API

APPLICATION PROGRAMMING INTERFACE

What is API

- API is a set of rules and protocols that allows different software applications to communicate and interact with each other.

- One application acts as a client and the other acts as a server. A client asks for some resource, say for example a photo, and the server sends that photo to the client.
- The client here can be your mobile phone, desktop, or laptop computer, The server is a bigger computer that stores the data you want (a photo in our case).
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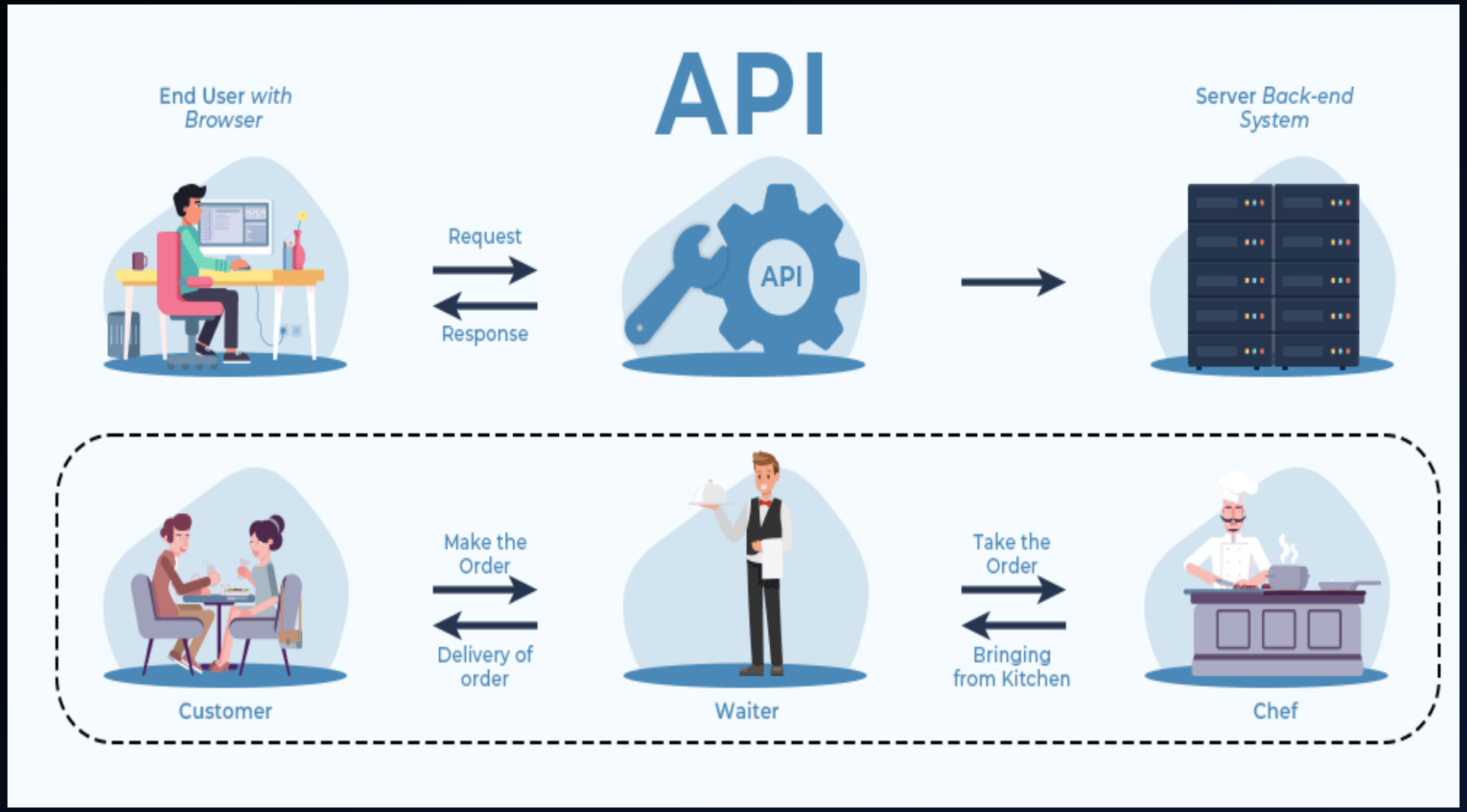

API
End User with Browser
Server Back-end System
Request
Response
API
Customer
Make the Order
Delivery of order
Waiter
Take the Order
Bringing from Kitchen
Chef

TYPES OF API

- REST APIs (Representational State Transfer)
- SOAP APIs (Simple Object Access Protocol)
- GraphQL APIs
- Public APIs

REST APIs

- REST APIs are the most widely used type of API on the web.
- They follow a stateless, client-server communication model.
- REST APIs use HTTP methods (GET, POST, PUT, DELETE) to perform operations on resources.

HTTP METHODS

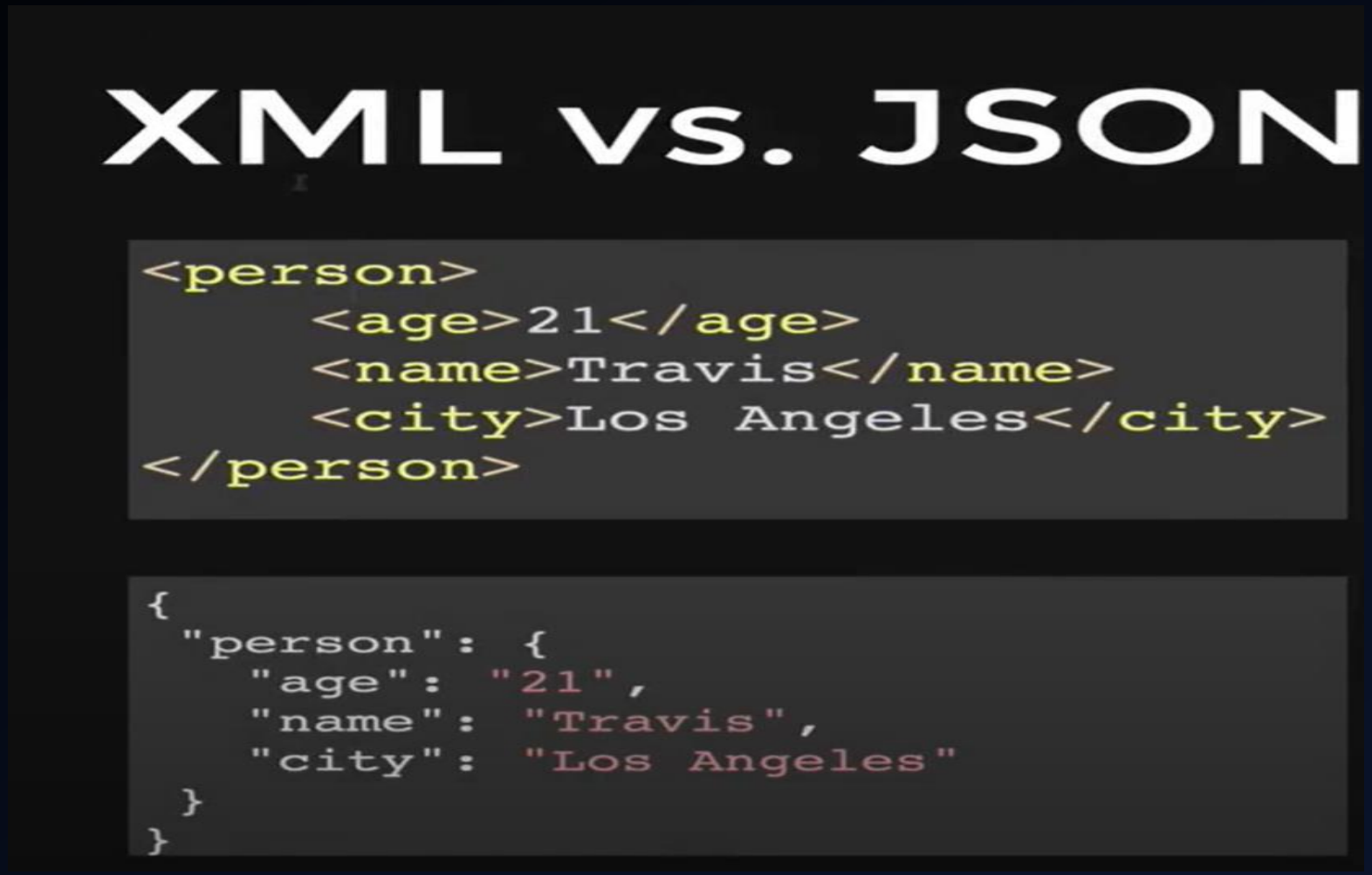
1. GET: as already discussed, this indicates that the client is requesting data to be sent from the server.
2. POST: this method tells the server that the client wants to create a new entry in a database. For example, saving a new blog post in a database of all previous blogs.
3. DELETE: as the name suggests, the client wants to delete a data record from a database.
4. PUT: this method is used when a client wants to update or edit a data record. For example, changing your Facebook password.

HTTP STATUS CODE

1. 200 OK: this indicates that the request was successfully fulfilled by the server
2. 201 CREATED: the data entry that you requested to create was created
3. 404 NOT FOUND: this indicates that the resource you requested wasn't found by the server
4. 500 INTERNAL SERVER ERROR: this means that an error occurred at the server's end and it couldn't fulfill your request

REST APIs

- They typically exchange data in JSON or XML format.



Benefits of APIs

- Scalability: APIs allow systems to handle large-scale operations and user interactions
- Reusability: APIs can be reused across different applications, reducing redundancy
- Flexibility: APIs enable customization and adaptation to specific requirements

Thank you