

Project: Comparing Exchange Rate Offers for Banking Clients

The concept is to request several currency exchange rate APIs for remittance offers and select the best deal.

Conditions:

- No UI expected.
- No SQL required.
- Must be unit-tested.
- Must work even if one or more APIs are unavailable or return invalid responses.
- Good practices expected (e.g., clean architecture, SOLID principles, logging, error handling).

Process Input:

- * one set of data {source currency, target currency, amount}
- * Multiple API using the same data with different signatures

Process Output:

- * All API respond with the same data in different formats
- * Process must query, then select the highest conversion amount and return it in the least amount of time

Sample APIs, each with its own url and credentials

API1 (JSON)

Input {from, to, value}

Output {rate}

API2 (XML)

Input <XML><From/><To/><Amount/></XML>

Output <XML><Result/></XML>

API3 (JSON)

Input {exchange: {sourceCurrency, targetCurrency, quantity}}

Output {statusCode, message, data: {total}}

Considerations:

- The code must be versioned in a personal public repository (e.g., GitHub).
- The project must be fully testable by the evaluators.
- Using containerization technology will be considered a plus.
- Assistance from other individuals is not allowed; the project must be completed independently.
- No additional information will be provided beyond what is described in the attached document. You are expected to analyze, design, and develop a solution that best meets the stated requirements.