06-01	2020	June	20-Jun
Prod061	Cus001	Mark001	2020-01-17	184	32972	INR	2020-01-17	2020-01-01	2020	January	20-Jan
Prod061	Cus001	Mark001	2020-02-13	348	62366	INR	2020-02-13	2020-02-01	2020	February	20-Feb
Prod061	Cus001	Mark001	2020-02-27	1	241	INR	2020-02-27	2020-02-01	2020	February	20-Feb
Prod061	Cus001	Mark001	2020-05-15	88	15769	INR	2020-05-15	2020-05-01	2020	May	20-May
Prod065	Cus001	Mark001	2020-01-17	42	7810	INR	2020-01-17	2020-01-01	2020	January	20-Jan
Prod065	Cus001	Mark001	2020-01-20	107	21208	INR	2020-01-20	2020-01-01	2020	January	20-Jan
Prod065	Cus001	Mark001	2020-02-21	16	2977	INR	2020-02-21	2020-02-01	2020	February	20-Feb
Prod065	Cus001	Mark001	2020-05-21	212	12421	INR	2020-05-21	2020-05-01	2020	May	20-May

Output: Action Output

#	Time	Action	Message	Duration / Fetch
15	13:07:36	select * from transactions inner join date on transactions.order_date= date.date where date.year=2020 LI...	1000 row(s) returned	0.000 sec / 0.015 sec
16	13:14:31	select * from transactions inner join date on transactions.order_date= date.date where date.year=2020 an...	174 row(s) returned	0.328 sec / 0.015 sec
17	13:15:06	select * from transactions inner join date on transactions.order_date= date.date where date.year=2020 an...	174 row(s) returned	0.282 sec / 0.016 sec

Result 9 x Read Only Context Help Snippets

Query using JOIN and AND operations between transactions and date tables

# Data Transformation Using Power Query Editor

Power Query Editor is a data connection, transformation, and preparation tool used in Power BI, Excel, and other Microsoft applications. It allows users to import, clean, and reshape data before it is used for analysis or reporting and enables easy extraction of data from various sources, applying transformations.

I applied several key transformations to clean and prepare the dataset for analysis in Power BI Query Editor:

- Data Cleansing: I removed empty rows, applied filters to exclude unwanted data, and discarded invalid values (such as -1 and 0), ensuring data accuracy.
- Currency Conversion: I added a calculated column to convert USD values into INR, facilitating localized analysis.

These transformations helped structure the data for further analysis and visualization.

Untitled - Power BI Desktop

File Home Help

Cut Copy Paste Get data Excel OneLake SQL Server Enter data Data Transform data Refresh data Manage relationships New measure New measure column New table Manage roles View as Sensitivity Publish Clipboard

Clipboard

Upgrade Power BI Desktop: The 32-bit version will no longer be supported after 31-07-2025. Upgrade to the 64-bit version for continued support and updates.

Queries Relationships Calculations Security Sensitivity Share

MySQL database

Server: localhost

Database: sales

Advanced options

OK Cancel

Search

You haven't loaded any data yet. Get data

Established connection between MySQL database and Power BI using server and database details

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Source Data source settings Refresh Preview Choose Columns Keep Rows Split Column Sort Data Type: Text Merge Queries Text Analytics Close Recent Sources Manage Parameters Advanced Editor Remove Columns Remove Rows Group By Use First Row as Headers Append Queries Vision Combine Files Azure Machine Learning Close New Query Data Sources Parameters Query Manage Columns Reduce Rows Sort 1 2 Replace Values Combine AI Insights

Queries [5] = Table.SelectRows(sales\_markets, each ([zone] <> ""))

	A <sup>B</sup> C markets_code	A <sup>B</sup> C markets_name	A <sup>B</sup> C zone
1	Mark001	Chennai	South
2	Mark002	Mumbai	Central
3	Mark003	Ahmedabad	North
4	Mark004	Delhi NCR	North
5	Mark005	Kanpur	North
6	Mark006	Bengaluru	South
7	Mark007	Bhopal	Central
8	Mark008	Lucknow	North
9	Mark009	Patna	North
10	Mark010	Kochi	South
11	Mark011	Nagpur	Central
12	Mark012	Surat	North
13	Mark013	Bhopal	Central
14	Mark014	Hyderabad	South
15	Mark015	Bhubaneshwar	South

Query Settings

▲ PROPERTIES

- Name: sales markets
- All Properties

▲ APPLIED STEPS

- Source
- Navigation
- Filtered Rows

Filtered out null values from the markets table(under sales database) during data cleaning in Power Query Editor.

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Recent Enter Data Data source settings Refresh Preview Advanced Editor Manage Columns Remove Columns Keep Rows Remove Rows Sort Split Column Group By Data Type: Decimal Number Merge Queries Text Analytics Append Queries Vision Combine Files Azure Machine Learning Close New Query Data Sources Parameters Query Manage Manage Columns Reduce Rows Sort Transform Combine AI Insights

Queries [5]

= Table.SelectRows(sales\_transactions, each ([sales\_amount] <> -1 and [sales\_amount] <> 0))

	order	customer_code	market_code	order_date	sales_qty	sales_amount	currency
1		Cus001	Mark001	10-10-2017	100	41241	INR
2		Cus003	Mark003	06-04-2018	1	875	INR
3		Cus003	Mark003	11-04-2018	1	583	INR
4		Cus004	Mark003	18-06-2018	6	7176	INR
5		Cus005	Mark004	20-11-2017	59	500	USD
6		Cus005	Mark004	22-11-2017	36	250	USD
7		Cus005	Mark004	23-11-2017	39	21412	INR
8		Cus005	Mark004	27-11-2017	35	19213	INR
9		Cus005	Mark004	28-11-2017	310	170185	INR
10		Cus005	Mark004	29-11-2017	184	101194	INR
11		Cus005	Mark004	30-11-2017	35	19213	INR
12		Cus005	Mark004	29-11-2017	17	9426	INR
13		Cus005	Mark004	19-12-2017	1	218	INR
14		Cus005	Mark004	07-08-2018	5	3093	INR
15		Cus006	Mark004	04-12-2017	58	30306	INR
16		Cus006	Mark004	29-06-2018	38	52319	INR
17		Cus006	Mark004	02-07-2018	93	126296	INR
18		Cus006	Mark004	03-07-2018	79	107500	INR
19		Cus006	Mark004	04-07-2018	1	273	INR
20		Cus006	Mark004	06-07-2018	3	3574	INR
21		Cus006	Mark004	13-07-2018	1	273	INR
22		Cus006	Mark004	07-06-2019	20	23403	INR
23		Cus006	Mark004	29-07-2019	81	76329	INR
24		Cus006	Mark004	01-08-2019	5	4512	INR

Query Settings

PROPERTIES

Name: sales transactions  
All Properties

APPLIED STEPS

Source  
Navigation  
Remove -1/0 in sales\_amount

Filtered out -1 and 0 values from 'sales\_amount' column in transactions table.

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Column From Custom Invoke Custom Examples Column Function General

Conditional Column Index Column Duplicate Column Format ABC Extract 123 Parse Statistics Standard Scientific From Text From Number From Date & Time AI Insights

Date Time Duration Information Text Analytics Vision Azure Machine Learning

Queries [5]

= Table.AddColumn(#"Removed Columns", "norm\_sales\_amount", each if [currency] = "USD#{(cr)}" then [sales\_amount]\*86 else [sales\_amount])

id	market_code	order_date	sales_qty	sales_amount	currency	norm_sales_amount
1	Mark001	10-10-2017	100	41241	INR	41241
2	Mark003	06-04-2018	1	875	INR	875
3	Mark003	11-04-2018	1	583	INR	583
4	Mark003	18-06-2018	6	7176	INR	7176
5	Mark004	20-11-2017	59	500	USD	500
6	Mark004	22-11-2017	36	250	USD	250
7	Mark004	23-11-2017	39	21412	INR	21412
8	Mark004	27-11-2017	35	19213	INR	19213
9	Mark004	28-11-2017	310	170185	INR	170185
10	Mark004	29-11-2017	184	101194	INR	101194
11	Mark004	30-11-2017	35	19213	INR	19213
12	Mark004	29-11-2017	17	9426	INR	9426
13	Mark004	19-12-2017	1	218	INR	218
14	Mark004	07-08-2018	5	3093	INR	3093
15	Mark004	04-12-2017	58	30306	INR	30306
16	Mark004	29-06-2018	38	52319	INR	52319
17	Mark004	02-07-2018	93	126296	INR	126296
18	Mark004	03-07-2018	79	107500	INR	107500
19	Mark004	04-07-2018	1	273	INR	273
20	Mark004	06-07-2018	3	3574	INR	3574
21	Mark004	13-07-2018	1	273	INR	273
22	Mark004	07-06-2019	20	23403	INR	23403
23	Mark004	29-07-2019	81	76329	INR	76329
24	Mark004	01-08-2019	5	4542	INR	4542
25	Mark004	19-09-2019	18	16579	INR	16579

Query Settings

PROPERTIES

Name: sales transactions

All Properties

APPLIED STEPS

Source, Navigation, Remove -1/0 in sales\_amount, Cleanup Currency, Removed Columns, Add norm\_sales\_amount

Added 'norm\_sales\_amount' column to the transactions table for USD to INR conversion using DAX

# Visualization in Power BI Desktop

Power BI Desktop allows users to create interactive and visually appealing reports using a variety of charts, tables, and KPIs. These visualizations help in analyzing business performance and gaining

- In this part, I created visualizations using the data and measures such as revenue, sales quantity, customer-wise revenue, year, receive ID, etc. I matched the results with manual SQL queries for validation. Then, I built visuals for top 5 customers, top 5 products, and revenue trend. The report was formatted with proper colors and alignment for clarity. Finally, I converted the report into a mobile layout for responsive viewing.

Untitled - Power BI Desktop

Search

Sign in

File Home Insert Modeling View Optimize Help

Cut Copy Format painter Paste Clipboard

Get data workbook catalog Server Data

Excel OneLake SQL Enter data Recent sources

Transform data Refresh data

New visual New box More visuals

Queries Insert

Insert

New visual calculation New measure

Quick Sensitivity

Sensitivity Share Copilot

Calculations

Sensitivity Share Copilot

**Upgrade Power BI Desktop:** The 32-bit version will no longer be supported after 31-07-2025. Upgrade to the 64-bit version for continued support and updates.

Upgrade X

Build visual

Filters

Visualizations

Data

Search

BaseMeasure

sales customers

sales date

sales markets

sales products

sales transactions

Build visuals with your data

Select or drag fields from the Data pane onto the report canvas.

Add data fields here

Drill through

Cross-report Off

Keep all filters On

Add drill-through fields here

Page 1 of 1

Page 1 82%

The screenshot shows the Power BI Desktop interface. The top navigation bar includes File, Home, Insert, Modeling, View, Optimize, and Help. The Home tab is selected. The ribbon below has sections for Clipboard, Data, Queries, Insert, Calculations, Sensitivity, Share, and Copilot. A prominent message at the top left says "Upgrade Power BI Desktop: The 32-bit version will no longer be supported after 31-07-2025. Upgrade to the 64-bit version for continued support and updates." Below this is a workspace with the heading "Build visuals with your data" and the instruction "Select or drag fields from the Data pane onto the report canvas." To the right is the "Visualizations" pane, which lists various chart and visualization types, and the "Data" pane, which shows data source connections like "sales customers", "sales date", etc. At the bottom, there are page navigation icons and a status bar indicating "Page 1 of 1" and "82%".

# Power BI Desktop home screen

Untitled - Power BI Desktop

File Home Insert Modeling View Optimize Help Table tools Measure tools

Name: Sales Quantity Format: Whole number Data category: Uncategorized

Home table: BaseMeasure \$ % , . 0 00 New measure Quick measure

Structure Formatting Properties Calculations

**Upgrade Power BI Desktop:** The 32-bit version will no longer be supported after 31-07-2025. Upgrade to the 64-bit version for continued support and updates.

1 Sales Quantity = SUM('sales transactions'[sales\_qty])

Build visuals with your data  
Select or drag fields from the Data pane onto the report canvas.

Visualizations Data

BaseMeasure

- Column1
- Revenue
- Sales Quantity

sales customers

sales date

sales markets

sales products

sales transactions

Add data fields here

Drill through

Cross-report (Off)

Keep all filters (On)

Add drill-through fields here

Page 1 +

Page 1 of 1 82%

Detailed description: This screenshot shows the Power BI Desktop application interface. The top navigation bar includes File, Home, Insert, Modeling, View, Optimize, Help, Table tools, and Measure tools. The Measure tools tab is currently active. In the center, there's a message about upgrading to the 64-bit version. Below it, a DAX formula is displayed: 1 Sales Quantity = SUM('sales transactions'[sales\_qty]). The main workspace is titled 'Build visuals with your data' and instructs users to select or drag fields from the Data pane onto the report canvas. On the right side, the 'Data' pane is open, showing the 'BaseMeasure' table with its columns: Column1, Revenue, and Sales Quantity. Other tables like 'sales customers', 'sales date', 'sales markets', 'sales products', and 'sales transactions' are also listed. The bottom of the screen shows page navigation and a zoom level of 82%.

Created a DAX measure named 'Revenue' and 'Sales Quantity'

Untitled - Power BI Desktop

Search

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Paste Get data workbook catalog Excel OneLake SQL Server Enter Dataverse Recent sources Transform Refresh data New visual Text box More visuals New calculation New measure Quick Sensitivity Publish Copilot Clipboard Data Queries Insert Calculations Sensitivity Share Copilot

986.57M Revenue 2M Sales Quantity

Filters

Visualizations

Data

BaseMeasure

- Column1
- Revenue
- Sales Quantity

sales customers

sales date

sales markets

sales products

sales transactions

Sales Quantity

Drill through

Cross-report Off

Keep all filters On

Add drill-through fields here

Page 1 +

Page 1 of 1 73%

Displayed ‘Revenue’ and ‘Sales Quantity’ using card visuals

Untitled - Power BI Desktop

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Clipboard Paste

Get data Get workbook catalog OneLake Server Enter data Data Refresh data Recent sources

Transform data New visual Text box More

New visual calculation New measure Quick Sensitivity

Calculation Share Copilot

Queries Insert Calculations Sensitivity Copilot

Visualizations Data

Format visual

Search

BaseMeasure

Column1

Revenue

Sales Quantity

Revenue by customers

Customer	Revenue
Electrical...	0.1M
Electrical...	0.05M
Excel Sto...	0.02M
Premium...	0.01M
Nixon	0.01M
Info Stores	0.01M
Control	0.01M
Surge St...	0.01M
Acclai... 28.83M	0.01M
Forward ...	0.01M
Epic Sto...	0.01M
Nomad S...	0.01M
Electrical...	0.01M
Modular	0.01M
Atlas Sto...	0.01M
Leader	0.01M
Surface S...	0.01M
Integrati...	0.01M
Logic Sto...	0.01M
Path	0.01M

Sales Quantity by customers

Customer	Sales Quantity
Electrical...	1M
Premium...	0M
Surge St...	0M
Excel Sto...	0M
Surface S...	0M
Nixon	0M
Epic Stores	0M
Electrical...	0M
Electrical...	0M
Info Stores	0M
Modular	0M
Control	0M
Flawless ...	0M
Insight	0M
Forward ...	0M
Sound	0M
Nomad S...	0M
Acclai... Leader	0M
Electrical...	0M
Leader	0M

Visual General

Sales Quantity

Font

Font Style

Color

Transparency

Display units

Value decimal places

Show blank as

Search

Visualizations Data

Format visual

Search

BaseMeasure

Column1

Revenue

Sales Quantity

sales customers

customer\_name

customer\_code

customer\_type

sales date

date

date\_yy\_mm

month\_name

year

sales markets

sales products

sales transactions

Created bar charts for 'Revenue by customers' and 'Sales Quantity by customers'

Untitled - Power BI Desktop

Search

Sign in

Share

File Home Insert Modeling View Optimize Help

Cut Copy Format painter Paste Clipboard

Get data workbook catalog Data OneLake Server SQL Enter Dataverse Recent sources Transform Refresh data New visual Text box More visual Calculations New measure Sensitivity Publish Copilot

Queries Insert Calculations Sensitivity Share Copilot

Visualizations Format page Filters

Revenue: 142.24M  
Sales Quantity: 350K

year: 2017, 2018, 2019, 2020

Revenue by customers

Customer	Revenue
Electrical...	65.64M
Excel Sto...	7.93M
Premium...	5.9M
Electrical...	5.54M
Info Stores	5.07M
Control	4.18M
Surge St...	3.95M
Logic Sto...	3.32M
Acclaim...	3.12M
Nixon	3.03M
Epic Stores	3M
Forward ...	2.56M
Electrical...	2.52M
Modular	2.45M
Surface S...	2.42M
Atlas Sto...	2.19M
Nomad S...	1.98M
Integrati...	1.91M
Unity Sto...	1.75M
Path	1.72M

Sales Quantity by customers

Customer	Sales Quantity
Electrical...	0M
Premium...	0M
Surface S...	0M
Excel Sto...	0M
Surge St...	0M
Epic Stores	0M
Insight	0M
Nixon	0M
Info Stores	0M
Electrical...	0M
Modular	0M
Sound	0M
Control	0M
Electrical...	0M
Flawless ...	0M
Forward ...	0M
Electrical...	0M
Atlas Sto...	0M
Nomad S...	0M
Integrati...	0M

Visualizations Format page Filters

BaseMeasure

- Column1
- Revenue
- Sales Quantity

sales customers

- custmer\_name
- customer\_code
- customer\_type

sales date

- cy\_date
- date
- date\_yy\_mmm
- month\_name
- year

sales markets

sales products

sales transactions

Canvas settings

- Type: 16:9
- Height: 720 px
- Width: 1280 px
- Vertical alignment: Top

Reset to default

Canvas background

Wallpaper

Filter pane

Page 1 of 1

82%

A slicer to select the specific years is been created

MySQL Workbench

sales\_insights x

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 customers date markets products transactions x date

SCHEMAS

Filter objects

new sakila sales

Tables

- customers
- date
- markets
- products
- transactions

Views

Stored Procedures

Functions

sys world xyz

Administration Schemas

Information

Schema: sales

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

SUM(transactions.sales\_amount)

142225295

Form Editor

Field Types

Query Stats

Result 10 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
17	13:15:06	select * from transactions inner join date on transactions.order_date= date.date where date.year=2020 and transactions.currency = "INR\r" or transactions.currency = "USD\r";	174 row(s) returned	0.282 sec / 0.016 sec
18	17:22:24	SELECT * FROM sales.date LIMIT 0, 1000	1000 row(s) returned	0.031 sec / 0.000 sec
19	17:29:33	select SUM(transactions.sales_amount) FROM transactions INNER JOIN date ON transactions.order_date=date.date where date.year=2020 and transactions.currency = "INR\r" or transactions.currency = "USD\r";	1 row(s) returned	0.531 sec / 0.000 sec

Object Info Session

SQLAdditions

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

The screenshot shows the MySQL Workbench interface with the 'sales\_insights' database selected. In the central pane, a query is run against the 'sales' schema to calculate the total sales amount for the year 2020 in INR or USD. The result grid displays a single row with the value 142225295. Below the results, the execution history shows three log entries corresponding to the executed queries. The bottom right panel contains a message about automatic context help being disabled.

Revenue for 2020 is been verified with an SQL query in MySQL Workbench

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Search

Sign in

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Paste Format painter Clipboard

Get data Get workbook catalog Excel OneLake SQL Server Enter data Dataverse Recent sources

Transform Refresh data New visual New visual calculation Text box Insert More visuals

New visual calculation New measure Quick Sensitivity Publish Copilot

Clipboard Data Queries Insert Calculations Sensitivity Share Copilot

Revenue 25.66M

Sales Quantity 58K

year 2020

cy\_date Jan 20 Feb 20 Mar 20 Apr 20 May 20 Jun 20

Revenue by customers

Customer	Revenue
Electrical...	13.39M
Electrical...	1.27M
Excel Sto...	0.94M
Premium...	0.9M
Forward ...	0.68M
Control	0.64M
Acclaime...	0.63M
Nixon	0.62M
Info Stores	0.61M
Surge St...	0.6M
Modular	0.53M
Atlas Sto...	0.45M
Epic Stores	0.45M
Surface S...	0.44M
Unity Sto...	0.42M
Path	0.39M
Nomad S...	0.38M
Integrati...	0.35M
Flawless ...	0.25M
Synthetic	0.24M

Sales Quantity by customers

Customer	Sales Quantity
Electrical...	0M
Premium...	0M
Surge St...	0M
Nixon	0M
Surface S...	0M
Excel Sto...	0M
Electrical...	0M
Modular	0M
Electrical...	0M
Flawless ...	0M
Info Stores	0M
Sound	0M
Epic Stores	0M
Control	0M
Forward ...	0M
Synthetic	0M
Atlas Sto...	0M
Acclaime...	0M
Nomad S...	0M
Integrati...	0M

Visualizations Data

Build visual

Filters

BaseMeasure

- Column1
- Revenue
- Sales Quantity

sales customers

- custmer\_name
- customer\_code
- customer\_type

sales date

- cy\_date
- date
- date\_yy\_mmm
- month\_name
- $\sum$  year

sales markets

sales products

sales transactions

Y-axis

custmer\_name

X-axis

Sales Quantity

Legend

Add data fields here

Small multiples

Add data fields here

Tooltips

Page 1 of 1

Page 1 + 82%

'cy\_date' slicer is created to display all available dates along with month

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Search

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Paste Clipboard Get data workbook catalog OneLake SQL Server Enter data Recent sources Data Transform Refresh data New visual Text box More visuals Insert Queries Calculations Sensitivity New visual calculation New measure Quick Sensitivity Publish Copilot Share Copilot

**Visualizations**

Revenue: 27.19M

Sales Quantity: 59K

Revenue by markets

Market	Revenue
Delhi NCR	13.91M
Ahmeda...	3.92M
Mumbai	3.85M
Bhopal	2.39M
Nagpur	1.58M
Kochi	0.61M
Chennai	0.33M
Kanpur	0.28M
Patna	0.18M
Hyderabad	0.06M
Lucknow	0.05M
Surat	0.03M

Sales Quantity by markets

Market	Sales Quantity
Delhi NCR	0M
Kochi	0M
Mumbai	0M
Nagpur	0M
Ahmeda...	0M
Bhopal	0M
Chennai	0M
Hyderabad	0M
Kanpur	0M
Patna	0M
Surat	0M
Lucknow	0M

Top 5 Customers

Customer	Revenue
Electricalsara Stores	10.87M
Premium Stores	1.85M
Excel Stores	1.46M
Electricalslytical	1.4M
Nixon	1.08M

Top 5 Products

Product	Revenue
(Blank)	13.76M
Prod018	0.82M
Prod225	0.66M
Prod052	0.58M
Prod077	0.55M

Filters

Build visual

Search

BaseMeasure

- Column1
- Revenue
- Sales Quantity

sales customers

- customer\_name
- customer\_code
- customer\_type

sales date

- cy\_date
- date
- date\_yy\_mmm
- month\_name
- year

Keep all filters

Drag tooltip fields here

Field cy\_date

Tooltip

sales markets

- markets\_code
- markets\_name
- zone

sales products

- product\_code
- product\_type

sales transactions

# Top 5 Customers and Products using bar charts

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Search

Sign in

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Clipboard Paste Get data workbook catalog OneLake Server Enter data Recent sources Transform Refresh data New visual Text box More visuals New visual calculation New measure Quick Sensitivity Publish Copilot

**Revenue Trend**

Date	Revenue (M)
Jan 2019	30.5M
Feb 2019	27.5M
Mar 2019	28.5M
Apr 2019	28.5M
May 2019	28.5M
Jun 2019	25.5M
Jul 2019	35.0M
Aug 2019	32.5M
Sep 2019	25.5M
Oct 2019	27.5M
Nov 2019	25.5M

**Top 5 Customers**

Customer	Revenue (Bn)
Electricalsara Stores	138.77M
Excel Stores	18.56M
Electricalslytical	17.14M
Premium Stores	15.08M
Info Stores	12.7M

**Top 5 Products**

Product	Revenue (Bn)
(Blank)	154.61M
Prod018	8.28M
Prod040	7.75M
Prod065	6.81M
Prod053	5.56M

**Filters**

Search

Filters on this visual

- cy\_date is (All)

Add data fields here

Filters on this page

Add data fields here

Filters on all pages

Add data fields here

**Visualizations**

Format visual

**Data**

Search

BaseMeasure

- Column1
- Revenue
- Sales Quantity

sales customers

- customer\_name
- customer\_code
- customer\_type

sales date

- > cy\_date
- > date
- date\_yy\_mmm
- month\_name
- Σ year

sales markets

- markets\_code
- markets\_name
- zone

sales products

- product\_code
- product\_type

> sales transactions

Line chart of 'Revenue Trend' by using Revenue and cy\_date

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Paste Get data workbook catalog Excel OneLake SQL Server Enter data Dataverse Recent sources Data Transform Refresh data New visual Text box More Visuals New visual calculation New measure Quick Sensitivity Publish Copilot Share Copilot

Clipboard

Visualizations

Build visual

Filters

BaseMeasure

- Revenue
- Sales Quantity

Revenue by markets

Market	Revenue
Delhi NCR	520.72M
Mumbai	150.18M
Ahmedabad	132.53M
Bhopal	58.65M
Nagpur	55.03M
Kochi	18.81M
Chennai	18.23M
Kanpur	13.58M
Hyderabad	7.44M
Patna	4.43M
Lucknow	3.09M
Surat	2.61M
Bhubanpur	0.89M
Bengaluru	0.37M
0.0bn	0.5bn

Sales Quantity by markets

Market	Sales Quantity	
Delhi NCR	1M	
Mumbai	0M	
Nagpur	0M	
Kochi	0M	
Ahmedabad	0M	
Bhopal	0M	
Hyderabad	0M	
Chennai	0M	
Lucknow	0M	
Surat	0M	
Kanpur	0M	
Bhubanpur	0M	
Patna	0M	
Bengaluru	0M	
0.0M	0.5M	1.0M

Revenue Trend

Top 5 Customers

Customer	Revenue	
Electricalsar...	413.91M	
Electricalslyt...	49.64M	
Excel Stores	49.18M	
Premium St...	45.26M	
Nixon	43.92M	
0.0bn	0.2bn	0.4bn

Top 5 Products

Product	Revenue	
(Blank)	468.96M	
Prod040	23.58M	
Prod159	17.66M	
Prod065	16.26M	
Prod018	15.6M	
0.0bn	0.2bn	0.4bn

Y-axis

X-axis

Legend

Add data fields here

Small multiples

Add data fields here

Tooltips

Visualizations

Build visual

Filters

BaseMeasure

- Revenue
- Sales Quantity

sales customers

- customer\_name
- customer\_code
- customer\_type

sales date

- cy\_date
- date
- date\_yy\_mmm
- month\_name
- ∑ year

sales markets

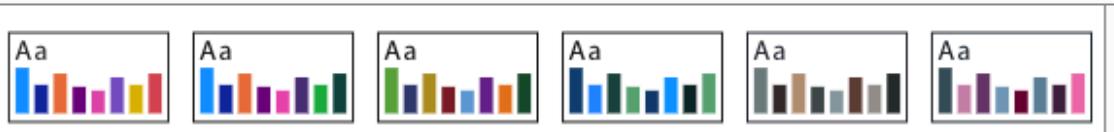
- markets\_code
- markets\_name
- zone

sales products

- product\_code
- product\_type

sales transactions

A clean format dashboard of visuals with added colors



Themes

Page view

Scale to fit

Mobile layout

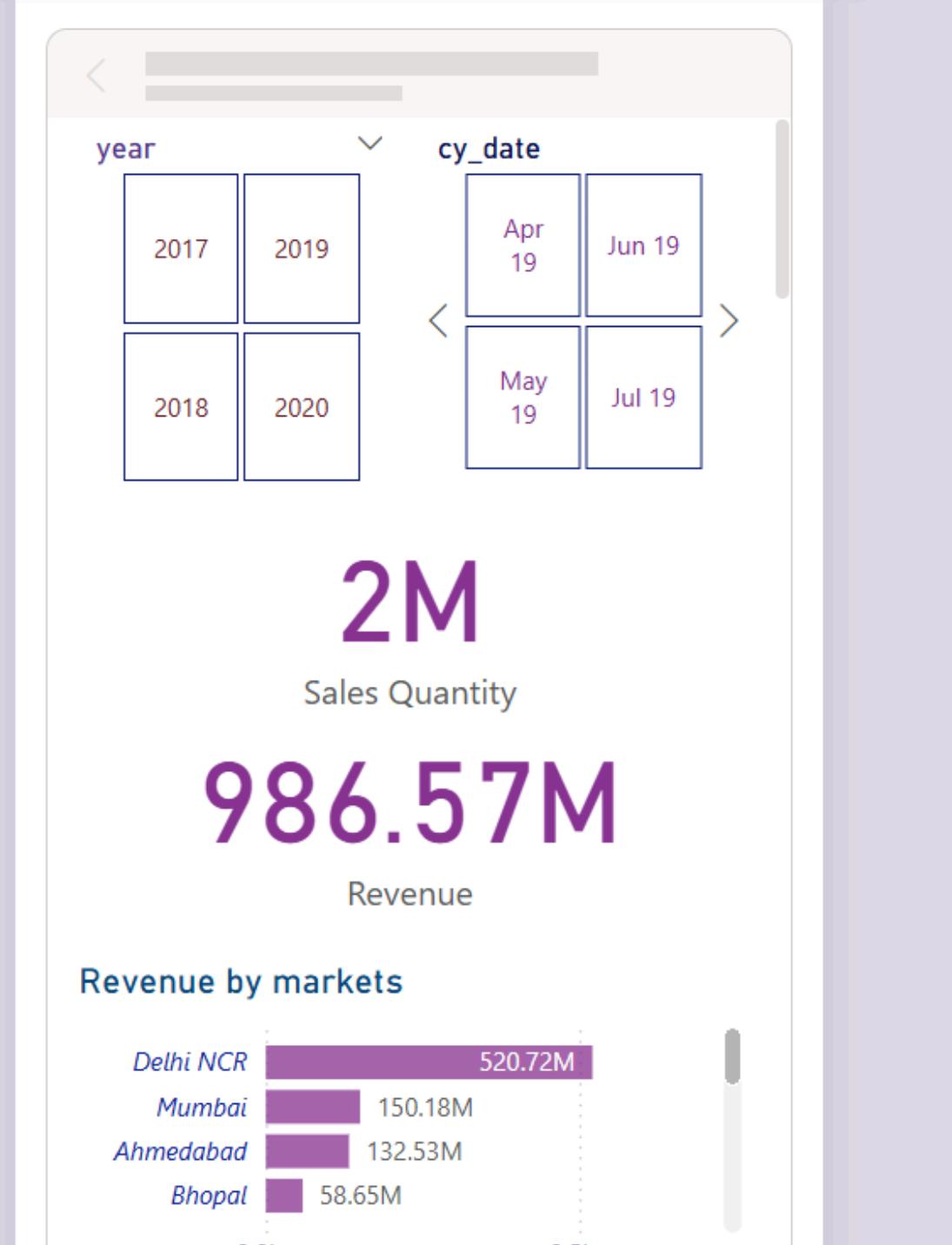
Mobile

Gridlines  
Snap to grid  
Lock objects

Filters Bookmarks Selection Performance analyzer Sync slicers

Show panes

Page 1 Page 2



Page visuals

Visualizations

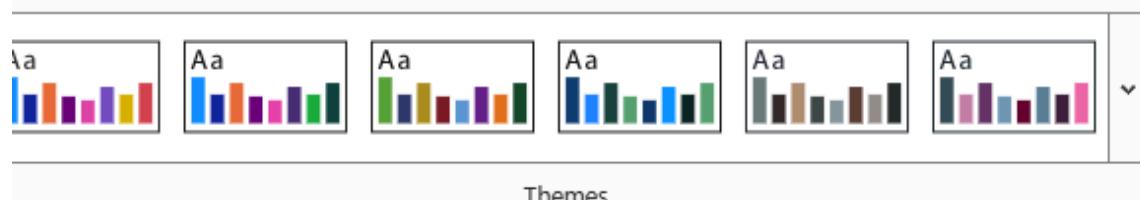


Select a visual on the canvas to start formatting.  
Your changes will only appear in the mobile layout.

# Mobile Layout of the dashboard

File View Optimize Help

Share



Page view Mobile layout

Gridlines   
Snap to grid   
Lock objects

Filters Bookmarks Selection Performance analyzer Sync slicers

Show panes

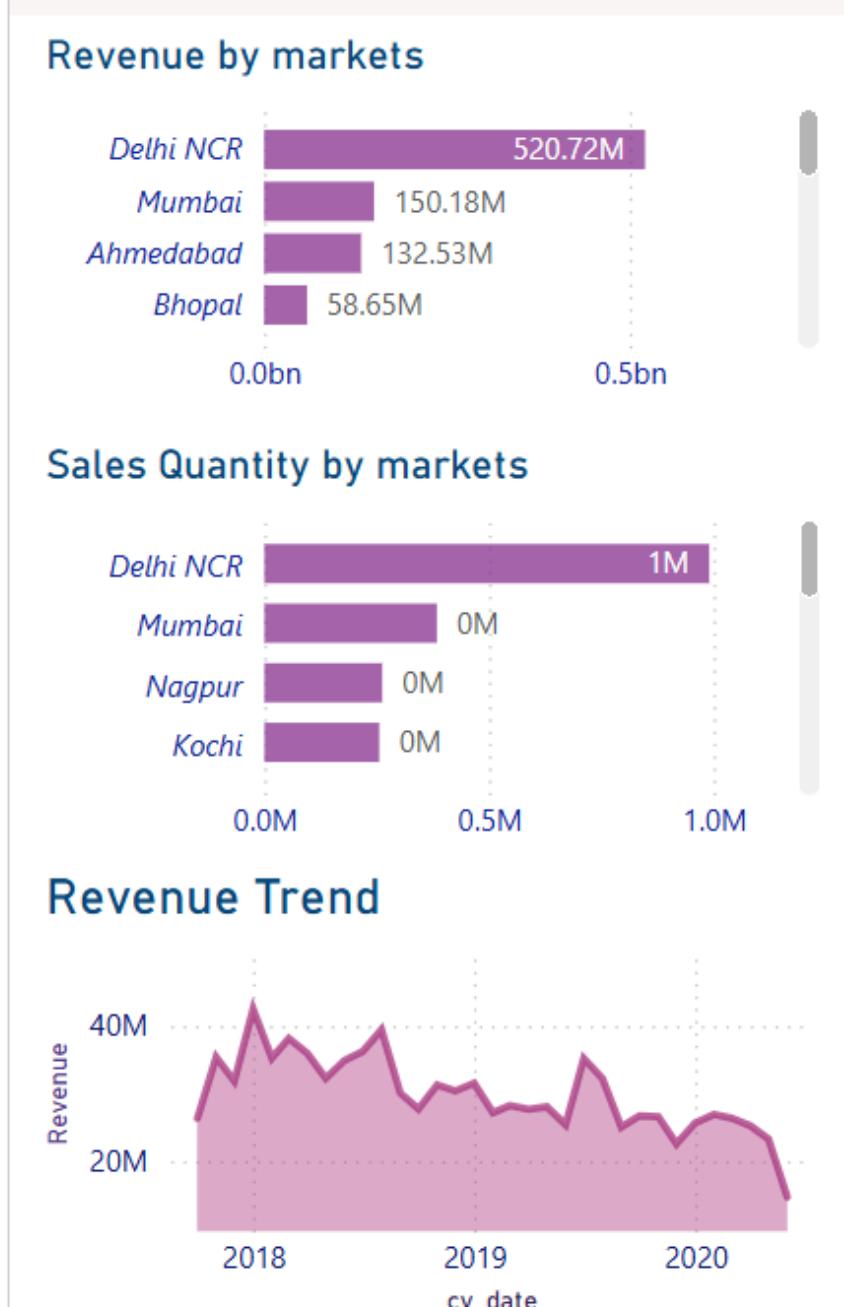
Themes

Scale to fit

Mobile

Page options  
Gridlines  
Snap to grid  
Lock objects

Show panes

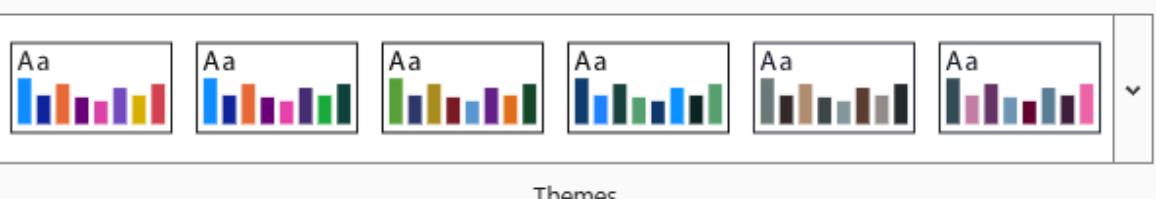


Visualizations

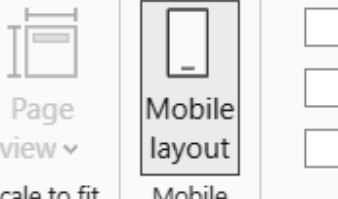
Page visuals



Select a visual on the canvas to start formatting.  
Your changes will only appear in the mobile layout.

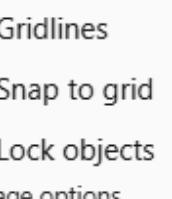


Themes



Page view ▾

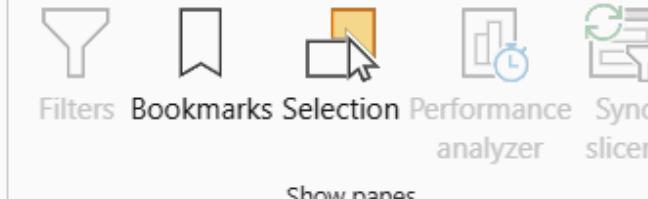
Mobile layout



Gridlines

Snap to grid

Lock objects



Filters

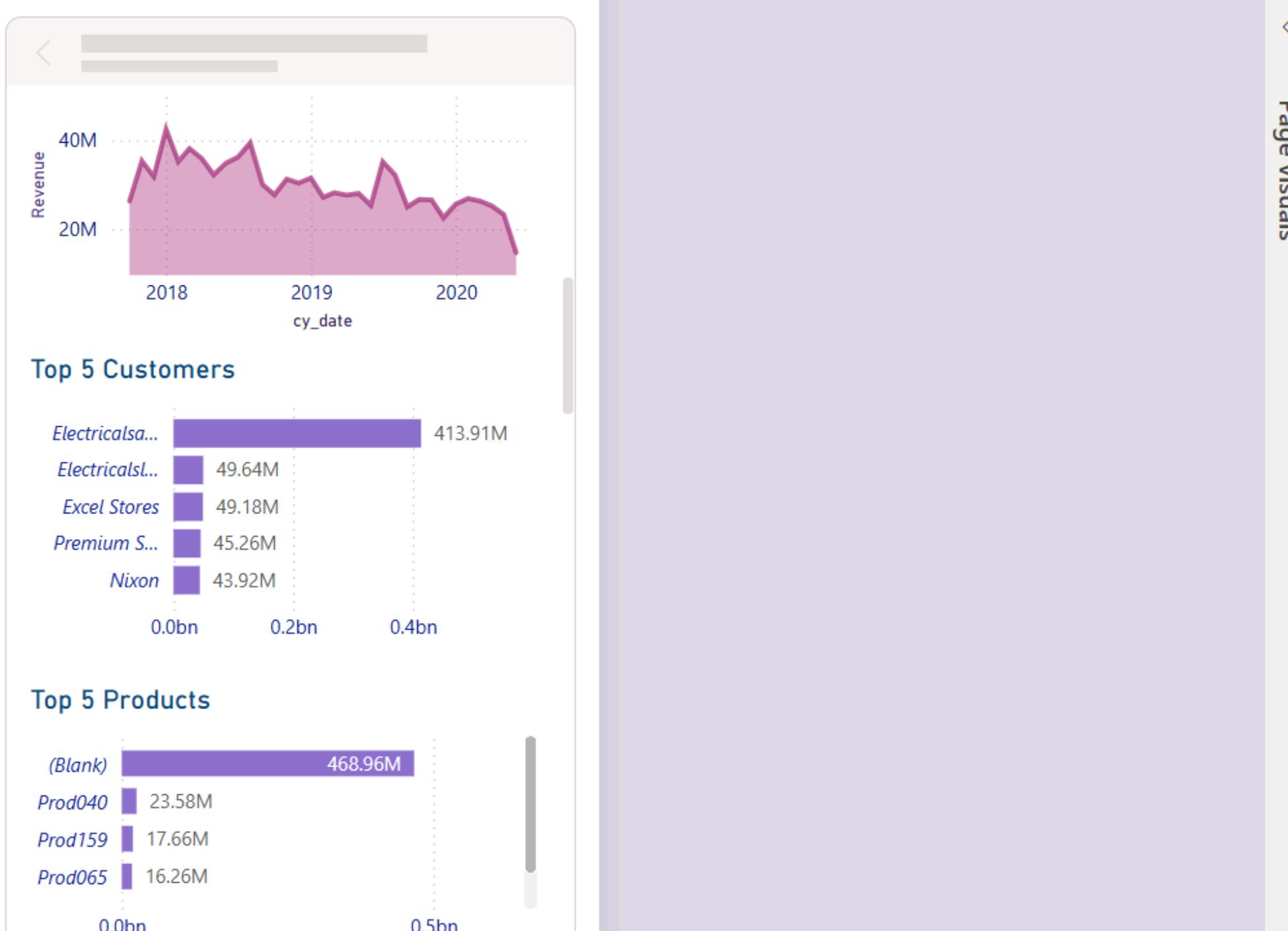
Bookmarks

Selection

Performance analyzer

Sync slicers

Show panes



**Visualizations**

Select a visual on the canvas to start formatting. Your changes will only appear in the mobile layout.

# Mobile layout of the dashboard

# Conclusion

This project provided a comprehensive understanding of how data-driven decisions can significantly improve business operations. By leveraging MySQL for data storage and Power BI for visualization, we transformed scattered data into meaningful insights. The final dashboards offer clarity and help stakeholders make informed decisions quickly. This hands-on experience enhanced my practical skills in SQL, Power BI, and real-time data handling, adding strong value to my learning journey and professional portfolio.