



# Acme Settlement Service

## The Problem

ACME Payments, Inc. needs settlement service to replace their paper and pencil bookkeeping. ACME processes payments on behalf of its customers, who are **Merchants**. When a **Customer** buys something from a **Merchant**, the funds are pulled from the **Customer**'s bank account to an **FBO Account** (think of this as a placeholder or virtual account) associated with the **Merchant**. Unfortunately, the system was implemented in COBOL back in 1972 and runs on a valve tube computer. Expect the API to be slow at times. It also randomly fails when a bug flies into the mainframe and may return corrupt data. Be ready for some error handling.

You will create a service that integrates with ACME Payments core API to retrieve data, process it and expose a settlement endpoint which we can use to determine the settlement amount for a merchant for a given date.

## Requirements

- Must integrate with the ACME Payments API
  - The API is documented at:
    - OpenAPI Schema: [https://acme-payments.clerq.io/tech\\_assessment/schema/](https://acme-payments.clerq.io/tech_assessment/schema/)
    - Swagger: [https://acme-payments.clerq.io/tech\\_assessment/schema/swagger/](https://acme-payments.clerq.io/tech_assessment/schema/swagger/)
    - Redoc: [https://acme-payments.clerq.io/tech\\_assessment/schema/redoc/](https://acme-payments.clerq.io/tech_assessment/schema/redoc/)
  - All the data is public and read only

- Must expose a REST endpoint with the settlement data
  - The design of this endpoint is part of the exercise
  - It must allow specifying a merchant and a date for the settlement
  - It must return a json payload with the settlement data, which must include the settlement amount (i.e. the net balance for the settlement period)
  - Everything else is open. Feel free to pick between running the settlement at request time, or precomputing them (or some other solution). Use a GET with query params for the input, or a POST with a body describing the request. Anything goes.



You will have 4 hrs to implement.

## Bonus

- Implement a CLI that allows listing merchants and running settlements
- Host your service online (AWS Free tier, fly.io, etc)
- Only compute settlements for weekdays. Anything after Friday 5pm goes into Monday's settlement. If implementing this, feel free to think on how to handle errors

## What we're looking for

The ultimate goal of the take home exercise is for us to better understand your technical approach and problem-solving skills — what factors are you taking into account, how are you ensuring what you've implemented is correct, etc. Use this project as an opportunity to **showcase** your personality, skills, and opinions :)

All submissions will be carefully evaluated and we will openly discuss the results. Don't be afraid of being declined for doing or not doing something.

Best of luck and thank you for taking the time to work on this project!