

Challenge: InsightHub – Resilient Sales Aggregator

Candidate Assumptions & Reasoning

- I assume the data returned by the API is a **LIST** of MAPs, each representing a sale.
- I assume the timestamp is a string in ISO format and comparable.
- For de-duplication with a $\pm 2s$ window, I'll convert timestamps to a comparable numeric format and track them using a composite key.
- Suspicious sales are flagged but still counted separately from duplicates and invalids.
- I used a class for **Sale** and a function-based structure for logic separation.
- I'm aware this isn't production-grade, but I tried to handle errors and structure the code cleanly.
- I know this challenge pushes my limits in handling data processing & edge case handling, but I aimed to write readable and maintainable code.

Notes from the Candidate

- I structured the logic into clear functions for reusability and readability.
- I struggled a bit with the deduplication logic initially ($\pm 2s$), but breaking it into timestamp normalization helped.
- If this were production, I'd probably add more logging and tests.
- I'd love to learn more about real-world data pipelines like Acme's Streamline system.