Task 3: SQL for Data Analysis

- **Objective: Use SQL queries to extract and analyze data from a database.**
- **Tools: MySQL or PostgreSQL or SQLite**
- **Deliverables: SQL queries in a SQL file + screenshots of output**
- **Hints/Mini Guide:**
  a. **Use SELECT, WHERE, ORDER BY, GROUP BY**
  b. **Use JOINS (INNER, LEFT, RIGHT)**
  c. **Write subqueries**
  d. **Use aggregate functions (SUM, AVG)**
  e. **Create views for analysis**
  f. **Optimize queries with indexes**
- **Dataset: Ecommerce_SQL_Database(or any data set of your choice)**
- **Outcome: Learn to manipulate and query structured data using SQL.**

Interview Questions:

1. **What is the difference between WHERE and HAVING?**
2. **What are the different types of joins?**
3. **How do you calculate average revenue per user in SQL?**
4. **What are subqueries?**
5. **How do you optimize a SQL query?**
6. **What is a view in SQL?**
7. **How would you handle null values in SQL?**

📌 **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