**Simple Retail Store Sample Database (SQL Script)**

This database simulates a basic retail system with the following **3 tables**:

* Customers
* Orders
* Products

### ****SQL Script to Create and Populate Sample Tables****

**-- Create Database**

CREATE DATABASE RetailDB;

USE RetailDB;

**-- Customers Table**

CREATE TABLE Customers (

CustomerID INT PRIMARY KEY,

Name VARCHAR(100),

Email VARCHAR(100),

City VARCHAR(50)

);

**INSERT INTO Customers VALUES**

(1, 'Alice Smith', 'alice@example.com', 'Mumbai'),

(2, 'Bob Khan', 'bob@example.com', 'Delhi'),

(3, 'Charlie Mehta', 'charlie@example.com', 'Bangalore');

**-- Products Table**

CREATE TABLE Products (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(100),

Category VARCHAR(50),

Price DECIMAL(10,2)

);

**INSERT INTO Products VALUES**

(101, 'Laptop', 'Electronics', 55000.00),

(102, 'Phone', 'Electronics', 30000.00),

(103, 'Shoes', 'Apparel', 2500.00);

**-- Orders Table**

CREATE TABLE Orders (

OrderID INT PRIMARY KEY,

CustomerID INT,

ProductID INT,

OrderDate DATE,

Quantity INT,

FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID),

FOREIGN KEY (ProductID) REFERENCES Products(ProductID)

);

**INSERT INTO Orders VALUES**

(1001, 1, 101, '2024-07-01', 1),

(1002, 1, 103, '2024-07-02', 2),

(1003, 2, 102, '2024-07-03', 1),

(1004, 3, 103, '2024-07-04', 3);

Importing SQL Database into Power BI

### Open Power BI Desktop and click ****Get Data → SQL Server****

You’ll see the **SQL Server database** dialog where you enter the details.

### 2. Enter Server & Database Information

* **Server**: name or IP of your SQL Server instance (e.g. localhost, MyMachine\SQLEXPRESS)
* **Database**: optional—leave blank to choose from all available
* Choose **Data Connectivity Mode**:
  + **Import** to load a static snapshot
  + **DirectQuery** to query live data (limitations apply)

### ****Choose**** Import ****When:****

* You want **faster performance** in Power BI
* Data **does not change frequently**
* You plan to do **complex transformations**, calculated columns, or custom visuals
* You're okay with **refreshing** the data manually or on schedule

**Recommended for students, projects, and most use cases.**

### ****Choose**** DirectQuery ****When:****

* You want to **query live data** directly from the SQL Server (real-time data)
* Your database is **too large** to import entirely
* The data changes **frequently** (e.g., stock prices, transactions)

But:

* Slower performance
* Limited transformation options
* Not all features of Power BI work in DirectQuery mode

You can expand **Advanced options** to enter a custom SQL query if needed.

### 3. Click ****OK****, then Authenticate

Select either **Windows Authentication** or **SQL Server Authentication** and proceed to connect.

### 4. Navigator Window Appears

Browse your available databases and tables or views. Preview the data on the right, then check the boxes for needed assets

Click **Load** to load directly

* Click **Transform Data** to open Power Query for data cleaning or shaping

### 5. Data Loads into Power BI

Once loaded, tables appear in the Fields pane. Use the Power BI canvas to build visuals (charts, graphs, tables, etc.) by dragging fields from your data panel

### 6. Optional: Customize and Transform with Power Query

In Power Query Editor you can:

* Remove or rename columns
* Filter rows
* Merge or join tables, etc.  
  It supports query folding—applied transformations that push back to SQL Server for efficiency

### Check These Key Points

#### ****1. Confirm MySQL Credentials Work****

Open **MySQL Workbench** and:

1. Connect to localhost using:
   * **Username**: root
   * **Password**: [the password you set during MySQL install]
2. If **you can log in**, then we know your credentials are correct.

#### ****2. Check You Have MySQL .NET Connector Installed****

Power BI **won’t connect** to MySQL without this.

Download & install from:  
MySQL Connector/NET (Oracle site) -- <https://dev.mysql.com/downloads/connector/net/>

* Choose **Windows (x86, 32-bit), MSI Installer**
* Install it fully
* Then **restart Power BI Desktop**

#### ****3. Try Again in Power BI****

In **Power BI Desktop**:

1. Go to **Get Data → More → Database → MySQL Database**
2. Enter:
   * **Server**: localhost
   * **Database**: (leave blank or enter sakila)
3. Click **OK**
4. On the **Authentication window**, use:
   * **Authentication**: Basic
   * **Username**: root
   * **Password**: [your password]
5. Click **Connect**