Summary:

Implement an HTTP-JSON API based subscription management system.

Description:

There is a new internet provider where clients can register online and choose 1 or more services.

For example, a user creates a new account by providing some basic info (email, name, ...) Next, he can subscribe to 1 or more services from the internet provider, these services can be :

- Internet access
- cable/TV
- Cloud hosting storage space
- Phone number

The user can activate service for a minimum duration and can also select the start date for the service.

Real life example:

John creates his account and chooses internet access to be provided. He next selects an upgrade to get cable/TV access while Champion's league is playing - this means we want the service with a start and end date. For each service, the cost is added to John's monthly billing invoice.

Acceptance criteria:

1. Implement an API has the following resources:
   a. Accounts
      - CREATE account - you can choose any fields you want
      - UPDATE - not all fields should be updatable
      - DELETE - you cannot delete an account with an active subscription
      - GET - retrieve account details
   b. Subscriptions
      - CREATE - needs an account id, end date and a service that can be read from a config file

- **UPDATE** - user can update the end date or can also mark it as deactivated (the subscription remains active until the end date) User cannot have multiple active subscriptions for the same service.
      - **GET** - subscription details
2. Implement the following rules for using the API:
    a. An active account wants to activate a subscription that will start from three months from today and will be active for 2 months.
    b. An active account with four active subscriptions wants to set that one of his subscriptions to cancel after 3 months.
3. Provide usage example of the API, this can be PostMAN calls or cURL collection

To score more points:

Upgrade the API to include on more of the following requirements with candidate preference:

1. API has authentication.
2. Uses a caching system.
3. Logs for operations