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# SQL Restaurant data Training on Microsoft SQL Management Studio:

```sql
--What were the least and most priced items?
  --Creating a procedure to execute it automatically later after
CREATE PROCEDURE MAX_MIN_p_items
AS
BEGIN
SELECT item_name,price
FROM menu_items
WHERE price=(SELECT MIN(price) FROM menu_items)
OR price=(SELECT MAX(price) FROM menu_items);
END;
EXECUTE MAX_MIN_p_items


--What were the least and most ordered items? What categories were they in?
SELECT m.item_name,m.category,COUNT(o.order_id)AS num_purchases FROM menu_items m
JOIN order_details o
ON o.item_id=m.menu_item_id
GROUP BY m.item_name,m.category
ORDER BY num_purchases DESC


--Top 5 orders spent the most money
SELECT
    o.order_id,
    m.item_name,
    SUM(m.price) OVER (PARTITION BY o.order_id) AS total_spent
FROM
    menu_items m
JOIN
    order_details o
ON
    o.item_id = m.menu_item_id
ORDER BY
    total_spent DESC;

--Which cuisines should we focus on developing more menu items for based on the
  data?
SELECT category,COUNT(o.order_details_id) AS Numbers_of_orders,
COUNT(o.order_details_id) * 100.0 / SUM(COUNT(o.order_details_id)) OVER () AS
  Category_Percentage FROM menu_items m
JOIN order_details o
ON o.item_id=m.menu_item_id
GROUP BY category
ORDER BY 2 DESC;
--Orders by day
SELECT order_date,COUNT(DISTINCT order_id) AS num_of_orders FROM order_details
GROUP BY order_date
ORDER BY num_of_orders DESC

SELECT o.order_id,m.item_name,SUM(m.price) AS Total_spent
FROM menu_items m
JOIN  order_details o
ON  o.item_id = m.menu_item_id
GROUP BY o.order_id,item_name
ORDER BY
    order_id ;
```
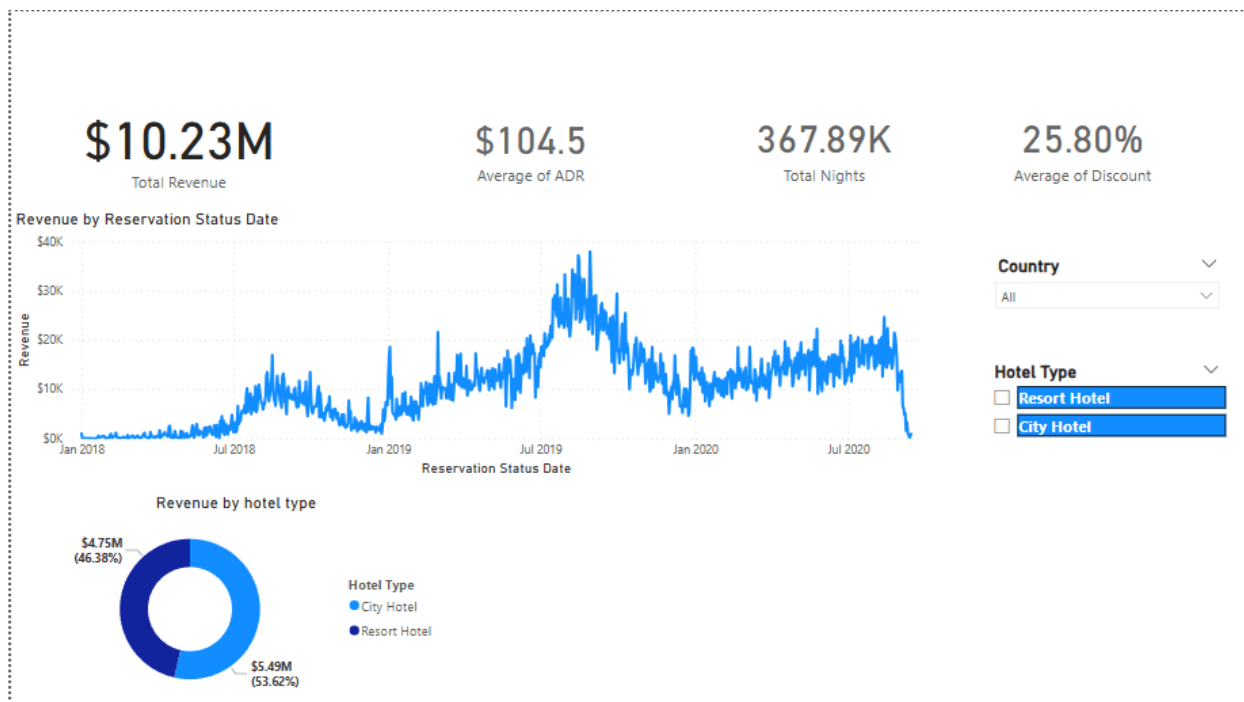
# Hotel Example SQL to Power BI dashboard:

```sql
with Hotel_data as (
SELECT * FROM year_2018
UNION
SELECT * FROM year_2019
UNION
SELECT * FROM year_2020
)

--JOINS
SELECT * FROM Hotel_data
LEFT JOIN market_segment
ON Hotel_data.market_segment = market_segment.market_segment
LEFT JOIN meal_cost
ON meal_cost.meal=Hotel_data.meal
```

Need to Join all years together to get the total 3 years data combined



This Power BI dashboard provides a comprehensive overview of **hotel performance** across all **available countries** and **hotel types.**

From CSV file to SQL to Power BI.

The key metrics tracked include:

**Total Revenue**: Aggregated room revenue across all hotels.

**ADR (Average Daily Rate)**: Calculated **as Total Revenue ÷ Number** of Rooms Sold. This metric reflects the average income earned per occupied room.

**Total Nights Reserved**: Represents the total number of room nights booked.

**Average Discount**: Shows the mean percentage of discounts applied to bookings.

Each of these metrics can be dynamically filtered by:

**Hotel Type (e.g., City Hotel, Resort)**

**Country**

This allows users to explore performance by region and hotel category. The dashboard offers a clear view of what each country and hotel type contribute in terms of revenue, The goal was to provide decision-makers with actionable insights into occupancy trends, pricing efficiency, and regional performance variations all in one interactive dashboard.

# Power BI Dashboard For A Café:
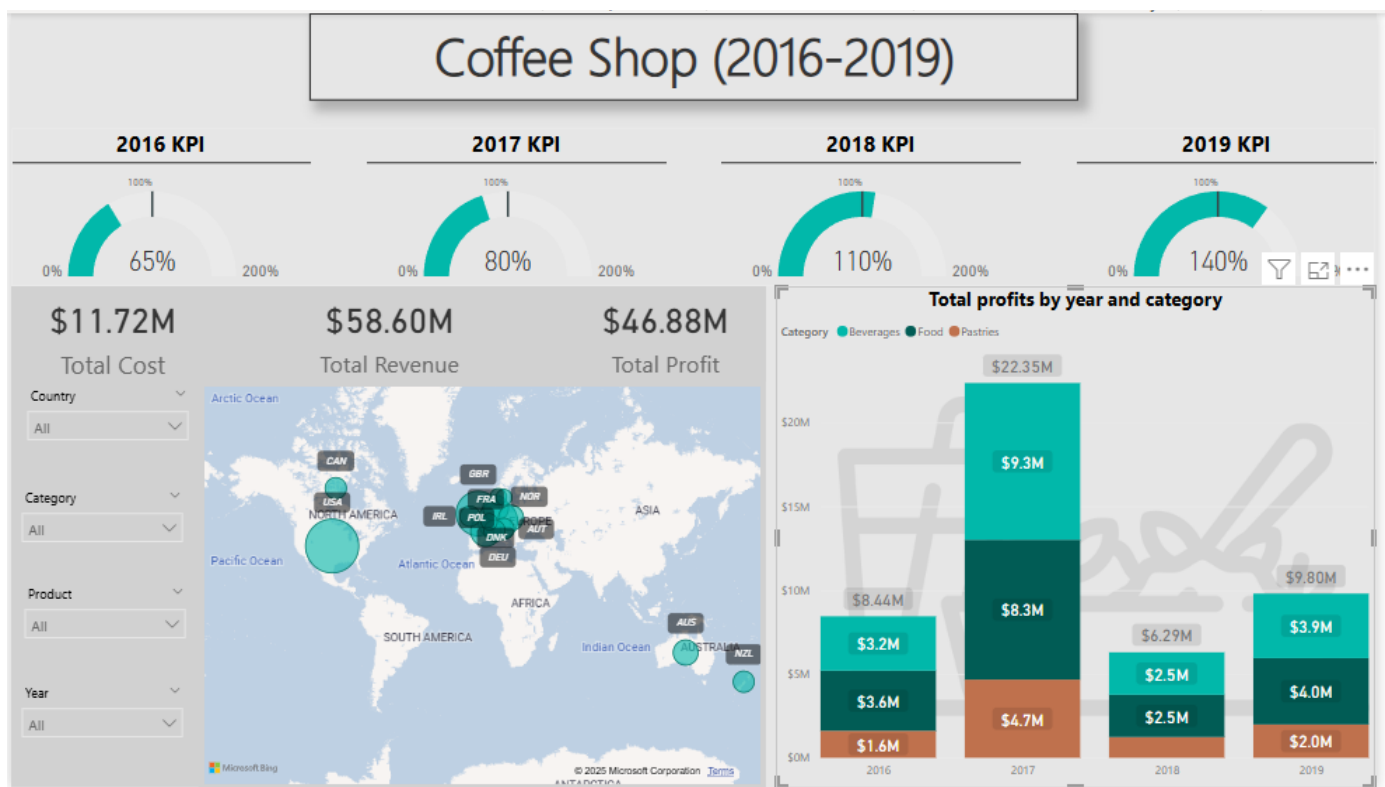


This Power Bi Dashboard provides a summarized view of a coffee shop's financial performance from 2016 to 2019.

- It tracks **key performance indicators (KPIs)** including **Total Cost**, **Total Price**, and **Total Profit** on a yearly basis, showing significant growth in profit percentage over the period.

- It breaks down **total profits by year and category (Beverages, Food, Pastries)** to highlight which areas are contributing most to profit.
- A map visualization shows the geographical availability of the cafe.
- The whole dashboard could be filtered by **country from the map or slicer,Category,Product and Year**

This dashboard aims to visualize and analyse the cafe historical financial data. This allows for easy identification of performance trends, understanding the contribution of different product categories to overall profitability, and gaining insights into geographical performance.