



مهم جدأ

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Introduction to Restful-APIs

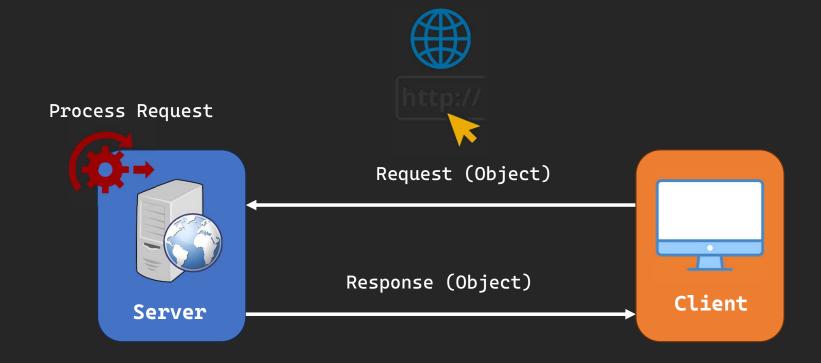
How REST and HTTP Work?

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How REST and HTTP work?





HTTP and REST:

- HTTP (Hypertext Transfer Protocol) is a foundational protocol used in REST (Representational State Transfer) APIs.
- REST is an architectural style for designing networked applications and relies on a stateless, client-server communication protocol, which is typically HTTP.



Basic Concepts

- Client-Server Architecture: In REST, the client sends requests to the server, and the server responds. The client is responsible for the user interface and user experience, while the server handles data storage and processing.
- **Statelessness:** Each request from the client to the server must contain all the information needed to understand and process the request. <u>The server does not store any state about the client session</u>. This means that each request is independent of others.
- Resources and URIs/URLs: In REST, resources (data or services) are identified by URIs/URLs (Uniform Resource Identifiers). Each resource can be retrieved or manipulated using its URI/URL.



Basic Concepts

- HTTP Methods: REST APIs use standard HTTP methods to perform operations on resources. The main HTTP methods are:
 - GET: Retrieve a resource.
 - POST: Create a new resource.
 - PUT: Update an existing resource.
 - DELETE: Delete a resource.
- HTTP Status Codes: These codes indicate the result of the HTTP request.
 Common status codes include:
 - 200 OK: The request was successful.
 - 201 Created: A resource was successfully created.
 - 204 No Content: The request was successful, but there is no content to return.
 - 400 Bad Request: The request was invalid or cannot be otherwise served.
 - 404 Not Found: The requested resource was not found.
 - 500 Internal Server Error: An error occurred on the server side.



How it Works?

- Client Request: The client sends an HTTP request to the server. The request includes.
- Server Processing: The server receives the request, processes it, and performs the necessary operations on the resource. The server may interact with a database, perform business logic, or execute other actions required to fulfill the request.
- Server Response: After processing the request, the server sends an HTTP response back to the client.



Request/Response Objects

Request Object

Request Line

Header

Body (Content)

Response Object

Status Line

Header

Body (Content)



