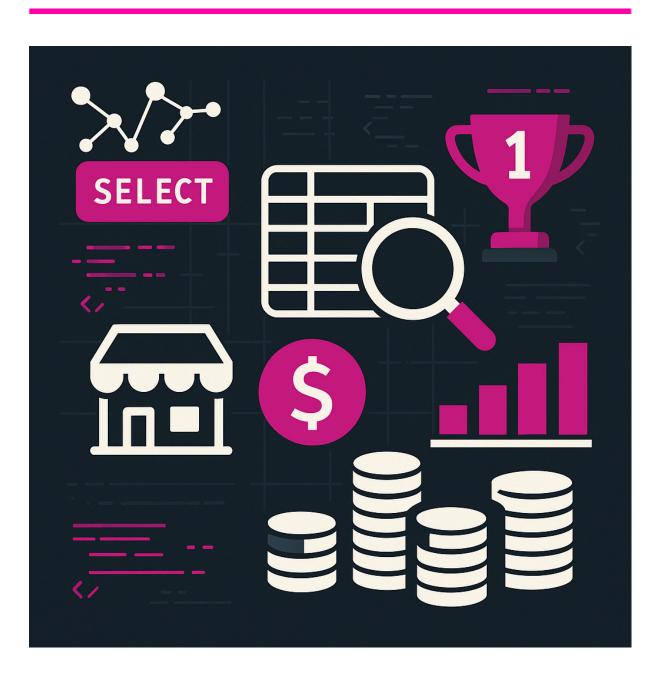Snappfood | Commercial

Data Analyst Technical Task
Report of Task 4 – SQL Analysis

Prepared By: **Amirreza Akbari**

Objectives

The objective of this task was to perform a structured analysis of sales data across multiple vendors operating on a food delivery platform. The analysis was conducted entirely in SQL, with a focus on calculating key performance indicators for each vendor. Specifically, the following metrics were computed:

- Total revenue per vendor

- Total profit per vendor

- Average Order Value (AOV) per vendor

- Identification of the top-performing vendor based on total profit

Tools and Environment

This task was completed using the following tools and technologies:

- SQLite as the database engine for lightweight, embedded relational storage.

- DB Browser for SQLite as the graphical interface for creating the database, importing CSV data, writing queries, and exporting results.

Data Overview

Two datasets were manually curated and imported as `.csv` files:

- Sales Table (`Sales`): Contains individual sales transactions including fields such as `VendorID`, `Product`, `Quantity`, and `UnitPrice`.

- Profit Margins Table (`ProfitMargins`): Maps each `Product` to a percentage-based `ProfitMargin` (e.g., "5%").

These tables were imported into SQLite and treated as relational tables with a one-to-many relationship (one margin per product, many sales per product).

Queries and Evaluation

The following queries were executed and evaluated based on their outcomes:

1. **Total Revenue per Vendor**: The query revealed `V03` as the vendor with the highest revenue (260), followed by `V01` (235) and `V02` (210).

2. **Total Profit per Vendor**: Profit figures closely mirrored revenue trends due to margin structure. `V01` led with a total profit of 20.65, followed by `V03` with 20.2, and `V02` with 16.5.

3. **Average Order Value (AOV) per Vendor**: AOV provided insight into per-order economics. `V03` showed the highest AOV (65). `V02` and `V05` had AOVs of 52.5 and 48.75 respectively.

4. **Top-Performing Vendor by Total Profit**: `V01` was clearly the top performer based on total profit, confirmed by sorting vendors in descending order of profit.

5. **Combined Summary Query**: A unified query was designed to consolidate revenue, profit, and AOV per vendor. This query facilitated side-by-side comparison and enabled direct ranking. The output confirmed:

VendorID	Total Revenue	Total Profit	AOV
V01	235	20.65	47
V03	260	20.2	65
V02	210	16.5	52.5
V05	195	12.65	48.75
V04	105	9.15	35

All queries were saved as .sql files and results exported to .csv. The combined result was particularly valuable for executive reporting and comparative analysis.

Final Outputs

The following deliverables were produced:

- `task4.ipynb`: The Jupyter Notebook containing the code for downloading the datasets from Google Sheets

- `task4_database.db`: SQLite database with imported tables

- `task4_query*.sql`: All SQL queries used

- `task4_result*.csv`: All results

- `task4_database.sqbpro`: DB Browser project file for reproducibility

Conclusion

This task demonstrates the power and simplicity of pure SQL in extracting actionable business insights from structured data. By using SQLite and DB Browser, the entire analysis was conducted in a reproducible and fully declarative manner, without external scripting.

The final combined query provides a clear overview of vendor performance and can be readily adapted to larger datasets or integrated into reporting pipelines. The top-performing vendor was identified based on calculated profit, while AOV and revenue offer further insight into operational efficiency.

This approach is efficient, scalable, and aligns well with SQL-centric workflows in commercial analytics projects.