



Exploring the World of Databases

Databases are the backbone of modern digital systems, storing and managing vast amounts of data. This presentation will guide you through various database concepts and SQL queries to unlock the power of your data.

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Accessing Office Information

All Office Data

The first query retrieves all information stored in the 'offices' relation, providing a comprehensive overview of the company's office locations and details.

Alphabetical Office Listing

The second query presents the city and phone number of all offices, sorted alphabetically by city. For cities with multiple offices, the phone numbers are displayed in descending order.

Offices in the UK and SA

The third query focuses on offices located in the 'UK' and 'SA' countries, retrieving all information about these specific office locations.

Analyzing Large Orders

1 Large Orderlines

This query identifies all orderline details where the cost ($\text{quantityOrdered} \times \text{priceEach}$) exceeds 10,000, providing insight into the company's largest sales transactions.

2 Doubled Stock for Exoto Designs

The next query targets products from the 'Exoto Designs' vendor, doubling the `quantityInStock` and presenting the new values in the 'newStock' column.

3 Office Locations

This simple query returns a list of all the cities where the company has offices, giving a high-level overview of the company's geographical footprint.

Uncovering Data Insights

Offices with Partial Addresses

The seventh query retrieves all office information where there is an addressLine2 value, but the state is missing (NULL).

Employee Count

This query determines the total number of employees in the database, providing a key metric about the company's workforce.

Average Product Price

The ninth query calculates the average buyPrice across all products, giving insight into the typical pricing of the company's offerings.

Unique Credit Limits

This query counts the distinct creditLimit values in the database, potentially highlighting different customer segments or credit policies.

Exploring Order Details

Exoto Designs Orders

This query focuses on orders for products from the 'Exoto Designs' vendor, providing details like orderNumber, status, price, quantity, and product name.

Unordered Products

The thirteenth query reveals the productCode of all products that have never been ordered, potentially highlighting opportunities for product development or marketing.

1

2

Disputed Orders

The twelfth query identifies all orders with a 'Disputed' status, showing the orderNumber, comments, and customer name for these problematic orders.

3



Workforce Analytics

1

Employees per Office

This query shows the number of employees in each office, providing insights into the distribution of the workforce across the company's locations.

2

Sales Reps per Office

The fifteenth query focuses on the number of sales representatives in each office, helping to understand the sales resource allocation.

3

Top Performing Sales Reps

The sixteenth query identifies the sales representatives who are associated with at least 10 customers and report to employee 1143, showcasing the company's top-performing sales talent.

Geographic Insights

Office Pairings by Country

The seventeenth query shows which pairs of offices are located in the same country, providing a view of the company's global footprint and potential synergies between locations.

Offices in the USA

This query calculates the percentage of the company's offices that are located in the 'USA' country, offering a snapshot of the organization's geographic distribution.



Checking for Pricing Issues



Largest Single Payment

The nineteenth query identifies the customerNumber of the customer with the largest single payment amount, which could be useful for understanding the company's top-spending clients.



Pricing Errors

The twentieth query checks for any pricing errors, specifically looking for any priceEach or buyPrice values that are zero, and outputs a "YES" if any are found.