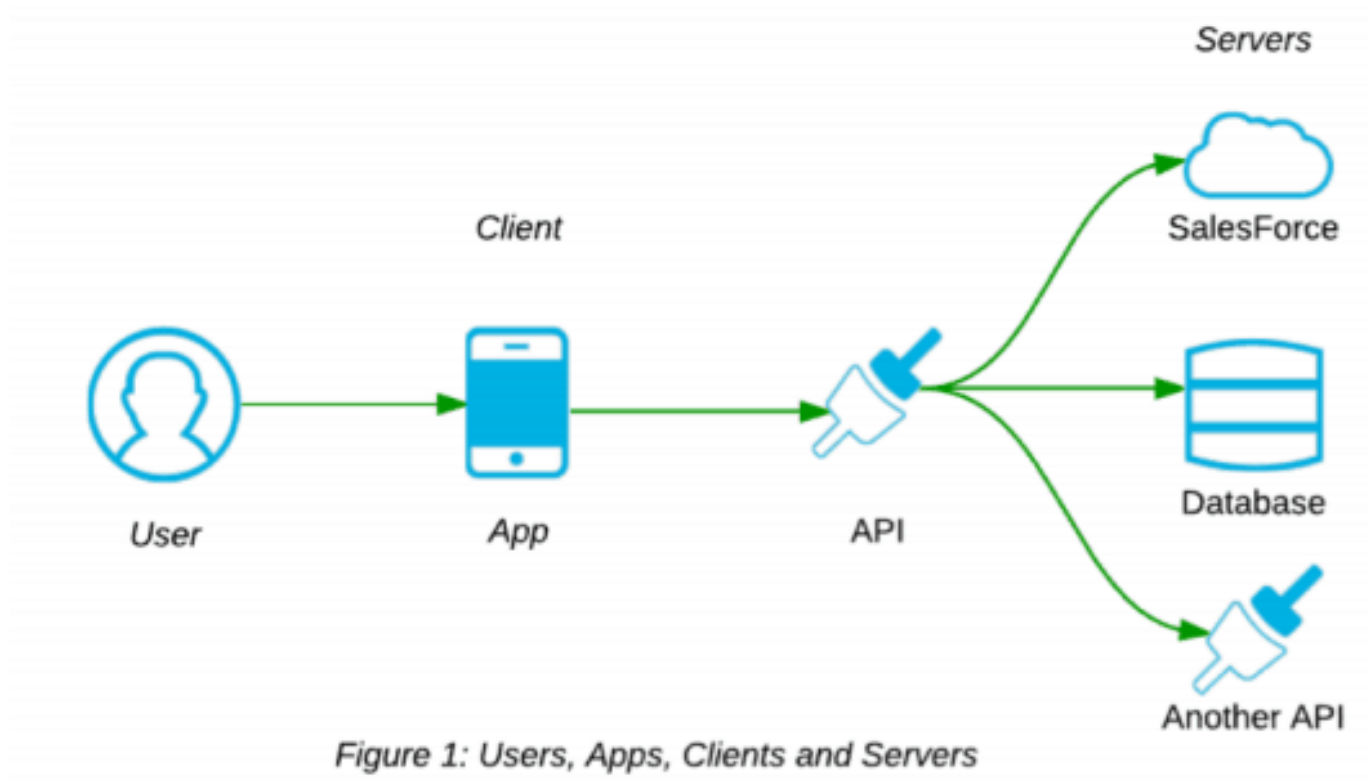


Web and API

Python basic for everyone

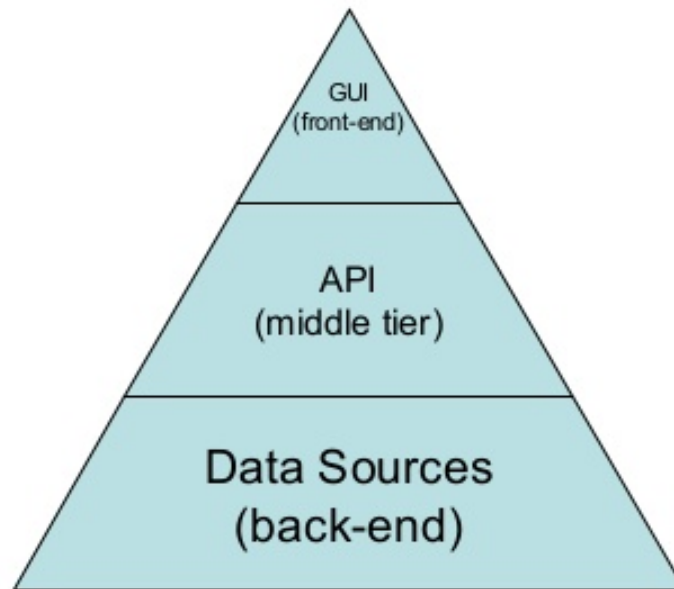
What is API?

Methods to access data and workflow from an application without using the application itself.

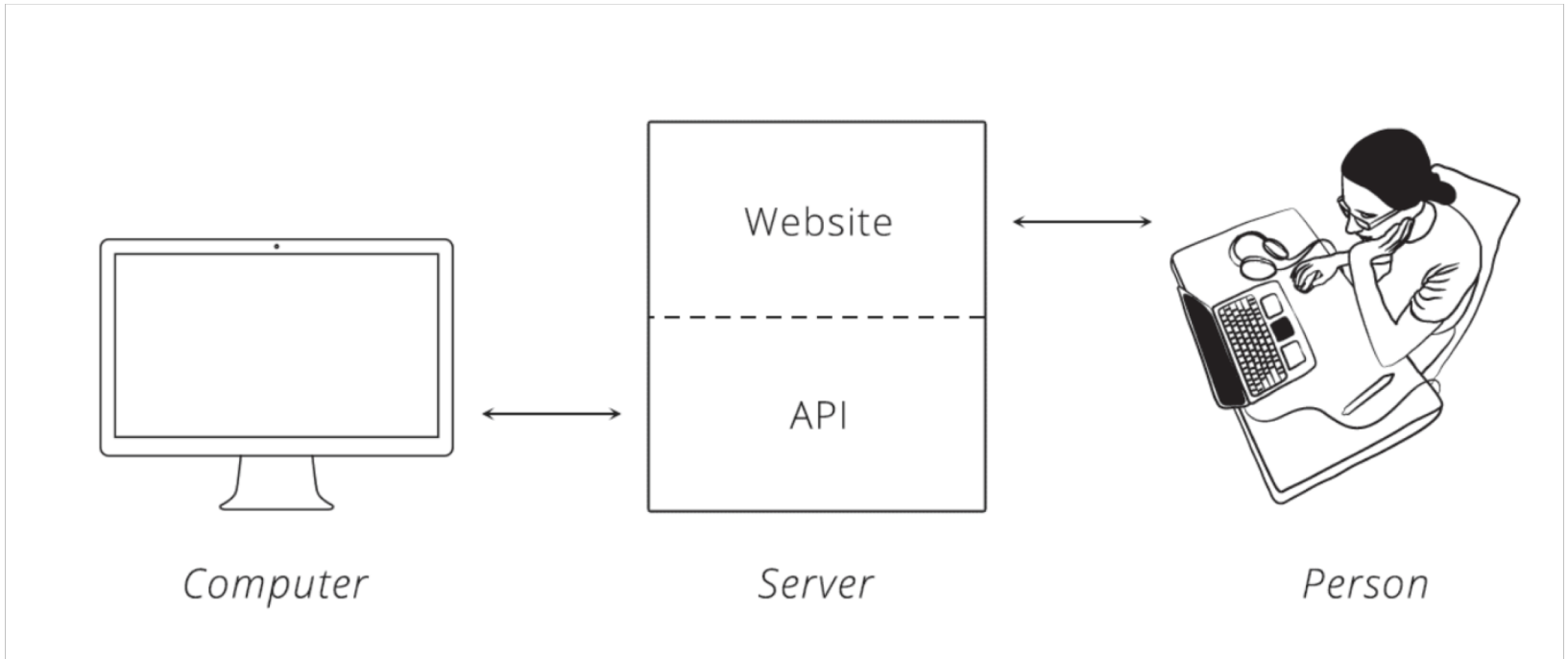


What is API?

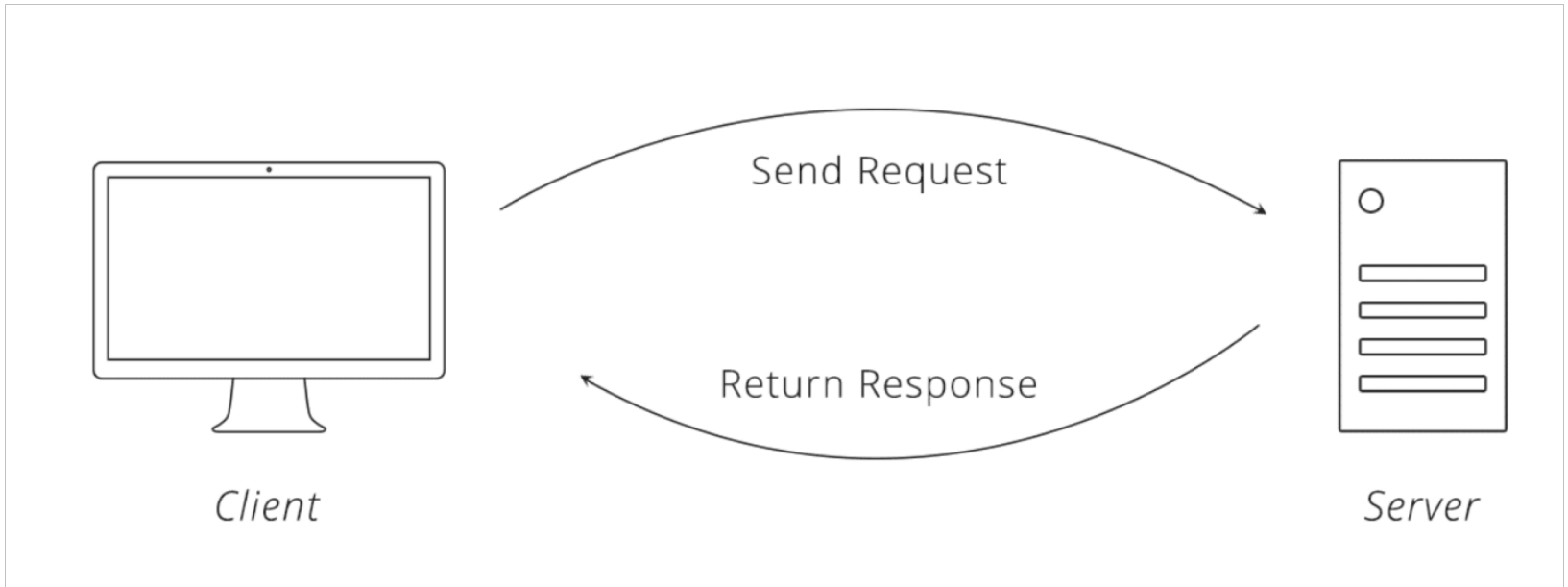
An API Stack



API and Web



HTTP Request



HTTP Request

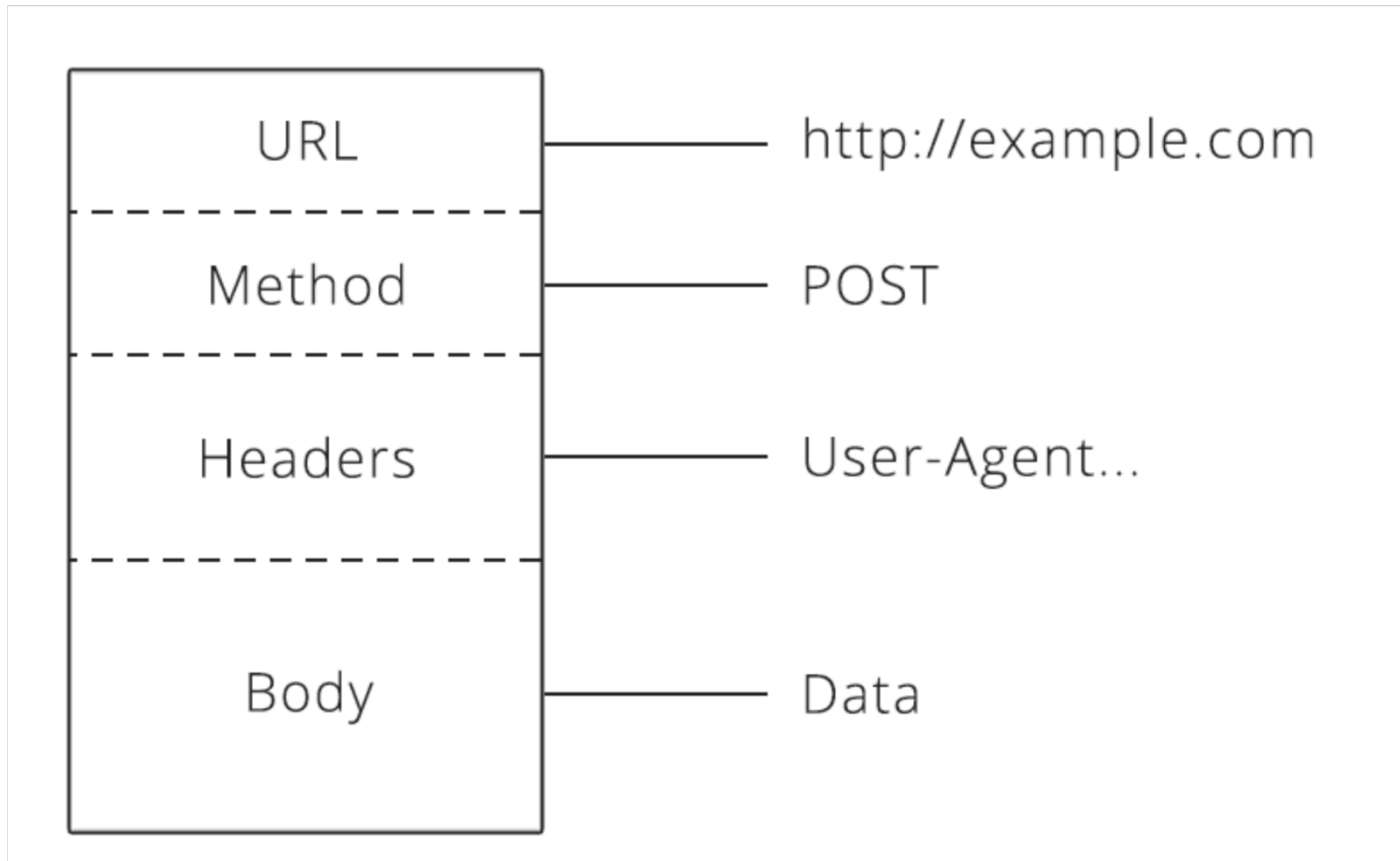
To make a valid request, the client needs to include four things:

- URL (Uniform Resource Locator)
- Method
- List of Headers
- Body

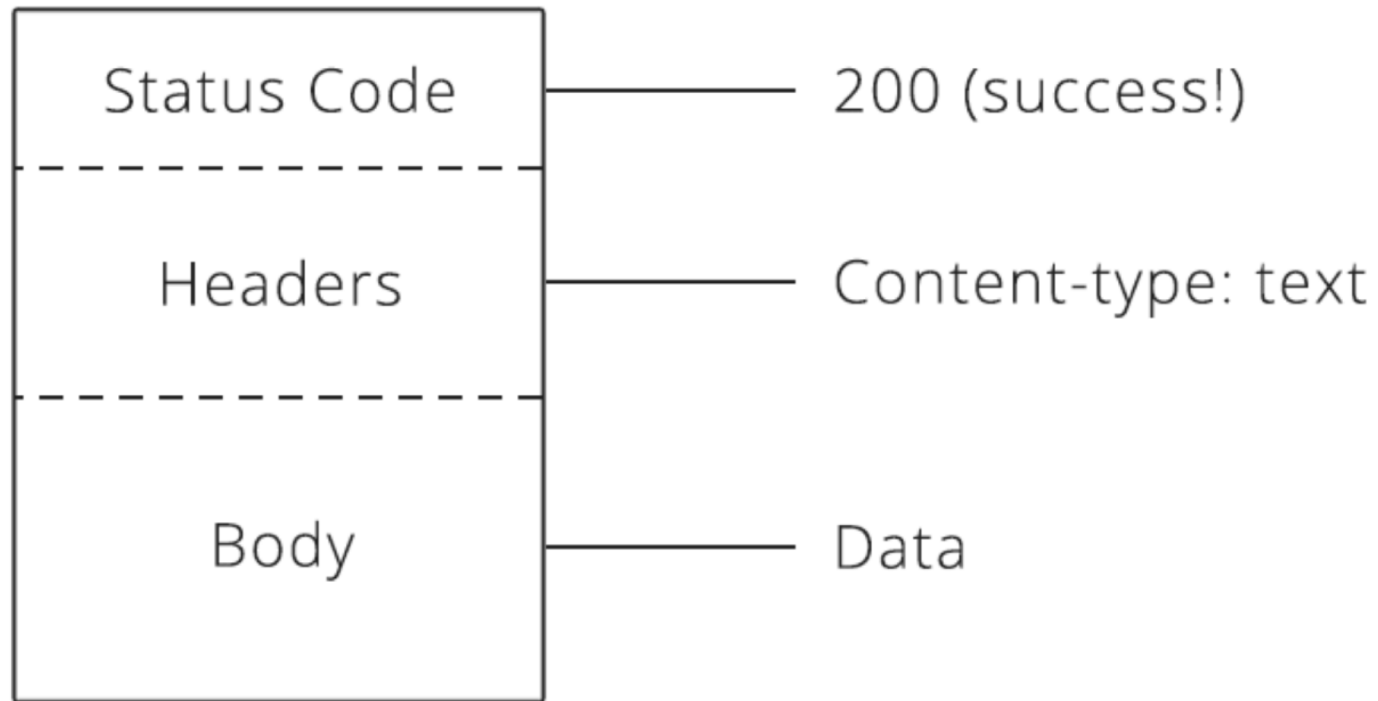
Method

- GET—Asks the server to retrieve a resource.
- POST—Asks the server to create a new resource.
- PUT—Asks the server to edit/update an existing resource
- DELETE—Asks the server to delete a resource.

Body



Response



Response

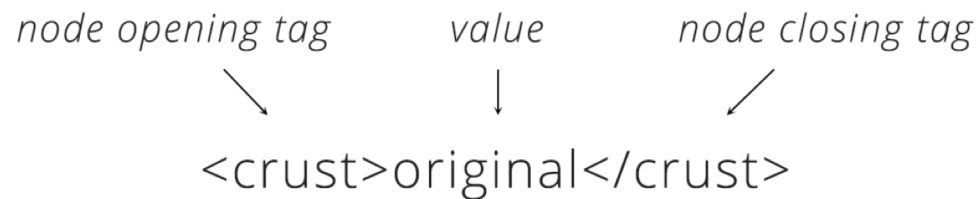
Data Formats

JSON



A diagram illustrating the structure of a JSON object. It shows a single key-value pair: `{ "crust": "original" }`. An arrow labeled *key* points to the string `"crust"`, and another arrow labeled *value* points to the string `"original"`.

XML



A diagram illustrating the structure of an XML element. It shows a single element: `<crust>original</crust>`. Three arrows point to its components: an arrow labeled *node opening tag* points to `<crust>`, an arrow labeled *value* points to `original`, and an arrow labeled *node closing tag* points to `</crust>`.

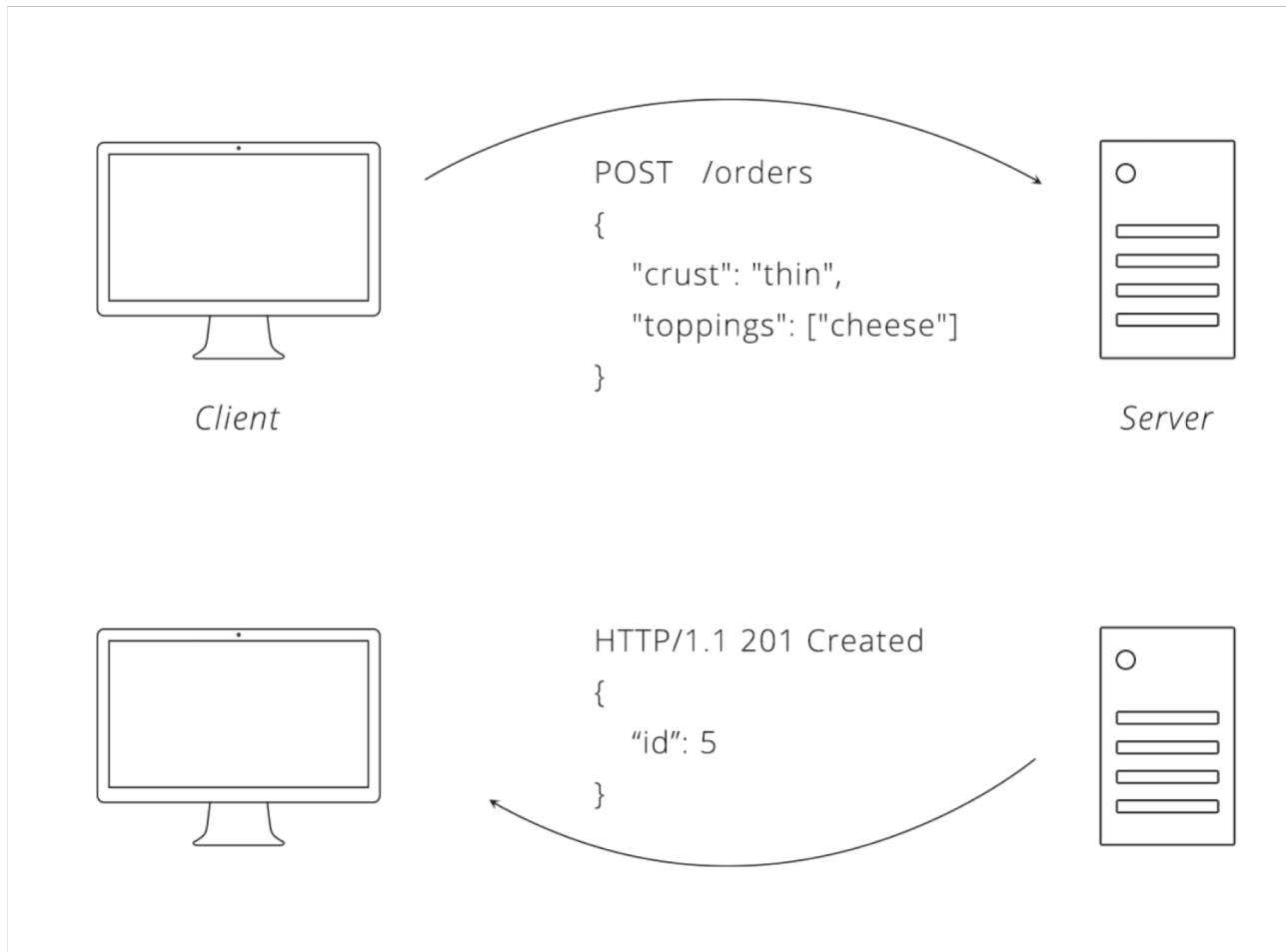
API Design

- Decide what resource(s) need to be available
- Assign URLs to the resources
- Decide what actions the client should be allowed to perform on those resources
- Figure out what pieces of data are required for each action and what format they should be in.

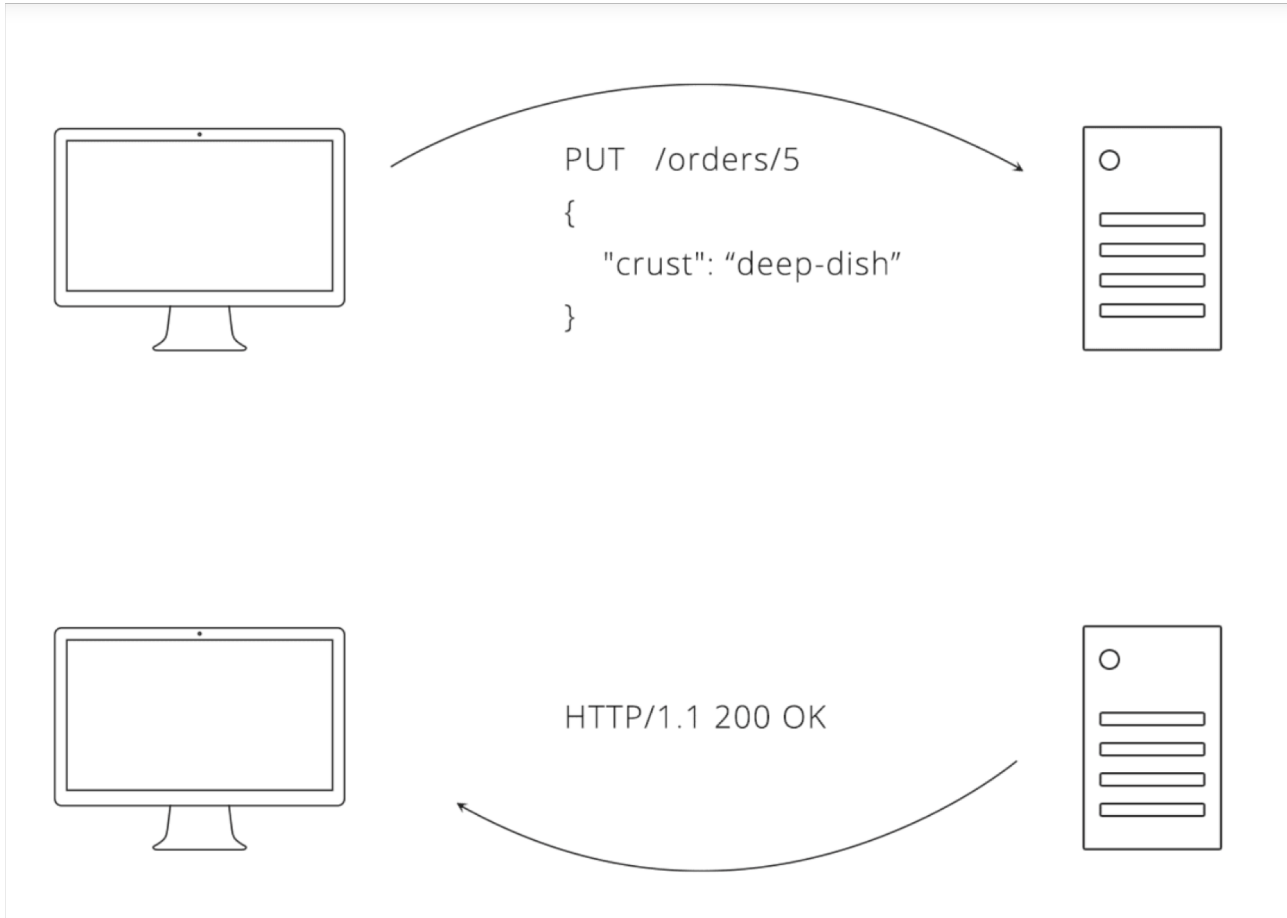
Example

HTTP Header	Endpoint	Action
GET	/orders	List existing orders
POST	/orders	Place a new order
GET	/orders/1	Get details for order #1
GET	/orders/2	Get details for order #2
PUT	/orders/1	Update order #1
DELETE	/orders/1	Cancel order #1

Example



Example



Example

POST /customers/5/orders/3

```
{  
  "crust": "thin",  
  "toppings": ["cheese"]  
}
```

VS

POST /orders/3

```
{  
  "crust": "thin",  
  "toppings": ["cheese"],  
  "customer_id": 5  
}
```

GET /customers/5

```
{  
  "name": "Brian"  
}
```

Demo



Thanks for your time!

See you in the next demo class!

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nxqd.inbox@gmail.com