

LiveEO Assessment

Stage #1: Planning:

- Hold a kickoff meeting with the development team to discuss the problem statement, desired outcomes, and constraints.
- Set up a recurring daily stand-up call where we can have updates and resolve blockers if any.
- Dive the requirements into user stories and plan them accordingly.
- Define the data model for tasks and their relationships. A data diagram is a plus.
- Document API endpoints, payloads, and authentication mechanisms.
- Establish coding standards, testing strategies, and deployment procedures.

Stage #2: Architectural design stage

Architectural Design

- RESTful API Design: The API will follow REST principles, providing a stateless protocol.

Data Model

- Task: Represents a garbage collection task. Attributes include task ID, description, location coordinates, isCompleted, and workerID.
- User: Represents users who can be admins or workers. Attributes include user ID, username, and email.

Assumptions and Trade-offs:

- Assumption: Reliable Internet connectivity for mobile app users in the field.
- Decision: Choose REST over SOAP for API simplicity and web-friendliness.
- Trade-off: Microservices can increase complexity but are chosen for their scalability and ease of updating parts of the system independently. Depending on the team structure and size, another option for microservices is a mono-repo.