Code Challenge

PEY Internship - Full Stack Developer (Commerce Ops Group)

For all tasks in the code challenge, please upload source code to the Google Drive folder link given to you by email. Show your work accordingly, and use the principles of self-documenting code wherever possible so that we can better understand your critical thinking and problem solving skills.

Task 1: Database Development

In this task, your objective is to create a simple SQL database structure given a payload of JSON data. You will make use of this work in a future task, so plan accordingly.

1. Download the JSON sample data here: https://drive.google.com/file/d/1E6FWwnEJB0h_0Nc30C5p2tSi1zsKPV2Y/view?usp=sharing
2. Create an SQL database to store this data.
3. Create a web-based process or tool to ingest and store JSON data with the same structure(s).
4. Zip and upload the database and any source code for review.

Bonus Points:

- Create a web-based process or tool to flag and communicate errors that occur during data ingestion.

Task 2: Reporting & Graphing

In this task, your objective is to create an engine for reporting and graphing based on the database developed above.

1. Using the SQL database and any open-source graphing library, create a reporting engine with a web user interface that can graph the following over time:
    a. Sales Revenue
    b. Quantity: Items Sold
    c. Quantity: Orders Placed
    d. # of Fulfillments (shipments)
    e. Website: # of Visitors
2. Zip and upload all source code for review. If your solution cannot run on a localhost with the web UI, provide a link to the working demo.

Bonus Points:

- Include a download function that summarizes the current reporting view in a CSV.
- Develop a UI allowing the user to customize the data view.
- Increased granularity of data—what's interesting that can be visualized?