WHAT IS

RESTAPI





example

You have a Website for your Pizza Shop

And Uber Eats want to list your resources











API enables an application or service to access a resource within another



APIs exchange commands and data, and this requires clear **protocols** and **architectures**

-- the rules, structures and constraints that govern an API's operation

> 3 categories of API protocols or architectures:

> > REST





REST architecture is perhaps the most popular approach to building APIs





What defines a REST API?

Representational State Transfer

architectural constraints

Uniform interface

All API requests should look concise and the same

Client-server

Client & Server must be completely independent of each other

Stateless

Server aren't allowed to store any data related to a client request

Cache

Improve performance on the client, scalability on the server side

Layered system

allow for the introduction of proxies, gateways and firewalls

Code on demand

responses can also contain executable code





How REST APIs work?

REST APIs communicate via HTTP requests to perform **CRUD** operations within a resource

A request is made up of four things:

- 1. The endpoint
- 2.The method
- 3. The headers

4.The data (or body)

provide information such as authentication, body content

contains information you want to be sent to the server





Endpoint

The endpoint (or route) is the url you request for

https://api.codynos/pizzas

Method

Create

Read

Update

Delete

POST

GET

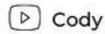
PUT

DELETE



A call is made from a client to a server, and data is received back over the HTTP protocol

Lists all GET https://api.codynos/pizzas pizza infos create a POST https://api.codynos/order new order body "order_no": "1", "items": "margherita" update PUT https://api.codynos/sales daily sales "date": "28-12-2021", remove DELETE https://api.codynos/offers/1 an offer





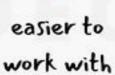
Why REST?



Works with XML, JSON, HTTP and plain text









Caching is Easier



highly scalable

