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TALENT IN TECHNICOLOUR

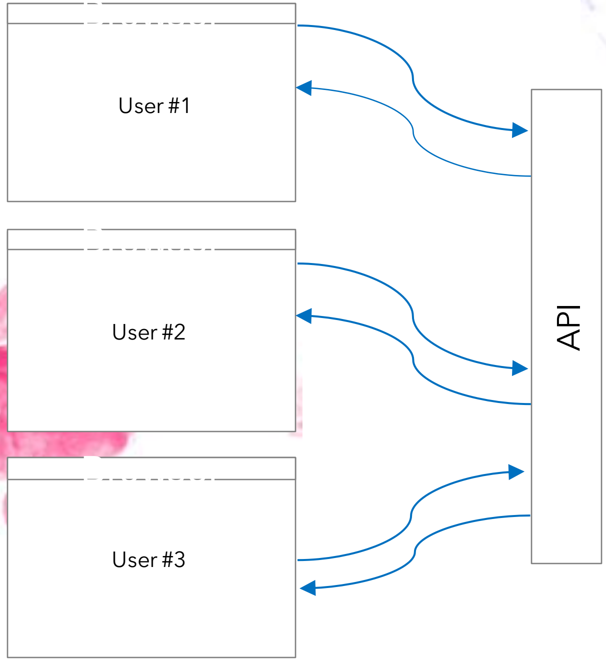
HTTP Foundation

Frontend v Backend

HTTP

Header / Body

Status Codes

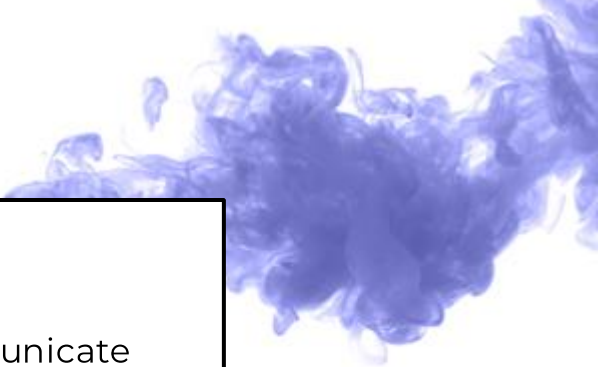


Request / Response

Rest

JSON

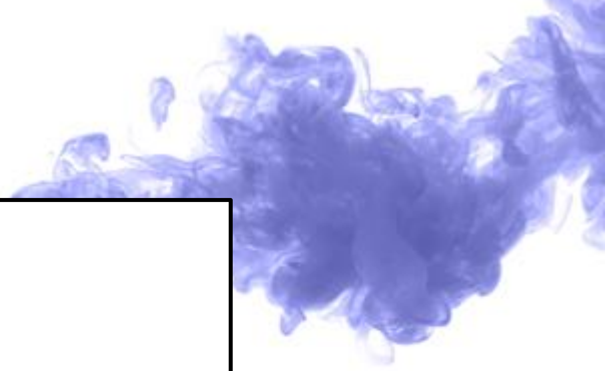
What is HTTP?



Hyper**t**ext **T**ransfer **P**rotocol

- Messaging Protocol that allows devices to communicate over the network
- Standard for formatting TCP messages that is understood by browsers

HTTP Messages



Components of an HTTP Message:

- **Method**
  - POST
- **URL** (Uniform Resource Locator)
  - https://www.test.com
- **Headers**
  - Authorization=Bearer my-token
  - Content-type=application/json
- **Body**
  - { “message”: “Hello, World! }

HTTP Commonly Used Methods

- **GET**
  - Get record/s from source
  - Should **not** have a body
- **POST**
  - Save new record in source
- **PATCH**
  - Save partial data for existing record in source
- **PUT**
  - Rewrite or write data in source
- **DELETE**
  - Delete record from source

HTTP Commonly Used Status Codes

Success Statuses (2xx):

- **200** => **Ok** (used with GET)
- **201** => **Created** (used with POST and PUT)
- **202** => **Accepted** (used with POST, PATCH, PUT, DELETE)
- **204** => **No Content** (used with POST, PATCH, PUT, DELETE)

Client Error Statuses (4xx):

- **400** => **Bad request** (The server will not accept request format)
- **401** => **Unauthorized** (The client does not have permission)
- **403** => **Forbidden** (Resource is not accessible)
- **404** => **Not found** (The record can not be found)

Server Error Statuses (5xx):

- **500** => **Internal Server Error** (Server bugs / crashes)

What is REST?

Representational **S**tate **T**ransfer

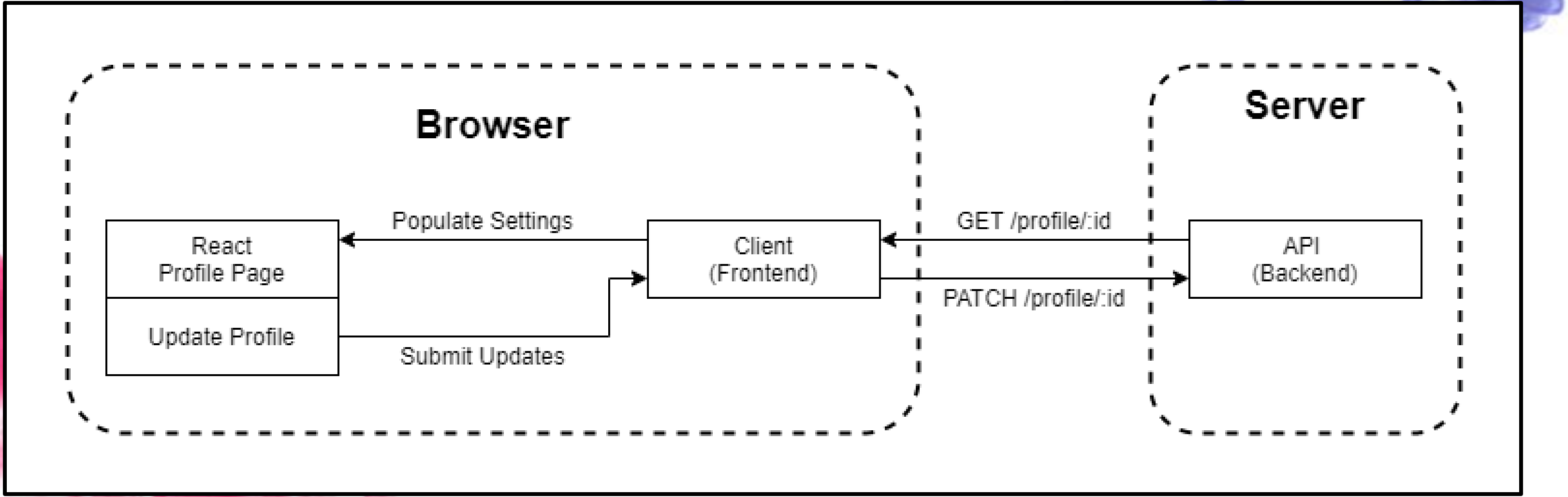
- A standard for creating stateless APIs on top of HTTP

Example RESTful Resource

Customer API

- **GET /customers**
  - List customer records
- **GET /customers/:customer_id**
  - Find customer record by id
- **POST /customers**
  - Create a new customer record
- **PUT /customers/:customer_id**
  - Create or replace a customer record
- **PATCH /customers/:customer_id**
  - Modify existing customer record
- **DELETE /customers/:customer_id**
  - Delete a customer record

Basic Client-API Architecture



Why do we host APIs?

- **Agnostic**: Does not require a specific language
- **Authorization**: We can restrict access to resources
- **Security:** We can hide proprietary logic (business secrets, IP)
- **Portability:** Most devices will support TCP and therefore will be able to use an HTTP/TCP API