Data Engineering Exercise: Loading Datasets into BigQuery (USD-normalized)

Context

You will receive three Python scripts that each produce a dataset for an internal analytics assignment. Your task is to orchestrate their execution, transform outputs, and load them into Google BigQuery with clean schemas and defined relationships. All currency values must be stored in USD.

Deliverables

1. Runnable pipeline
2. Schema DDL (SQL) checked into the repo and applied by your code.
3. Idempotent loads (safe to run multiple times).
4. Basic data quality checks and a short README with setup/run instructions.

Functional Requirements

1. **Execution & Ingestion**
    - Orchestrate all scripts
    - Clearly document the expected output format.

2. **Normalization & Currency**
    - Detect all monetary fields
    - Only USD in BigQuery tables

3. **Data Quality**
    - Validate before loading.
    - Emit a summary report (row counts, rejected rows, USD min/max sanity).

4. **Idempotency & Upserts**
    - Ensure running twice does not duplicate data.

5. **Performance & Storage**
    - Please choose either batch loading or streaming and document the trade-offs involved.

6. **Observability**
    - Structured logging (JSON), clear error messages.
    - Exit non-zero for validation or load failures.