🧪 Lab Title: Creating and Managing SQL Pipelines

⏱️ Duration: 1 hour 30 minutes

💳 Cost: 5 credits

📈 Level: Beginner

💡 AI Tools: May be integrated to assist your learning

💻 Device Requirement: Desktop or laptop only

🔥 Important Reminders

- ✅ **5 attempts only**: You have a maximum of five tries to complete the lab.
- ⏳ **Timer cannot be paused**: Once started, the lab runs for 90 minutes straight.
- ❌ **Do not use your personal Google Cloud account**: Use the temporary credentials provided.
- 🧪 **Real environment**: This is not a simulation — you'll work in a real Google Cloud environment.
- 🕵️ **Use Incognito mode**: Prevents conflicts with your personal Google account.

📚 Activity Overview

A **data pipeline** is a sequence of processes that move and transform data from source to destination for analysis.

Why use SQL pipelines?

- ⚡ **Performance boost**: SQL pipelines eliminate unnecessary steps by reading/writing directly to the destination.
- 💾 **Storage optimization**: You can archive or delete outdated data to free up space and improve speed.
- 🔄 **Flexibility**: Well-designed pipelines can adapt to evolving business needs.

🧩 Scenario: TheLook eCommerce

Problem: Profits are up, but **delivery times are lagging**, hurting customer satisfaction.

Your role: As a **Cloud Data Analyst**, you'll work with **Kai (Logistics Lead)** to:

- Collect, clean, transform, and load delivery data.
- Analyze distances from distribution centers to customers.
- Help logistics decide whether to:
  - Open new centers
  - Relocate existing ones
  - Improve transportation methods

🛠️ What You'll Do in the Lab

1. **Create a dataset** in BigQuery.
2. **Define table schemas** for incoming data.
3. **Explore and apply transformations** using SQL.
4. **Load transformed data** into new tables.
5. **Wrap queries into a stored procedure** for reusability.

🚀 Lab Setup Instructions

Before Starting:

- Use **Chrome** (recommended).
- Open the lab in an **Incognito window**.
- Make sure you have **90 uninterrupted minutes**.

Starting the Lab:

1. Click **Start Lab**.
2. Use the **temporary credentials** provided (username & password).
3. Click **Open Google Cloud Console**.
4. Sign in with the lab credentials (not your own).
5. Accept terms, skip recovery options, and avoid free trials.
6. The Console will open — you're ready to begin!