

Candidate Take-Home Assignment: Notes Service

1. Problem Statement

You are required to build a small backend service called **Notes Service**, which allows users to create and manage text-based notes.

2. Core Requirements

2.1 Essential Features

Your service must support the following operations:

- **Create a Note:** A note should have a title, body/content, and optional tags.
- **List Notes:** Must support pagination. You can choose any pagination method (offset-based, cursor-based, etc.)
- **Update a Note:** Allow partial or complete updates to an existing note.
- **Delete a Note:** Remove a note by its ID.
- **Search Notes:** Provide keyword search capability based on title or content.

2.2 Optional Enhancements

(Not required, but reflect well if implemented)

- Tag-based filtering
- Support for soft deletion instead of hard deletion
- Server-side sorting

2.3 Technical Expectations

Regardless of your tech stack, your project should include:

- **Logging for key operations** (create, update, delete, errors)
- **Clear, readable folder structure**
- **Appropriate error messages and HTTP response codes**

3. Evaluation Criteria

Your submission will be evaluated across the following dimensions:

3.1 Code Quality

- Clarity and readability
- Thoughtful naming and modularization
- Use of consistent patterns

3.2 Architecture & Design

- How you separated concerns (controllers, services, repositories, etc.)
- Data modeling choices
- Clear API structure
- Extensibility for future features

3.3 Problem-Solving Approach

- How you implemented pagination
- How you implemented search
- Error handling strategy
- Input validation