Growth Leads - Data Engineer Task

Part 1: Data Ingestion (4-5 hours)

1. **API Integration:**
    - Write a Python script to fetch data from 3 different endpoints in a sample third-party API. (For this task, use a publicly available API like OpenWeatherMap or REST Countries).
    - Implement basic error handling and logging in your script.
2. **Data Storage:**
    - Set up a table in a Postgres database to store the fetched data.
    - Write a Python script to insert the fetched data into the Postgres database.
3. **Documentation:**
    - Provide a brief README file explaining the steps to set up the database, run the script, and any dependencies or environment settings required.

Deliverables:

- Python script for fetching data from the API.
- Python script for inserting data into Postgres.
- SQL script or Postgres table schema for storing the data.
- README file with setup instructions.

Part 2: Data Integration (5-6 hours)

1. **Merging Various Data Sources:**
    - Use Python or SQL (or a combination of both) to write a script that concatenates the data from the Postgres tables called **tps_data** and **legacy_scraper** with the data from the CSV called sheet_stake_data. Sample data is provided in XLSX files appropriately named. The sample data from **sheet_stake_data** is provided in the CSV file.
    - Write a script that merges your concatenated data with that found in the **marketing_source table** (sample data provided in CSV)
    - Write a script that sends the data into a Google BigQuery table called **gl-dataengineer-project.bi_backend.routy_scraper_bi** with the format provided in the CSV file (keep in mind that you don't actually need to build the table)
    - Ensure that the concatenation handles potential issues such as missing values and mismatched data types.
    - Document the merging logic and any assumptions made during the process
    - Feel free to make any recommendations or changes to the final BigQuery table

Deliverables:

- Python/SQL scripts for merging data.
- Python script to push data into BigQuery
- Additional recommendations or changes to BigQuery.