

SQL Prompt Engineering Report

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Prompts Used

Zero-shot Prompt

Task

Generate a SQL query to answer [QUESTION]{question}[/QUESTION]

Instructions

- Use the provided schema only
- Return 'I do not know' if not possible
- Remember revenue = price * quantity
- Remember cost = supply_price * quantity

Database Schema

CREATE TABLE products (...); -- same as exercise
...

Answer

[SQL]

One-shot Prompt

Example

[QUESTION]List all product names[/QUESTION]
[SQL]SELECT name FROM products;[/SQL]

Task

Generate a SQL query to answer [QUESTION]{question}[/QUESTION]

- Follow example format
- Return 'I do not know' if impossible
- Revenue = price * quantity, Cost = supply_price * quantity

Database Schema

CREATE TABLE products (...);
...

Answer

[SQL]

Few-shot Prompt

Examples

[QUESTION]Total revenue for all products[/QUESTION]

[SQL]SELECT SUM(price*quantity) FROM products;[/SQL]

[QUESTION]List all customers in California[/QUESTION]

[SQL]SELECT name FROM customers WHERE address LIKE '%California%';[/SQL]

Task

Generate a SQL query to answer [QUESTION]{question}[/QUESTION]

- Follow examples
- Return 'I do not know' if impossible
- Revenue = price * quantity, Cost = supply_price * quantity

Database Schema

CREATE TABLE products (...);

...

Answer

[SQL]

Findings & Analysis

- Zero-shot is fast but may hallucinate or misinterpret subtle instructions.
- One-shot helps guide format and often reduces errors.
- Few-shot is the most reliable, showing patterns and instructions clearly.
- Hallucinations usually occur when schema details are missing or ambiguous.
- Learned the importance of structured examples to guide AI behavior.