Month 1 Project
"Adventure Works" is a fictional company that Microsoft uses as a sample database for demonstrating and teaching how to use SQL Server and other database products and services. AdventureWorks databases are often used to help users learn about database concepts, querying, and data modeling.
The databases typically feature a schema that includes tables for employees, products, sales, and other business-related entities, making it a versatile tool for learning SQL and exploring business intelligence scenarios."

Tools:
Microsoft SQL Server
Microsoft SQL Server Management Studio
Python
Any IDE preferable VS Code

Data warehouse : AdventureWorksDW2022.bak
https://github.com/Microsoft/sql-server-samples/releases/download/adventureworks/AdventureWorksDW2022.bak

Exercise 1: Executing SQL Commands
Objective: Understand how to execute SQL queries and commands from Python.

Task:
Connect to the Adventure Works database using Python.
Create a new table called CustomerFeedback with columns FeedbackID, CustomerID, FeedbackDate, and Comments.(This will be written in sql not python, using the execute_sql function)
Insert sample data into CustomerFeedback.(same concept)
Write a SQL command to update a record in the CustomerFeedback.(same concept)
Delete a record from the CustomerFeedback.(same concept)

Skills Covered:
Connecting to a SQL database from Python.
Executing DDL commands (CREATE, ALTER).
Executing DML commands (INSERT, UPDATE, DELETE).

Exercise 2: Uploading Data
Objective: Learn to upload data from a CSV file to the SQL Server database.

Task:
Download the csv file 7817_1.csv from this link
https://www.kaggle.com/datasets/yasserh/amazon-product-reviews-dataset?resource=download
Read the CSV file and uploads its contents to a new table named ProductReviews in the
Adventure Works database.
Ensure the table includes appropriate columns for the data

Skills Covered:
Reading files in Python.
Bulk data upload from Python to SQL Server.
Handling file paths and exceptions.

Exercise 3: Extracting Data
Objective: Extract data from SQL Server using queries and store it in a structured format in
Python.

Task:
Write a Python script to query the SalesOrderDetail table to find all orders placed in the last
year.
The script should calculate the total sales per product and store the results in a Pandas
DataFrame
Export the DataFrame to a csv file named lastYearSales.csv

Skills Covered:
Writing complex SQL queries.
Using pandas for data manipulation.
Exporting data to csv.

Template to use:
https://github.com/Olawoyin007/Python_ETL/blob/main/Database_E&L_Template.py

This template has been updated and works perfectly. Give the repository a star to appreciate the
effort.

Have fun! 👍