

✓ Task 3: SQL Basics – Filtering + Sorting + Aggregations

Tools:

- Primary: MySQL (free), PostgreSQL (free)
- Free Online Alternatives: SQLite Online, DB Fiddle
- GUI Tools: MySQL Workbench, DBeaver

Dataset:

- "Chinook Database" (best for beginners SQL)
- "Superstore dataset CSV" (import into SQL)
- "Retail Sales Dataset"

Hints / Mini Guide:

1. Download the dataset and create a new database schema in MySQL/PostgreSQL and prepare a table structure with correct data types for each column.
2. Import CSV into SQL using Workbench Import Wizard / PgAdmin Import / SQLite import to load dataset into your table.
3. Run basic SELECT queries to understand dataset columns and values, and confirm records count matches CSV row count for verification.
4. Perform filtering queries using WHERE (example: category = 'Technology') and sorting using ORDER BY to find top sales items.
5. Use aggregations like SUM(Sales), AVG(Profit), COUNT(*) grouped by category/region to create summary reports.
6. Apply HAVING clause to filter grouped results like "only show categories with Sales > 100000".
7. Use BETWEEN for date ranges (monthly sales report) and LIKE for pattern search (customer names).
8. Export query results into CSV and document key SQL outputs inside a README file.
9. Save all SQL queries in a .sql file like a professional analyst SQL script.

Deliverables:

- queries_task3.sql
- Exported outputs: sales_summary.csv
- README.md (what queries were written + what they mean)

Final Outcome:

- ✓ Intern becomes confident with basic SQL querying

Interview Questions Related To Above Task:

- What is the difference between WHERE and HAVING?
- How does GROUP BY work?
- When do you use ORDER BY?
- What happens if a column has NULL values in SUM/AVG?
- Write a query to find top 5 customers by total spend.

Task Submission Guidelines

-  **Time Window:**

You can complete the task anytime between 10:00 AM to 10:00 PM on the given day. Submission link closes at 10:00 PM.

-  **Self-Research Allowed:**

You are free to explore, Google, or refer to tutorials to understand concepts and complete the task effectively.

-  **Debug Yourself:**

Try to resolve all errors by yourself. This helps you learn problem-solving and ensures you don't face the same issues in future tasks.

-  **No Paid Tools:**

If the task involves any paid software/tools, do not purchase anything. Just learn the process or find free alternatives.

-  **GitHub Submission:**

Create a new GitHub repository for each task.

Add everything you used for the task — code, datasets, screenshots (if any), and a short README.md explaining what you did.

Submit Here:

After completing the task, paste your GitHub repo link and submit it using the link below:

-  [\[Submission Link\]](#)

