1. Goal

Understand this core aspects of any REST API - correct HTTP Semantics.

2. Lesson Notes

Create vs Update (vs Partial Update) - POST vs PUT (vs PATCH)

First, it's important to understand that the discussion around what HTTP verbs should match what REST operations is **not strictly a RESTful concern** but an HTTP implementation concern (REST itself is not tied to any one protocol).

The HTTP Spec documents **PUT as an idempotent operation and POST as not idempotent**. So, PUT is closer to replace / full update semantics, while POST is closer to the semantics of an insert operation.

For partial updates, PUT is not an option, as the HTTP Spec doesn't allow that usecase. Instead, the PATCH HTTP Verb should be used if the API supports partial updates.

Is DELETE Idempotent?

The HTTP Spec documents DELETE as an idempotent operation.

A quick important note here is that the idempotency of the operation is not decided by the responses sent back to the Client, but by the overall state of the system. If the system state remains unchanged after multiple identical operations, then the operation has idempotent semantics.

3. Resources

- REST Pagination in Spring

- What Is Idempotent in REST?