2024 PERSONAL FINANCE AND INVESTMENT ANALYSIS

(MYSQL EDITION)

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🧠 PROBLEM STATEMENT

- Managing personal finances often lacks structure, making it difficult to track where money goes, how investments perform, and whether financial goals are being met. This project uses MySQL to build a personal financial tracking system that organizes income, expenses, investments, savings, and debts — with the goal of uncovering trends and gaining clarity over financial health throughout 2024.

🎯 OBJECTIVE

- Create a MySQL database to track income, expenses, investments, savings, and debts, and analyze financial trends.
- Analyze financial activity to answer key questions for the year 2024:
    - *What is the general financial overview for each month in 2024?*
    - *How are expenses distributed across different categories, and what are the 3 major spending areas?*
    - *How much have investments earned in terms of returns?*
    - *What is the total debt and interest paid?*
    - *What is the total net worth?*

📦 FINAL PORTFOLIO DELIVERABLES

✅ Built a MySQL-based financial tracking system with analysis queries, automated views, and full documentation hosted on GitHub.

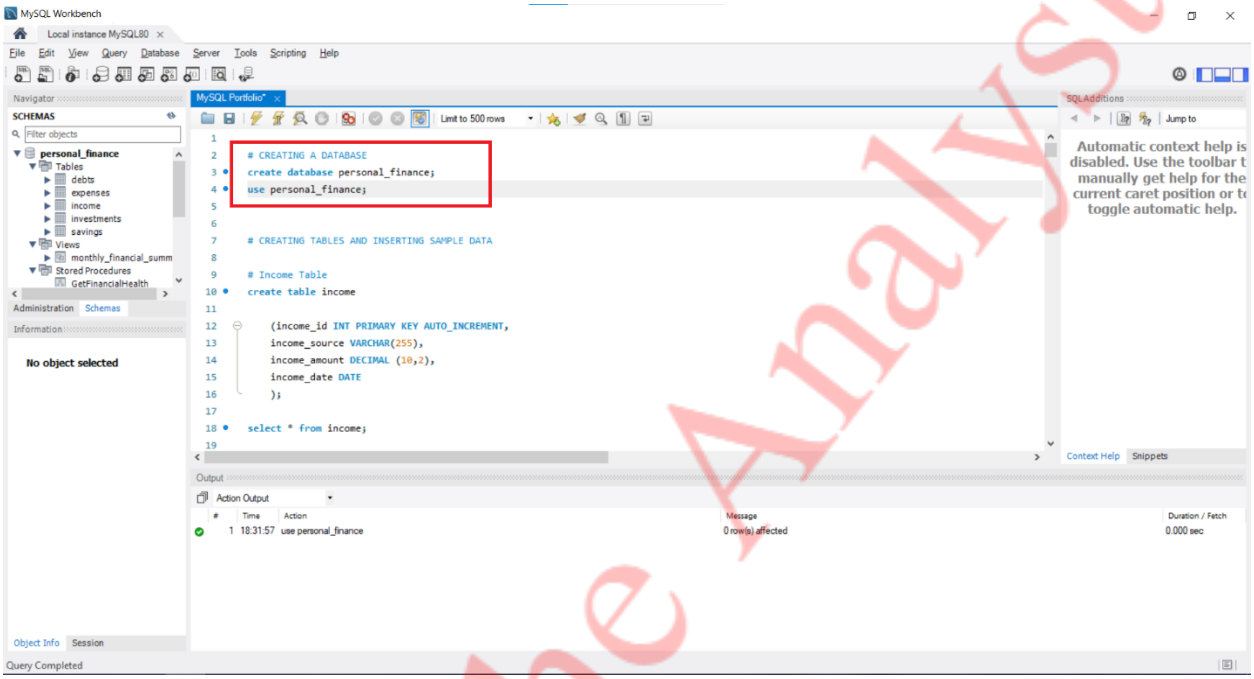
📎 LINK:

- Github: https://github.com/marktheanalyst103/mysql-scripts/blob/main/2024%20Personal%20Finance%20and%20Investment%20Analysis.sql

⚙ PROJECT STEPS

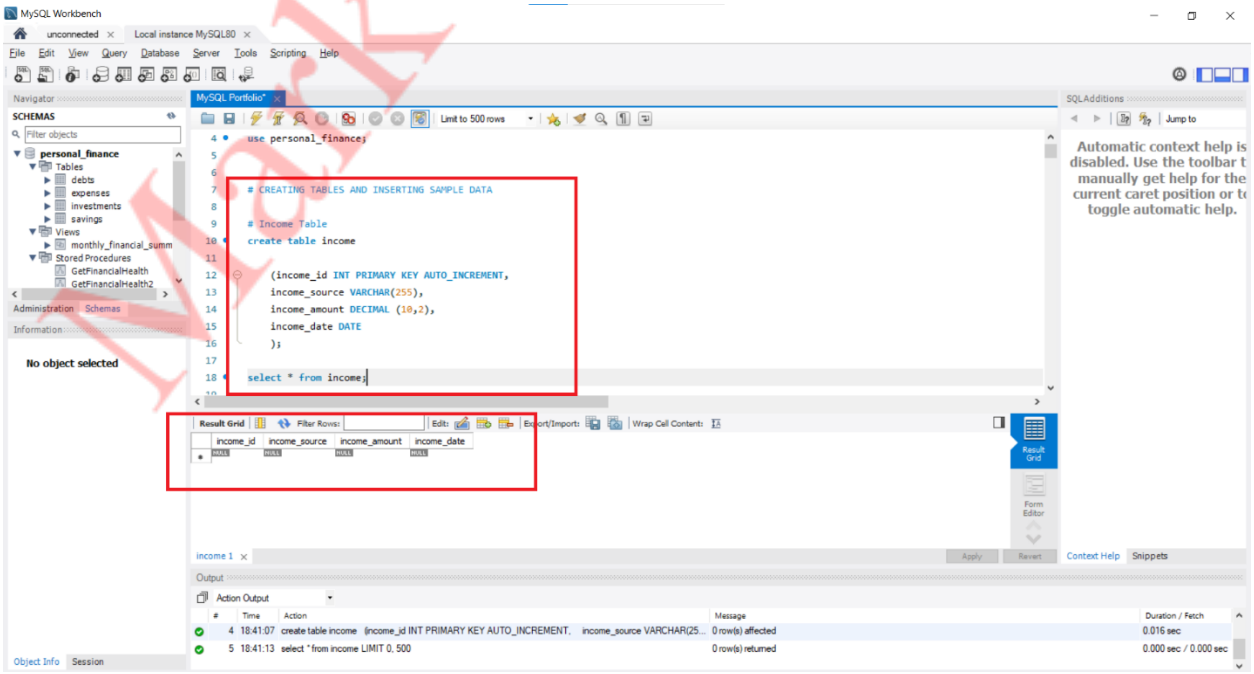
🔧 Step 1: Set Up MySQL Environment

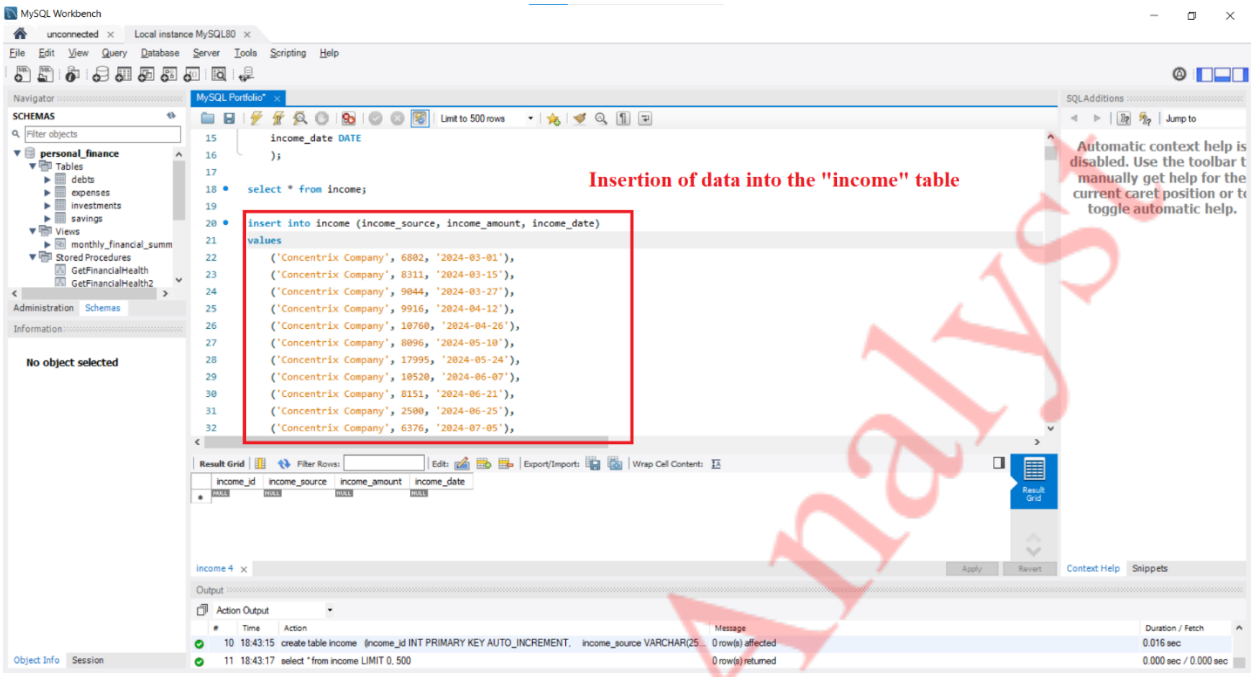
- Install MySQL and set up the database.

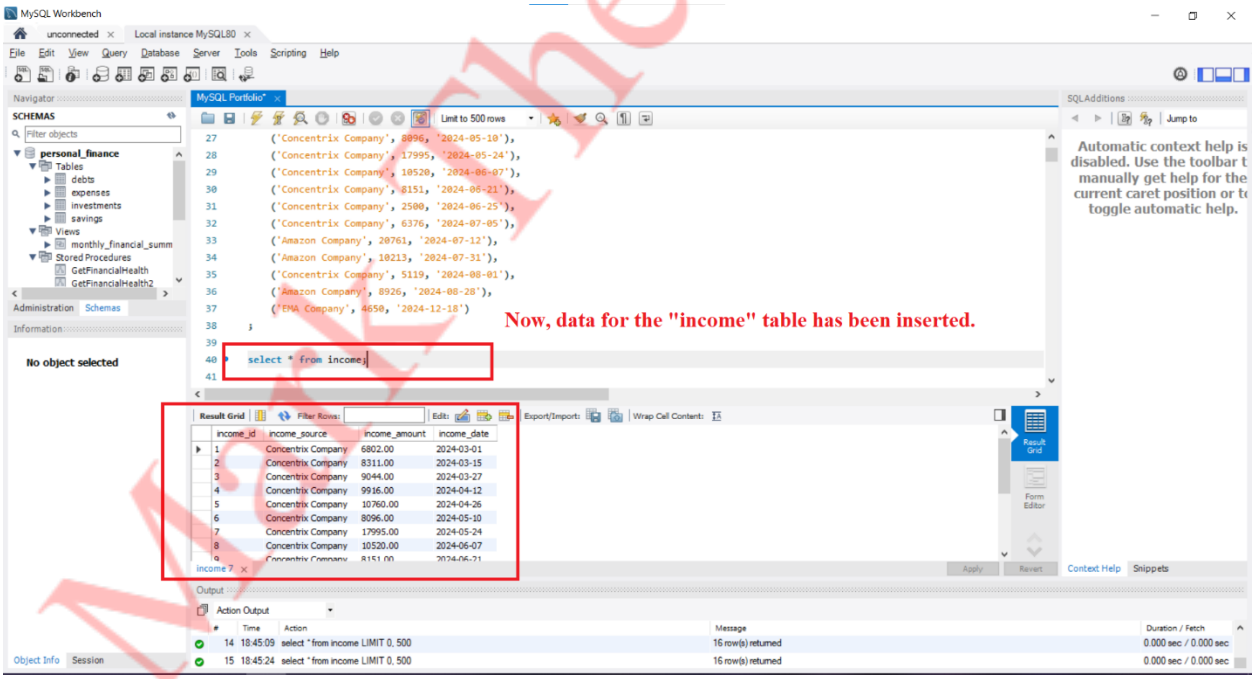


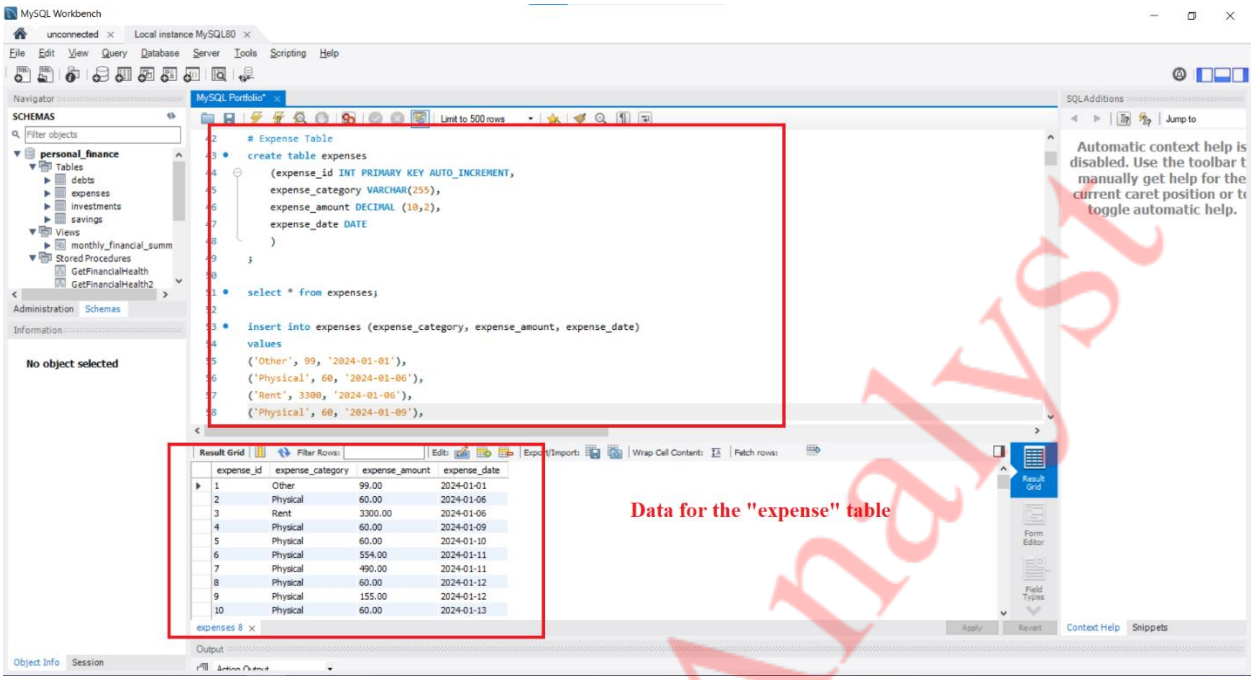
🧰 Step 2: Create Tables & Insert Sample Data

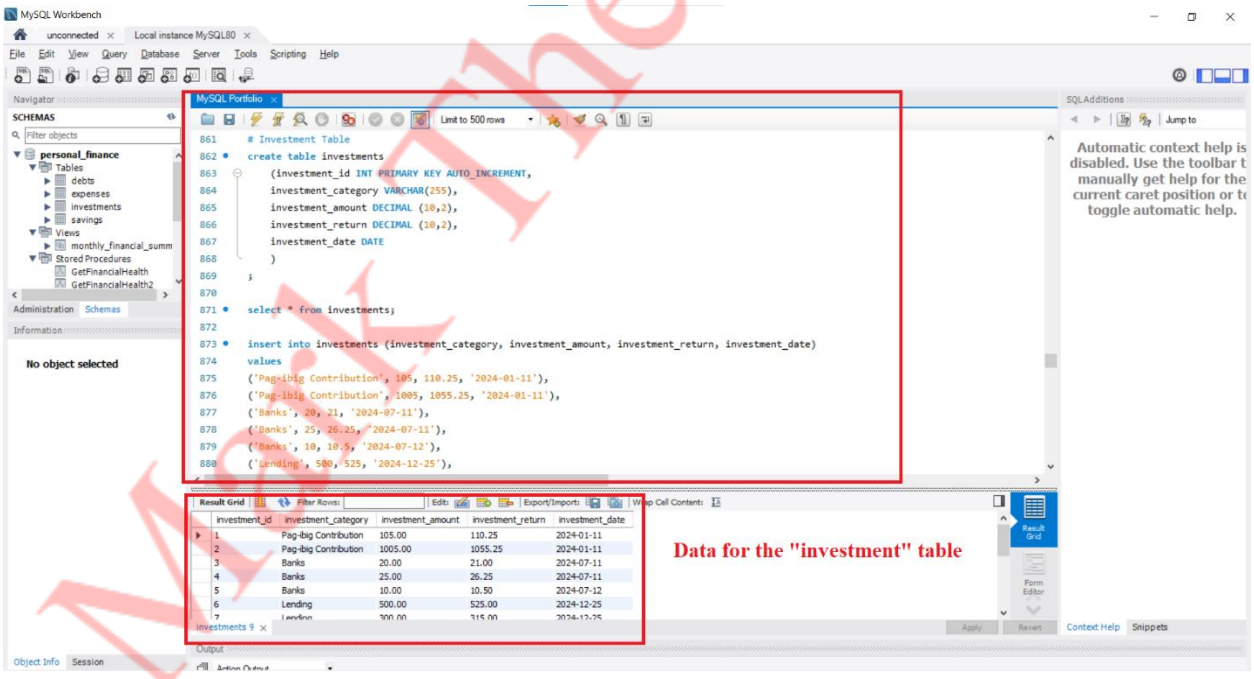
- Define tables for *income*, *expenses*, *investments*, *savings*, and *debts*.
- Populate tables with sample financial data.

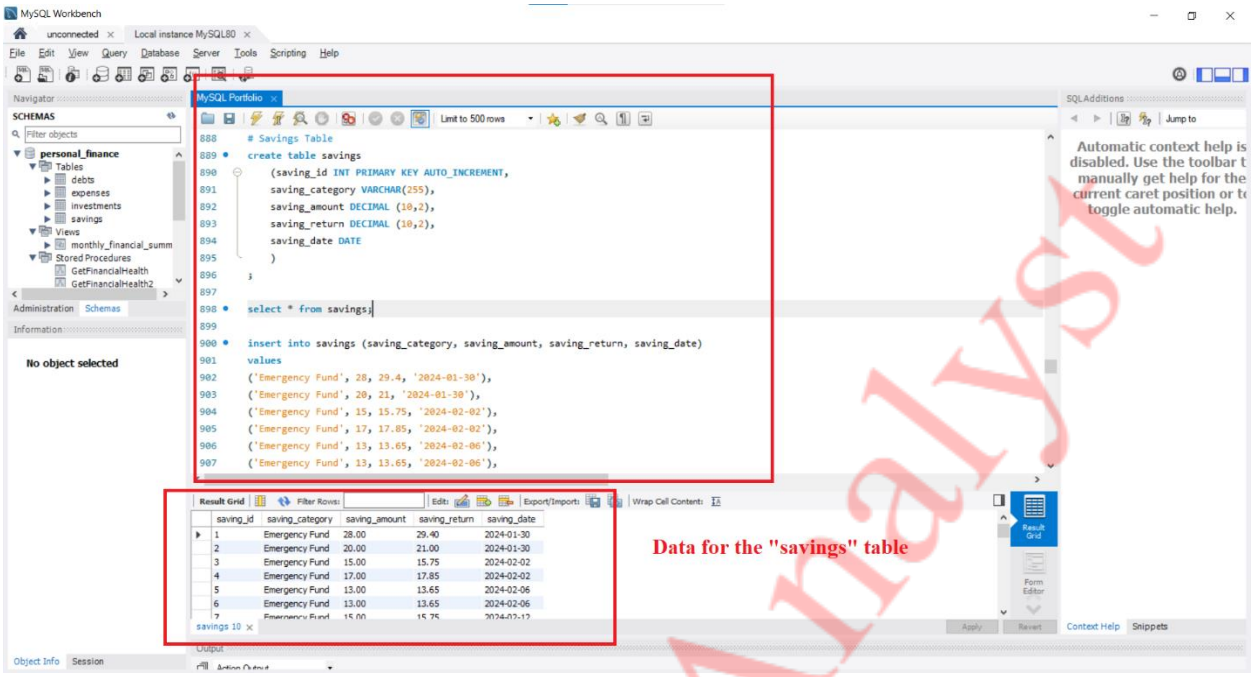


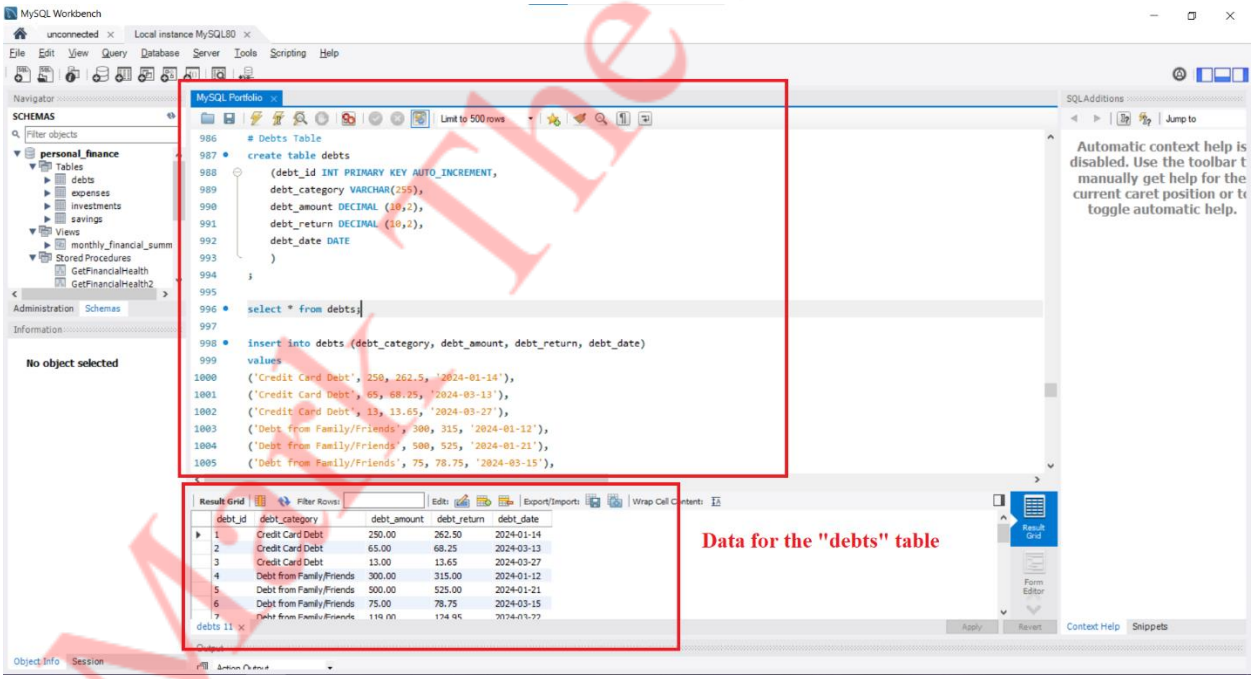








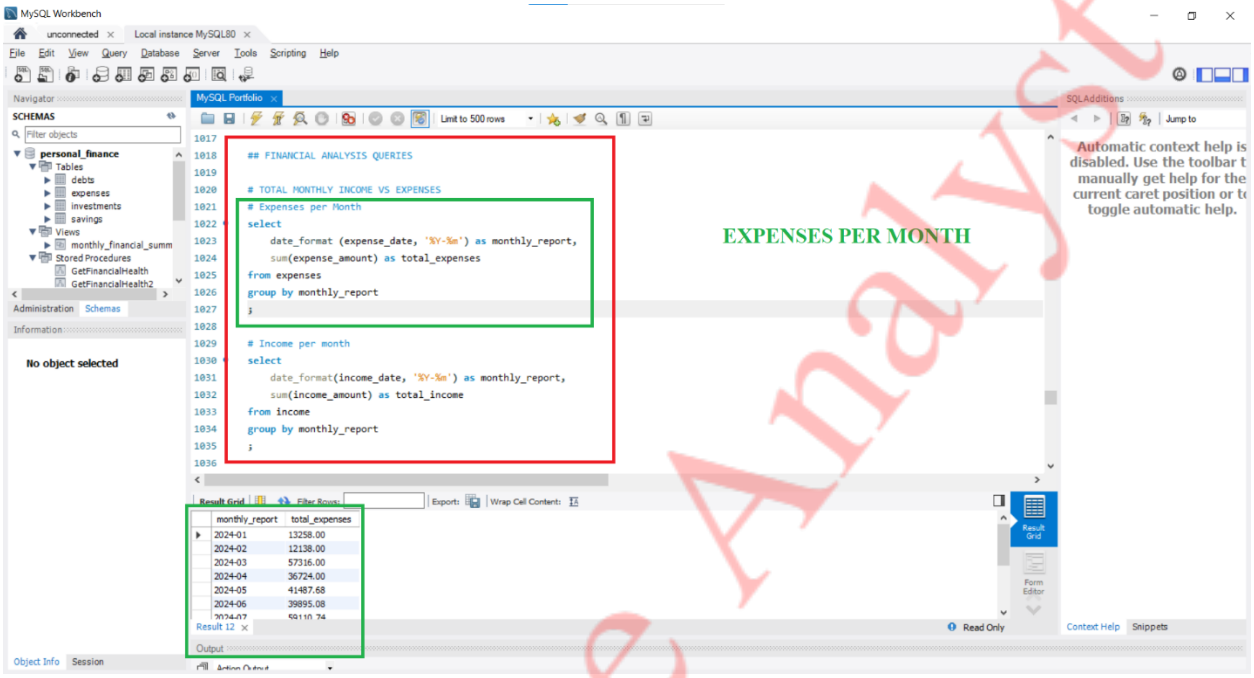


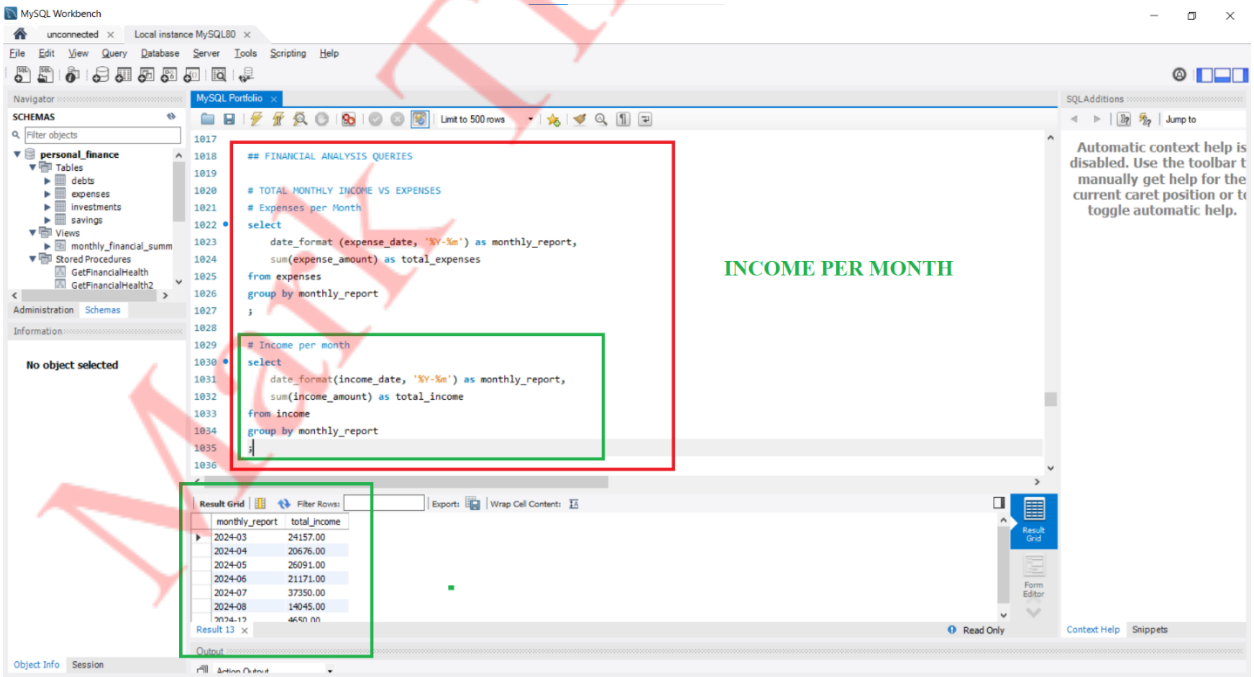


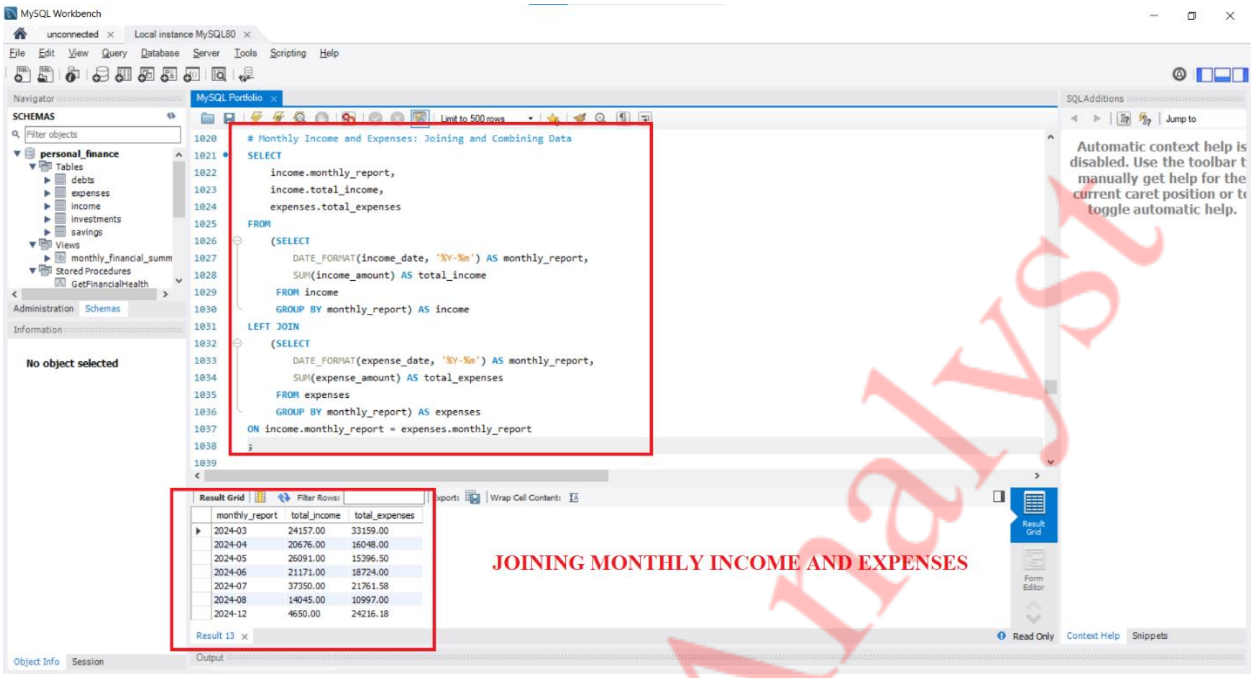
💰 Step 3: Financial Analysis Queries

3.1 Total Monthly Income vs. Expenses

- Query to compare total monthly income and expenses.

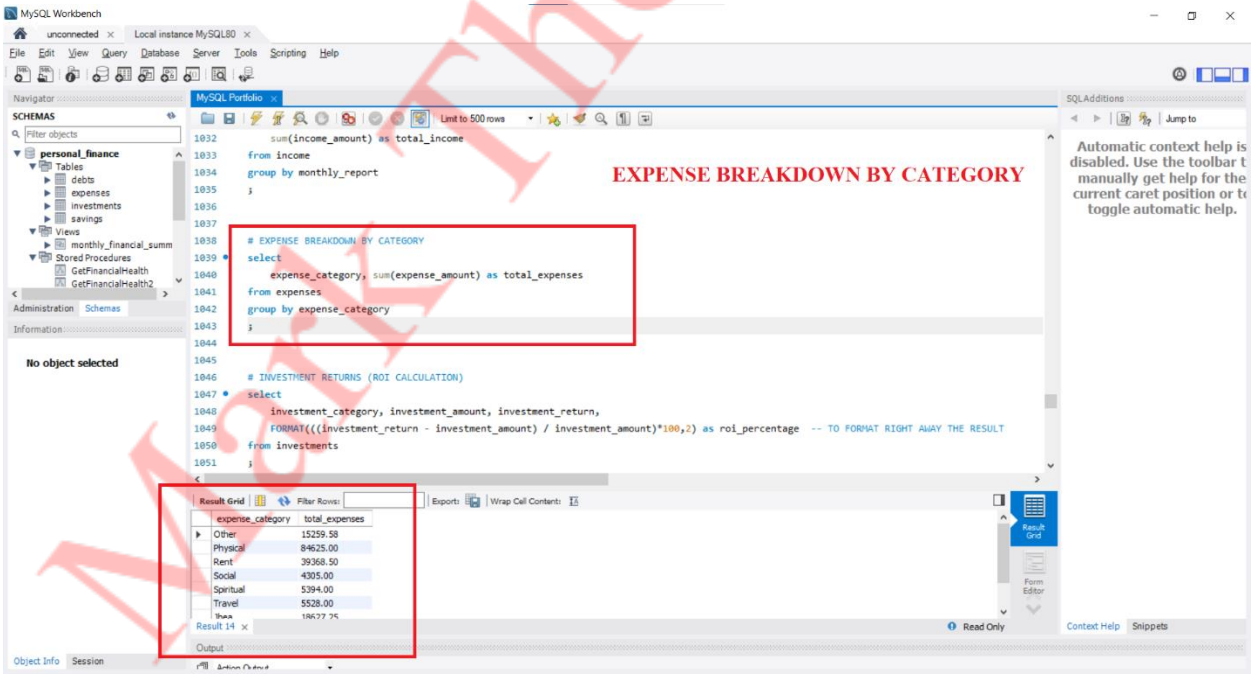






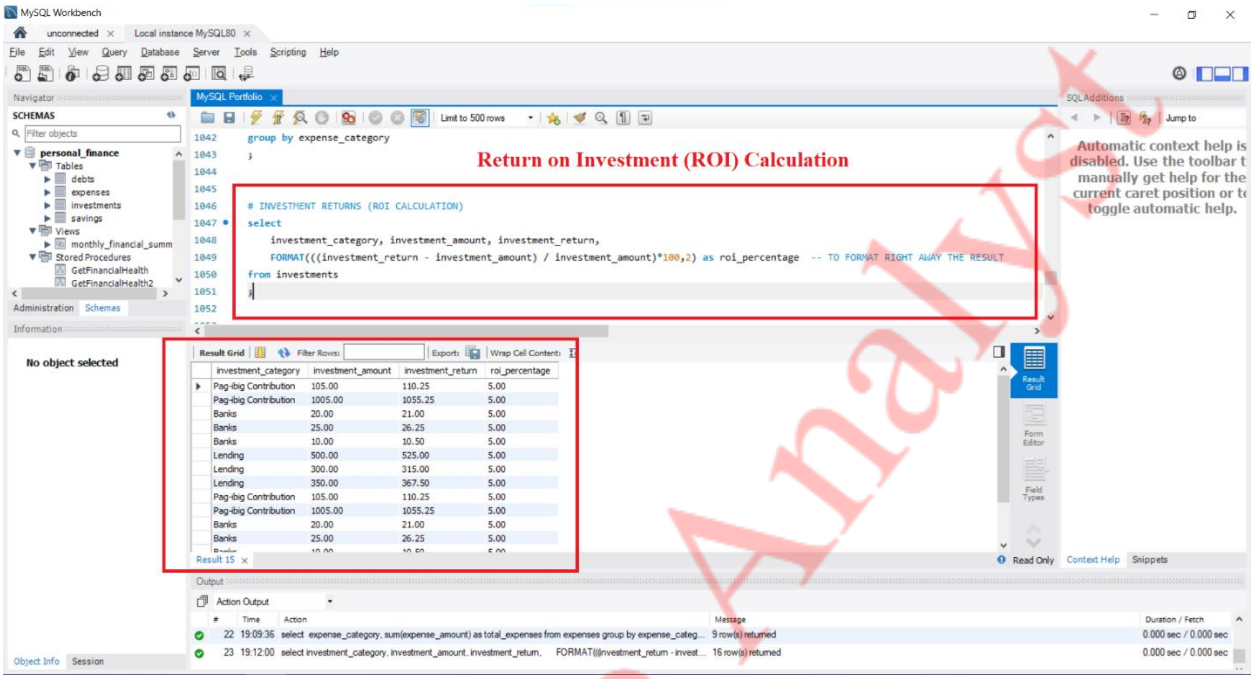
3.2 Expense Breakdown by Category

- SQL query to categorize and summarize expenses.



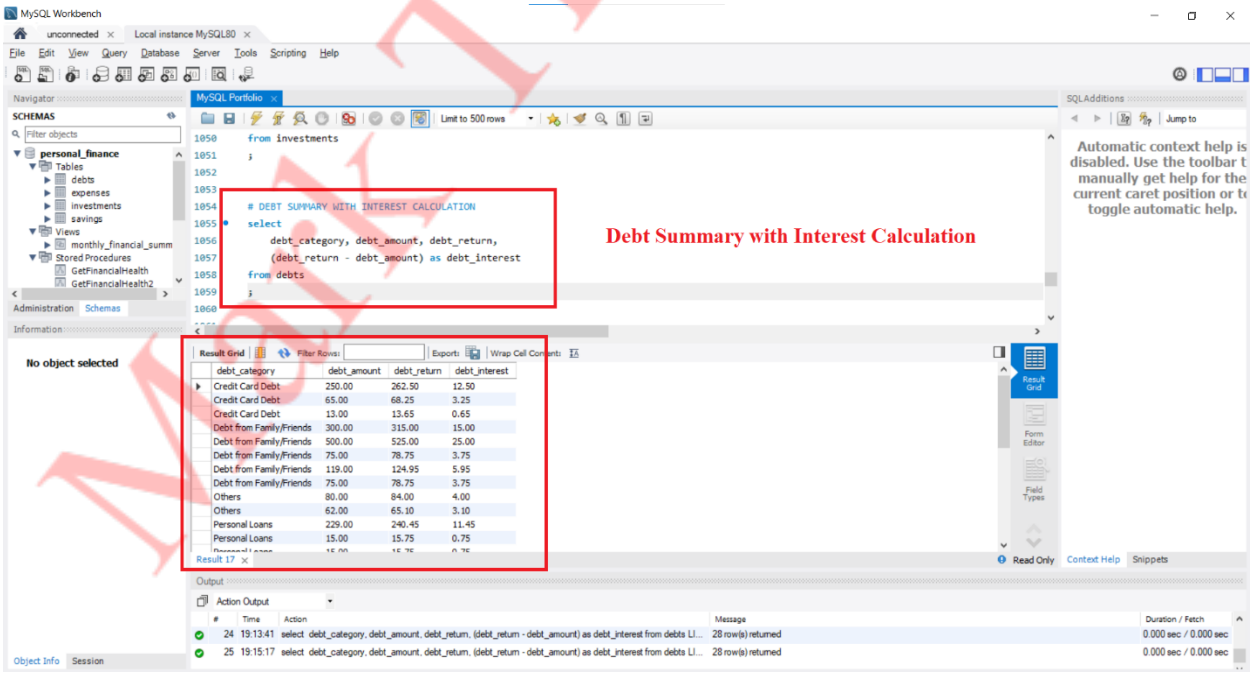
3.3 Investment Returns (ROI Calculation)

- Query to calculate return on investment (ROI) over time.



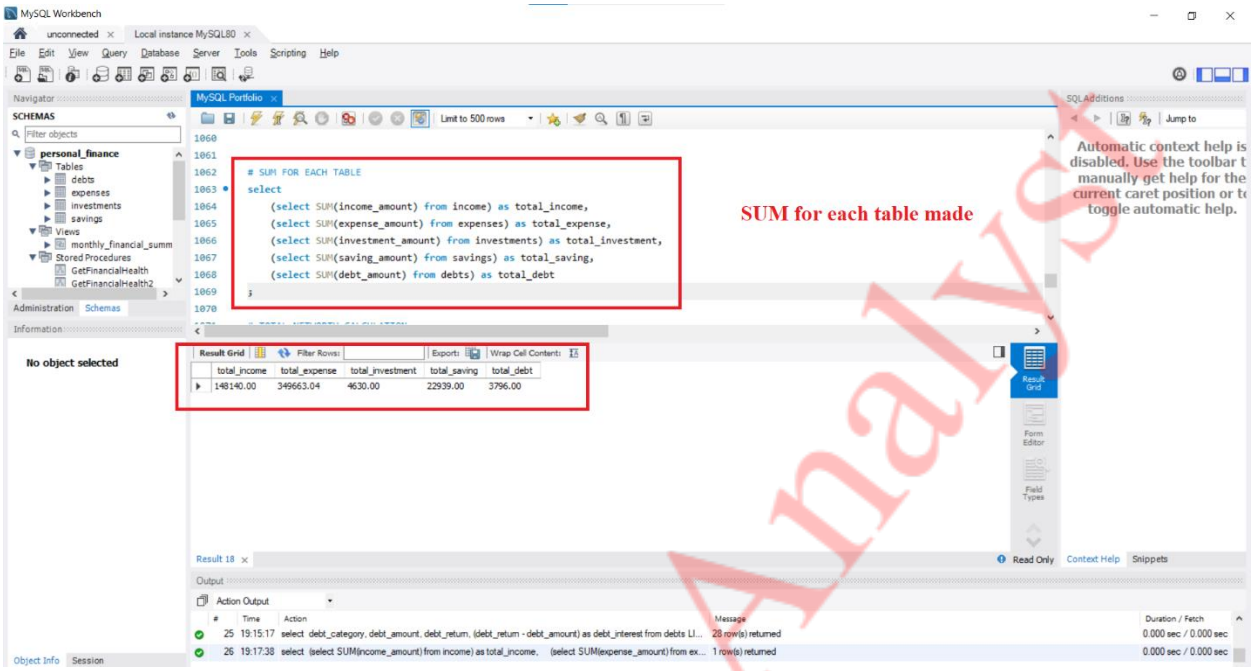
3.4 Debt Summary with Interest Calculation

- Query to track debt amounts and interest payments.



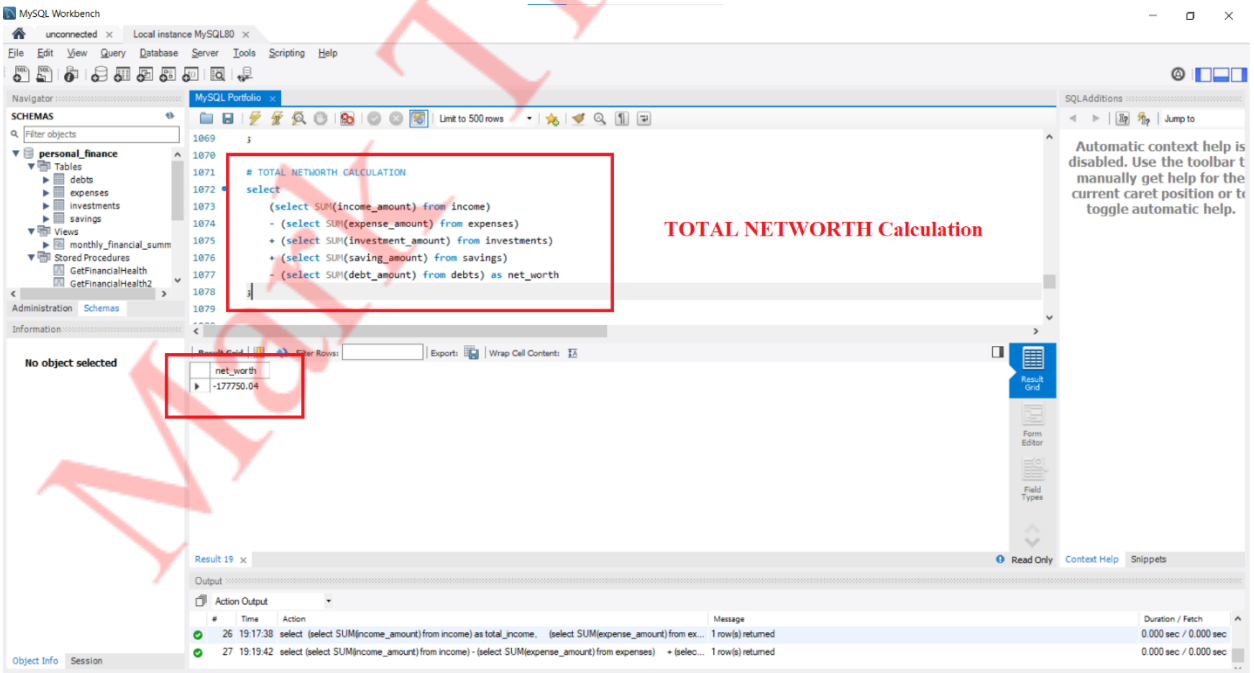
3.5 Sum for Each Table

- Aggregate calculations for each financial category.



3.6 Total Net Worth Calculation

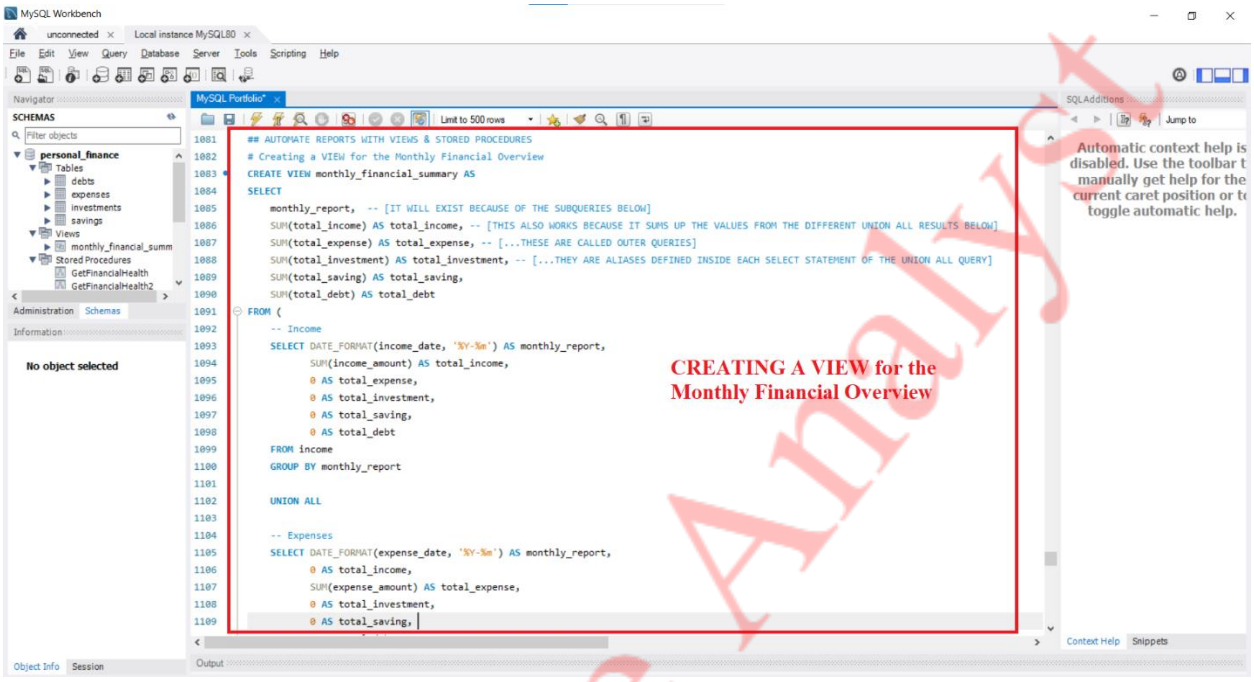
- Query to calculate overall financial standing.

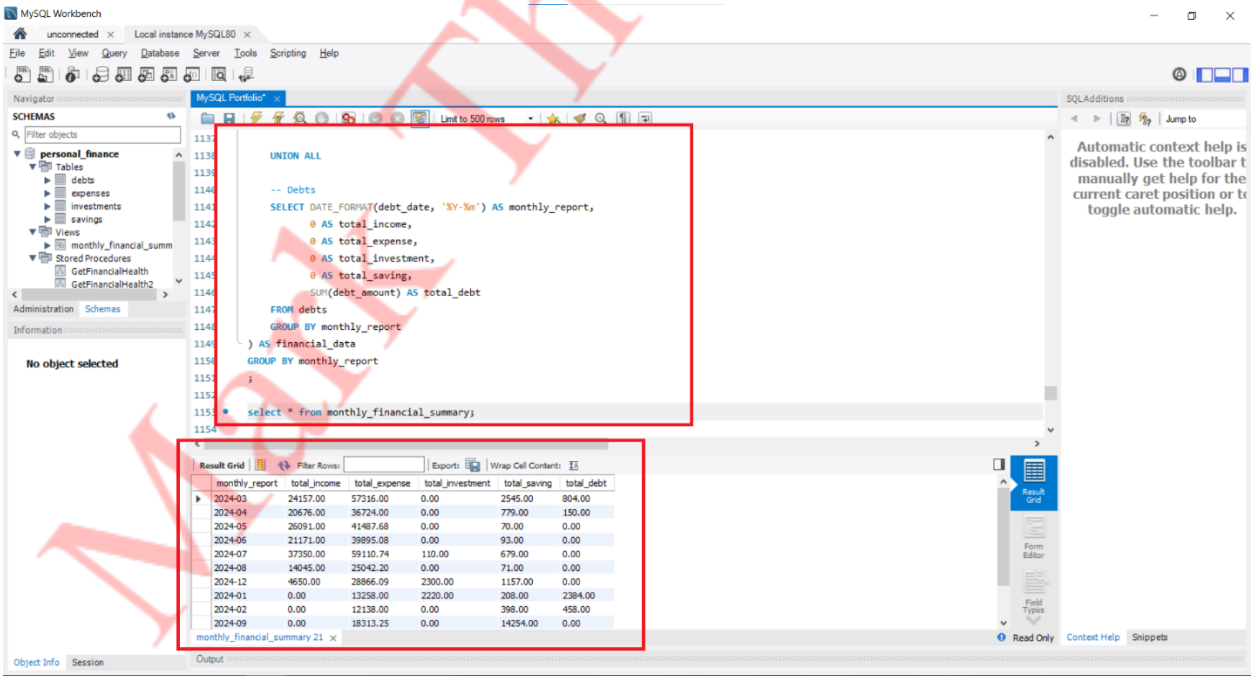


🗀 Step 4: Automate Reports with Views & Stored Procedures

4.1 Create a View for Monthly Financial Overview

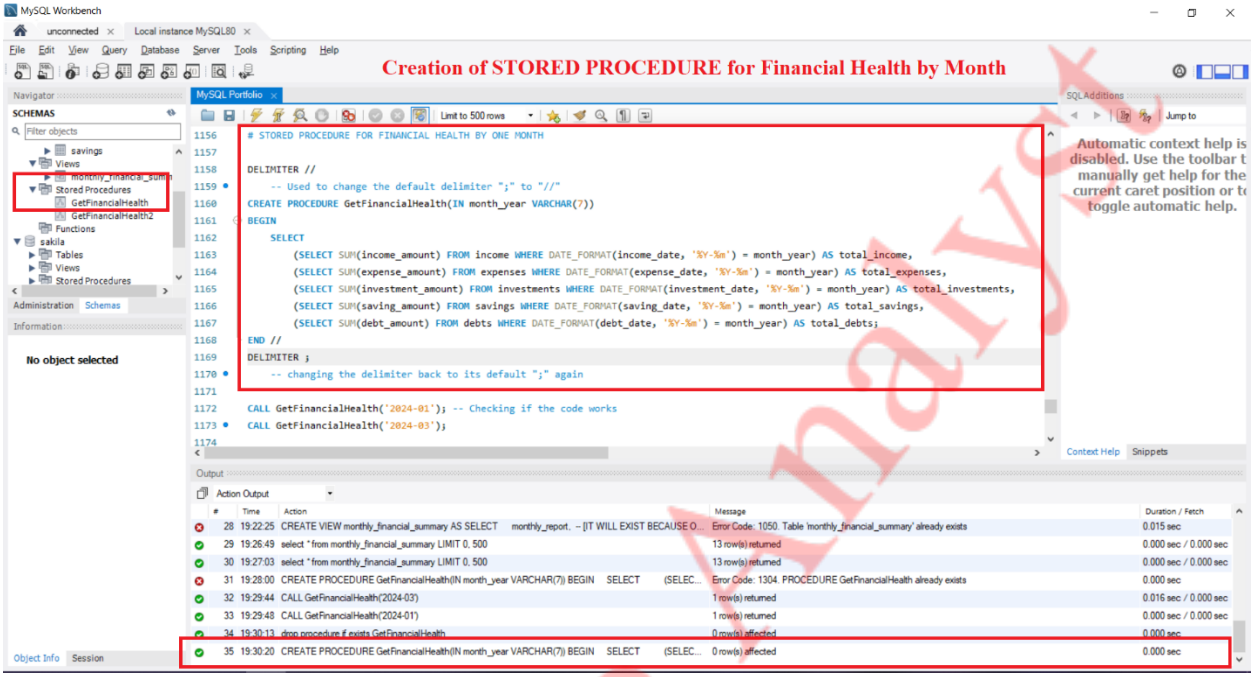
- View to display key financial metrics.





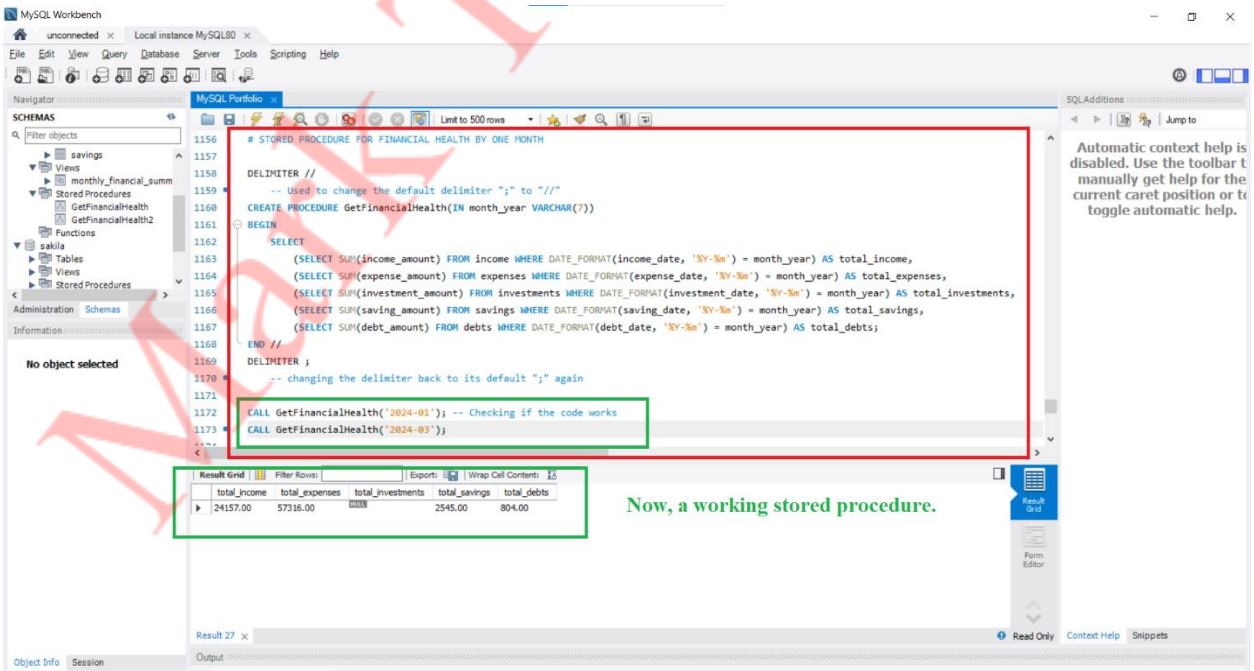
4.2 Stored Procedure for Financial Health by Month

- Automated query to analyze finances month by month.

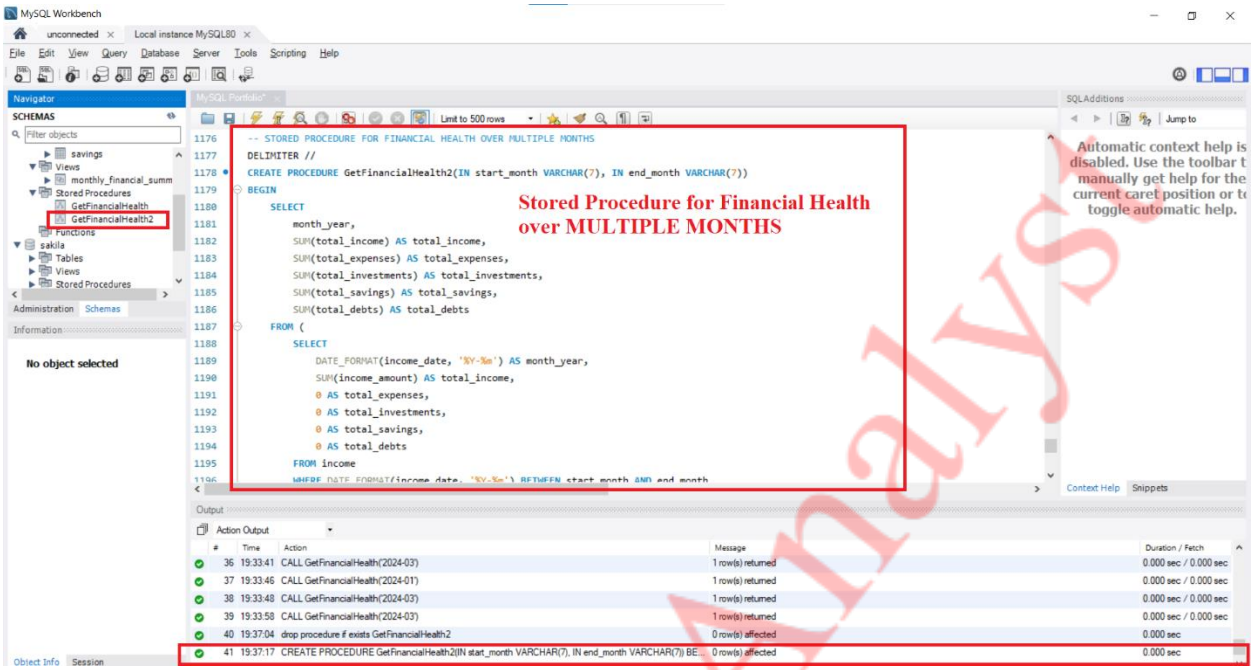


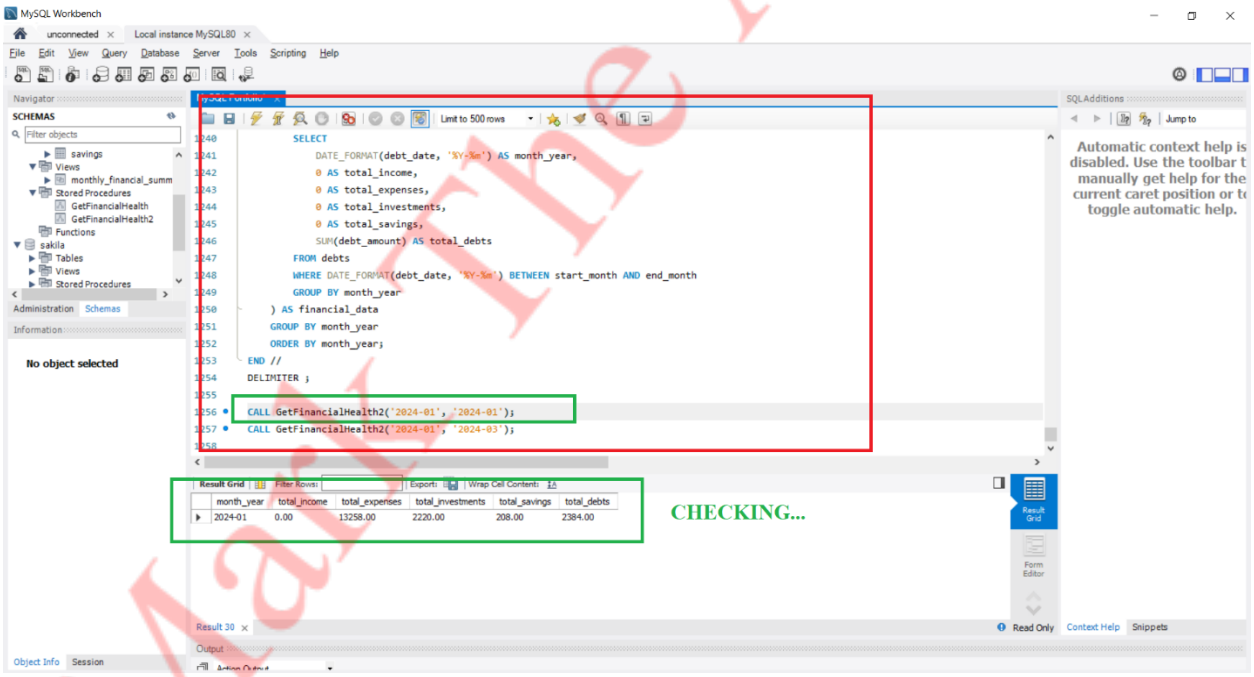
4.3 Stored Procedure for Financial Health Over Multiple Months

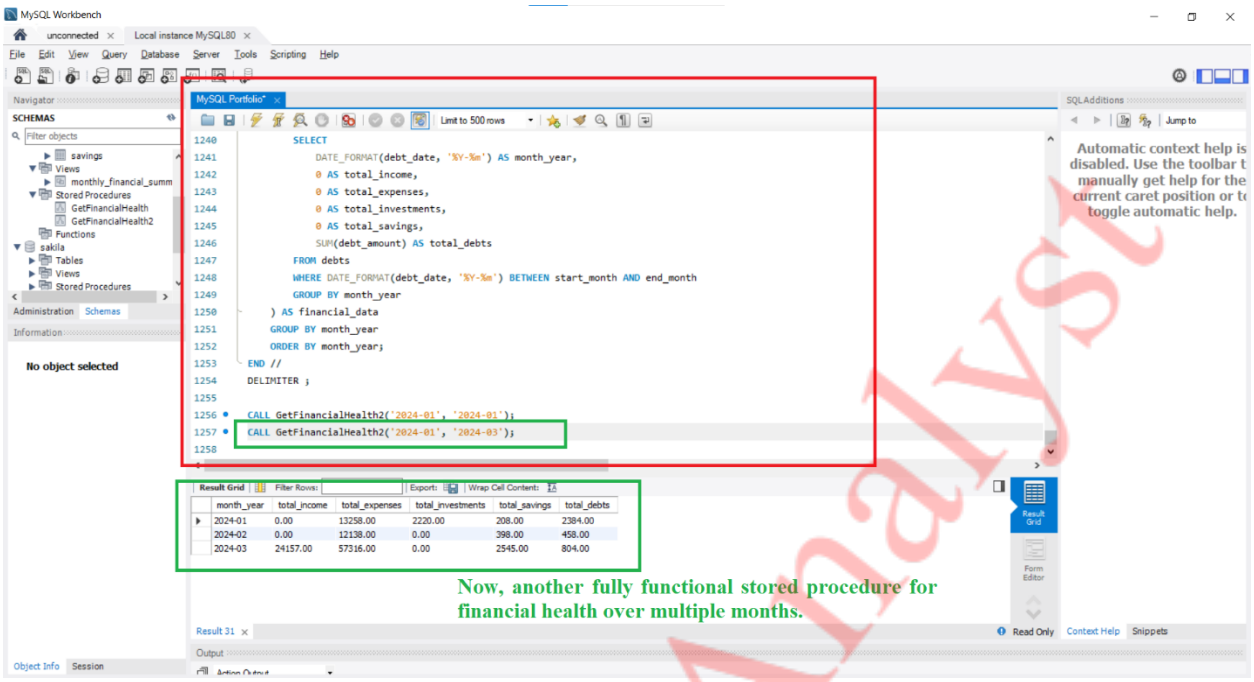
- Extended analysis over a chosen period.



4.4 Stored procedure for financial health over multiple months



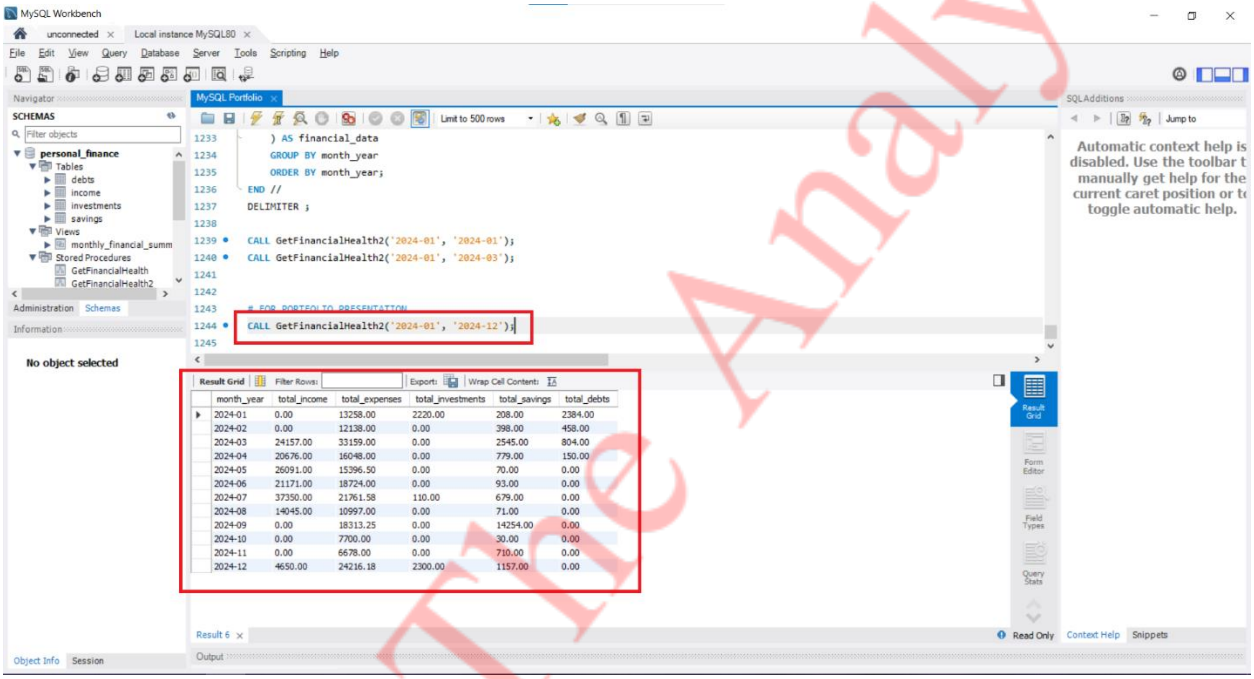




📊 DATA INSIGHTS

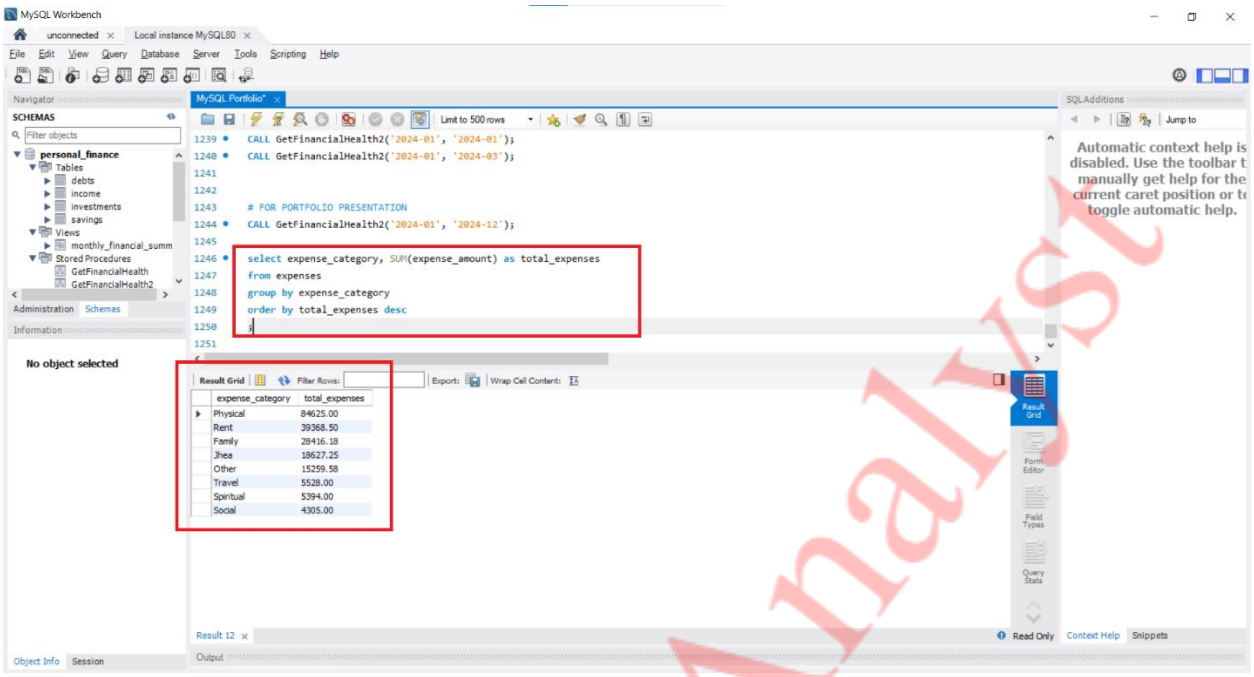
1. What is the general financial overview for each month in 2024?

- *The monthly financial overview for 2024 highlights trends in income, expenses, investments, savings, and debts. It provides a clear snapshot of financial performance, showing growth, stability, or areas needing adjustment. This helps track progress and make informed financial decisions throughout the year.*



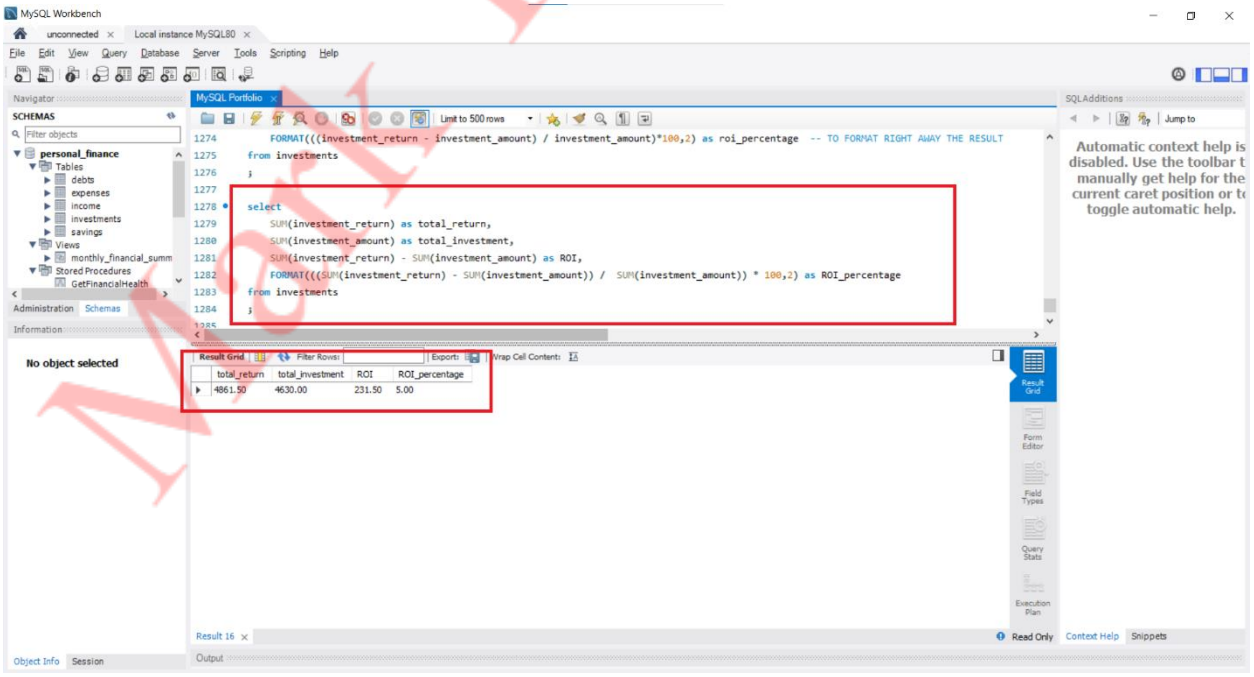
2. How are expenses distributed across different categories, and what are the 3 major spending areas?

- *Expenses are categorized into distinct groups (e.g., physical, travel, social, etc.), and as shown in the results, the top three spending categories are **'Physical'**, which ranks highest with a total of ₱84,625 spent, followed by **'Rent'** at ₱39,368, and **'Family'** with ₱28,416.18, with the remaining categories following in order.*
    - *By breaking down spending in these categories, we can identify which areas consume the most resources and explore opportunities to reduce costs, providing valuable insights for optimizing budgeting strategies.*



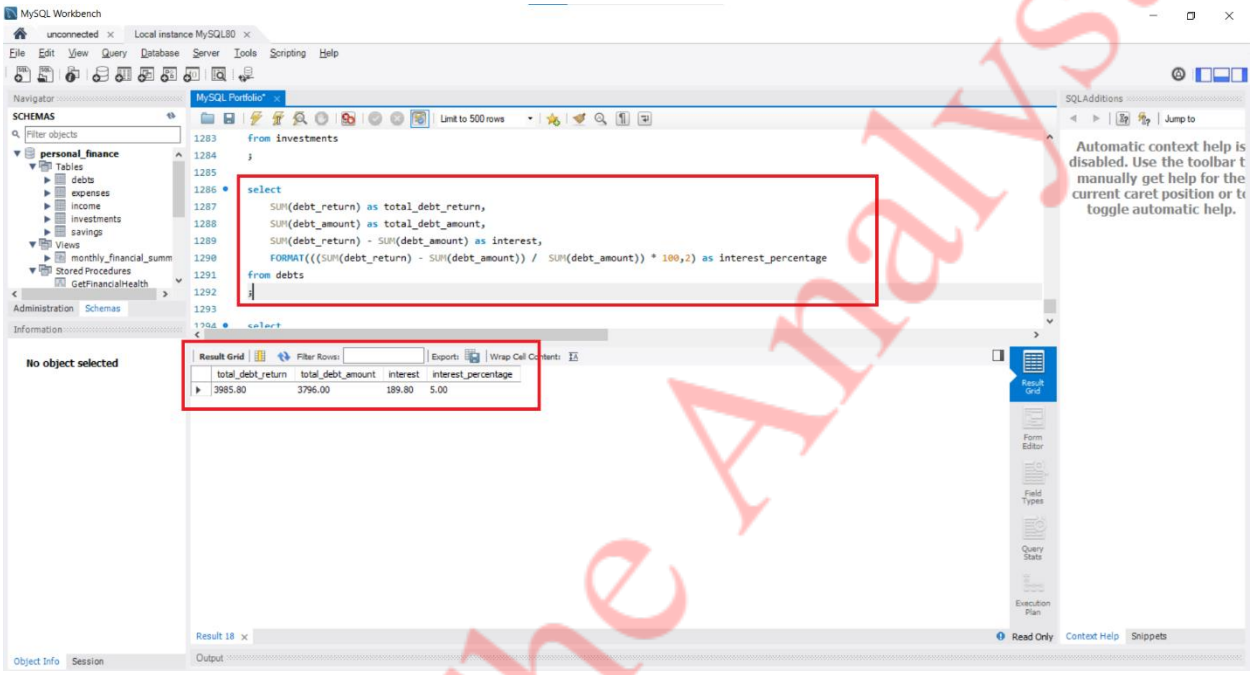
3. How much have investments earned in terms of returns?

- *The ROI formula is used to calculate investment returns by comparing the total amount invested to the returns generated. According to the query, the total ROI for 2024 is* ***₱231.50****, which accounts for* ***5% of the total investment.***
    - *This calculation helps assess the performance of various investments over the year, providing valuable insights for making strategic decisions on where to allocate future funds.*



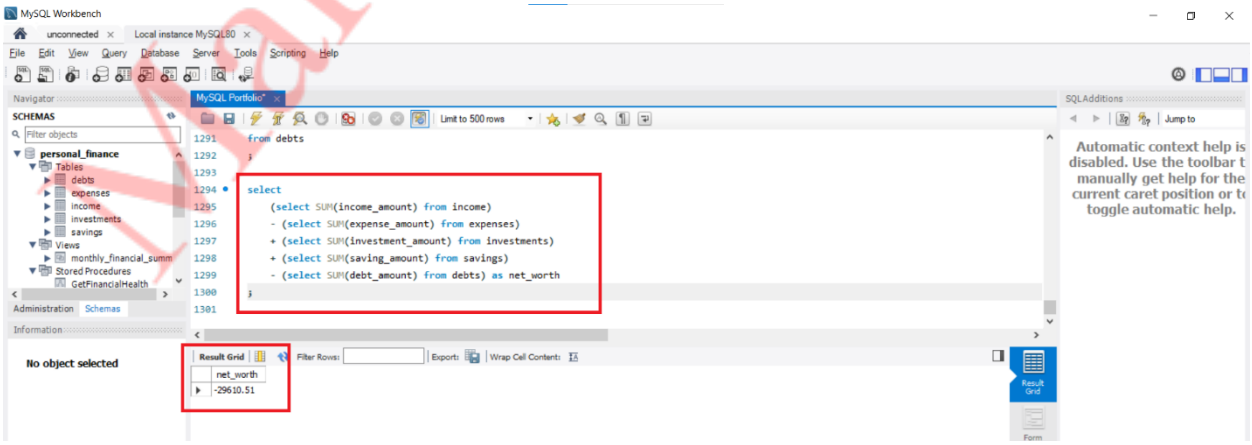
4. What is the total debt and interest paid?

- *The debt summary query calculates the total outstanding debt, while interest calculations provide insights into the cost of borrowing over time. This helps in managing repayment strategies effectively. For 2024, the total debt stands at **₱3,796**, with **₱189.90** paid in interest, representing **5% of the total debt**.*



5. What is the total net worth?

- *Total net worth is calculated by adding up assets (e.g., savings, investments, etc.) and subtracting liabilities (e.g., expenses, debts). As shown in the query, the total net worth for the year **2024** is **₱-29,610.51**, indicating poor financial management during this period.*
  - *By tracking net worth over time, we can evaluate overall financial progress and assess the impact of income, spending, and investment decisions.*



KEY INSIGHTS

- Monthly financial tracking in 2024 revealed varying trends in income, spending, savings, and debt, providing a clearer picture of overall financial flow and stability.
- The top 3 spending categories were **Physical** (₱84,625), **Rent** (₱39,368), and **Family** (₱28,416.18), indicating where most resources were allocated.
- Total investment returns reached **₱231.50**, representing a modest **5% ROI**, which helps evaluate the effectiveness of investment decisions.
- The total debt stood at **₱3,796**, with **₱189.90** in interest paid — highlighting the cost of borrowing and areas for improving repayment strategies.
- The **net worth for 2024 was negative ₱29,610.51**, pointing to overspending or underperformance in savings and asset growth throughout the year.

RECOMMENDATION

- To improve overall financial health, consider reviewing and adjusting high-expense categories like Physical and Rent, while increasing focus on consistent savings and better-performing investments. Monitoring financial data monthly and reallocating funds strategically could help shift net worth into a positive trajectory.

REFLECTION & NEXT STEPS

- This project strengthened my ability to write complex SQL queries and structure a database from scratch, helping me turn raw personal finance data into meaningful insights. It gave me hands-on experience applying SQL to real-world questions. Moving forward, I'd like to automate the data entry process using tools like Google Sheets and integrate a dashboard for live tracking and more dynamic analysis.