

Task1

Given: a table containing **id** (integer). The **id** field is intended to represent a continuous sequence of identifiers; however, certain values are missing from the sequence (e.g., 2, 3, 11, 12, 13, 27, 33, 34, 35, 42, ... N).

Requirements: develop an SQL query that identifies contiguous ranges of missing identifiers and returns these missing ID ranges as the result.

start_range	end_range
2	3
11	13
27	27
33	35
42	42

Task2

Your task is to build an Airflow pipeline that performs a full ETL process for currency exchange rates. The assignment consists of four parts: Data Loading, Processing, Storage, and Orchestration.

1. Data Loading

Fetch **currency exchange rates for yesterday (T-1)** from any public API. You may use one of the examples below or choose a different open source: <https://www.frankfurter.app/>, <https://openexchangerates.org/> or any other of your choice.

2. Processing

Calculate the **percentage change** of each currency relative to the previous day (T-2). You should also decide how to handle missing data for T-1 or T-2.

3. Storage

Store the processed results in **any database of your choice**, such as PostgreSQL or any other SQL database. You are free to design the table structure yourself.

4. Orchestration

Build a complete **Airflow pipeline (DAG)** that:

runs **once per week**, every **Friday**, at **02:00 UTC**.

The DAG must be **production-ready**, which includes:

- clear and correct task dependencies,
- sensors/validators where appropriate,
- proper logging,
- fault-tolerant pipeline,
- separation of responsibilities between tasks.

Result format

A GitHub repository is preferred, or alternatively, a project archive.