Lesson 3: REST

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Recap

What is REST?

HTTP methods

Request types:

- GET : request data from a resource
- POST : submit data to be processed to a specified resource
- PUT : replaces all current representations of the resource with the request payload.
- DELETE
- HEAD : identical as GET, but without response body
- OPTIONS : returns supported HTTP methods
- PATCH : update partial resources

Idempotent methods

Definition

Methods that can be called many times without different outcomes.

Example

- elixir_awesomeness = 42 -> Idempotent
- elixir_awesomeness++ -> Not idempotent

Safe methods

Definition

Methods that do not modify resources.

Example

- GET localhost:4000/users -> doesn't modify resources
- POST / PUT / DELETE -> modifies resources

Overview

Method	Idempotent	Safe
GET	Y	Y
POST	N	N
PUT	Y	N
DELETE	Y	N
HEAD	Y	Y
OPTIONS	Y	Y
PATCH	N	N

Recap

What is REST?

What is REST

Representational state transfer

- Software architectural style
- 6 constraints how **resources** are addressed/defined on the web
- Reminder: URI = Uniform **Resource** Identifier
- REST architectural style aka RESTful web services

- RESTful services provide interoperability between computer systems on the Internet
- Allow requesting systems to access & manipulate textual representations of web resources through uniform and predefined set of stateless operations

REST architectural constraints

- Client-server architecture
- Statelessness
- Cacheability
- Layered system
- OPTIONAL: Code on demand
- Uniform interface

RESTful Responses

Response types

- XML
- JSON