

AlfaBet Backend Exercise

Objective:

Develop a RESTful API that manages events, offering users the ability to schedule, retrieve, update, delete, and be reminded of events with additional advanced features.

Task Details:

1. API Design & Setup:

- Implement the API only in **Python \ Java \ Kotlin**.
- Design endpoints:
 - * Schedule a new event.
 - * Retrieve a list of all scheduled events.
 - * Retrieve details of a specific event.
 - * Update details of a specific event.
 - * Delete a specific event.
- Implement basic auth.

2. Database Integration & Advanced Querying:

- Use a relational database to store event details.
- Allow users to:
 - * Retrieve events based on location or venue (represented as a string).
 - * Sort events by date, popularity (number of participants), or creation time.

3. Event Reminders:

- Send reminders 30 minutes before the event's scheduled time.

4. Documentation & Testing:

- Provide API documentation detailing endpoint usage and request/response formats.
- Implement unit and integration tests.

5. Bonus Features:

- Allow batch operations for creating, updating, or deleting multiple events in one request.
- Implement rate limiting to prevent API abuse.
- Allow users to subscribe to events. Notify subscribers via a simulated mechanism (e.g., console log) when an event is updated or canceled.
- Offer real-time notifications to instantly notify subscribers of event changes, possibly using WebSockets.

6. Submission:

Provide a GitHub repository link containing your backend codebase along with a README.md file explaining the architecture, setup instructions, performance optimizations, and any additional notes you'd like to include.