◇ What is REST?

REST stands for **REpresentational State Transfer**.
It's **not a protocol** like HTTP, but a **set of rules or architecture style** for designing web services.

It was introduced by **Roy Fielding** in his PhD dissertation.

◇ Key idea behind REST:

Imagine you're talking to a server using simple **HTTP methods** (like GET, POST, PUT, DELETE) to perform actions on **resources** (like users, posts, orders, etc.).

Each resource is identified by a URL (Uniform Resource Locator).
For example:

GET https://example.com/users/101

Means: “Hey server, give me the user with ID 101”

◇ What is a REST API?

A **REST API (or RESTful API)** is an API (Application Programming Interface) that follows the rules of REST.

It allows different systems (like a mobile app and a server) to communicate using HTTP requests.

◇ Example:

Suppose you have an online store API.

HTTP Method	Endpoint	Meaning
GET	`/products`	Get all products

GET	`/products/1`	Get product with ID 1
POST	`/products`	Add a new product
PUT	`/products/1`	Update product with ID 1
DELETE	`/products/1`	Delete product with ID 1

◇ Why REST is Popular?

- Works over HTTP (simple and widely used)
- Language independent
- Stateless (server doesn't remember your previous request)
- Easy to scale and cache

CODE
API CALL

```
from flask import Flask, request, redirect, url_for, render_template,jsonify

app = Flask(__name__)

cart = []

@app.route('/')
def index():
    return render_template('index.html', cart=cart)

@app.route('/api/add', methods=['POST'])
def add_to_cart():
    product = {
        'name': request.form['name'],
    }
    cart.append(product)
    return jsonify({'message': 'Product added to cart', 'cart': cart}), 201
```

```
    return redirect(url_for('index'))

@app.route('/api/delete/<string:product_name>', methods=['DELETE'])
def delete_from_cart(product_name):
    global cart
    cart = [product for product in cart if product['name'] != product_name]
    return jsonify({'message': 'Product deleted ', 'cart': cart}), 201

    return redirect(url_for('index'))

if __name__ == '__main__':
    app.run(debug=True)
```

SIMPLE API

```
from flask import Flask, request, redirect, url_for, render_template,jsonify

app = Flask(__name__)

cart = []

@app.route('/')
def index():
    return render_template('index.html', cart=cart)

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    product = {
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