



# مهم جدأ

هذا الملف للمراجعة السريعة واخذ الملاحظات عليه فقط ،لانه يحتوي على اقل من 20٪ مما يتم شرحه في الفيديوهات الاستعجال والاعتماد عليه فقط سوف يجعلك تخسر كميه معلومات وخبرات كثيره

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**Introduction to Restful-APIs** 

What is Web API?

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## What is Web Api?

Endpoint: URL for the function

**Stateless** 



Application Running
On the Server 24 x 7

Request

**GetAllStudents** 

Response

All Students Provided

Text → JSON or XML

Request

StudentInfoByID(10)
Response

Info about student 10 provided



http://

Client

Application
Running
On Client Machine



- Mobile
- Desktop
- Web
- TV
- Car
- Windows Service
- Any App

#### OS:

- Windows
- Android
- Linux
- IOS
- Any OS

### Languages:

C#, Python, Java, C++..etc



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### What is Web API?

- A Web API (Application Programming Interface) is a set of protocols and tools for building and interacting with software applications.
- It allows different software systems to communicate with each other over the web.



## Key points about Web APIs:

- Interoperability: Web APIs enable different systems, platforms, and applications to interact and exchange data. This can be between a client application (like a web browser) and a server, or between two servers.
- HTTP Protocol: Most Web APIs use the HTTP protocol for communication, which is the same protocol used by the web. This makes them accessible via URLs and allows them to be easily integrated with web technologies.
- Data Formats: Web APIs often use JSON (JavaScript Object Notation) or XML (Extensible Markup Language) to format the data being exchanged. JSON is more commonly used due to its simplicity and ease of use with Programming Languages.



## Key points about Web APIs:

- Endpoints: An API endpoint is a specific URL where an API can access the resources it needs to perform its function. Each endpoint corresponds to a different function of the API.
- Authentication and Authorization: Web APIs often require authentication (verifying the identity of a user or system) and authorization (checking if the user or system has permission to perform a certain action). Common methods include API keys, OAuth, and tokens.
- Usage Examples: Web APIs are widely used for various purposes such as fetching data from a database, interacting with third-party services (like social media, payment gateways, etc.), integrating with cloud services, and much more.



## Key points about Web APIs:

- RESTful APIs: One of the most common types of Web APIs is RESTful (Representational State Transfer) APIs. RESTful APIs adhere to a set of principles and use standard HTTP methods like GET, POST, PUT, DELETE, etc., to perform operations on resources.
- Other types of Web API:
  - RESTful APIs
  - SOAP (Simple Object Access Protocol)
  - GraphQL APIs
  - gRPC APIs
  - Others..



