مهم جداً

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

يجب عليك مشاهدة فيديو الدرس كاملا

لاتنسى عمل لايك ومشاركة القناة لتعم الفائدة للجميع

لا تنسونا من دعائكم

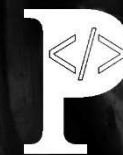## ProgrammingAdvices.com

Mohammed Abu-Hadhoud

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What is Web Api?

Endpoint: URL for the function

Stateless

Request

GetAllStudents

Response

All Students Provided

Text ➜ JSON or XML

Request

StudentInfoByID(10)

Response

Info about student 10 provided

Server

Application Running
On the Server 24 x 7

Client

Application
Running
On Client Machine
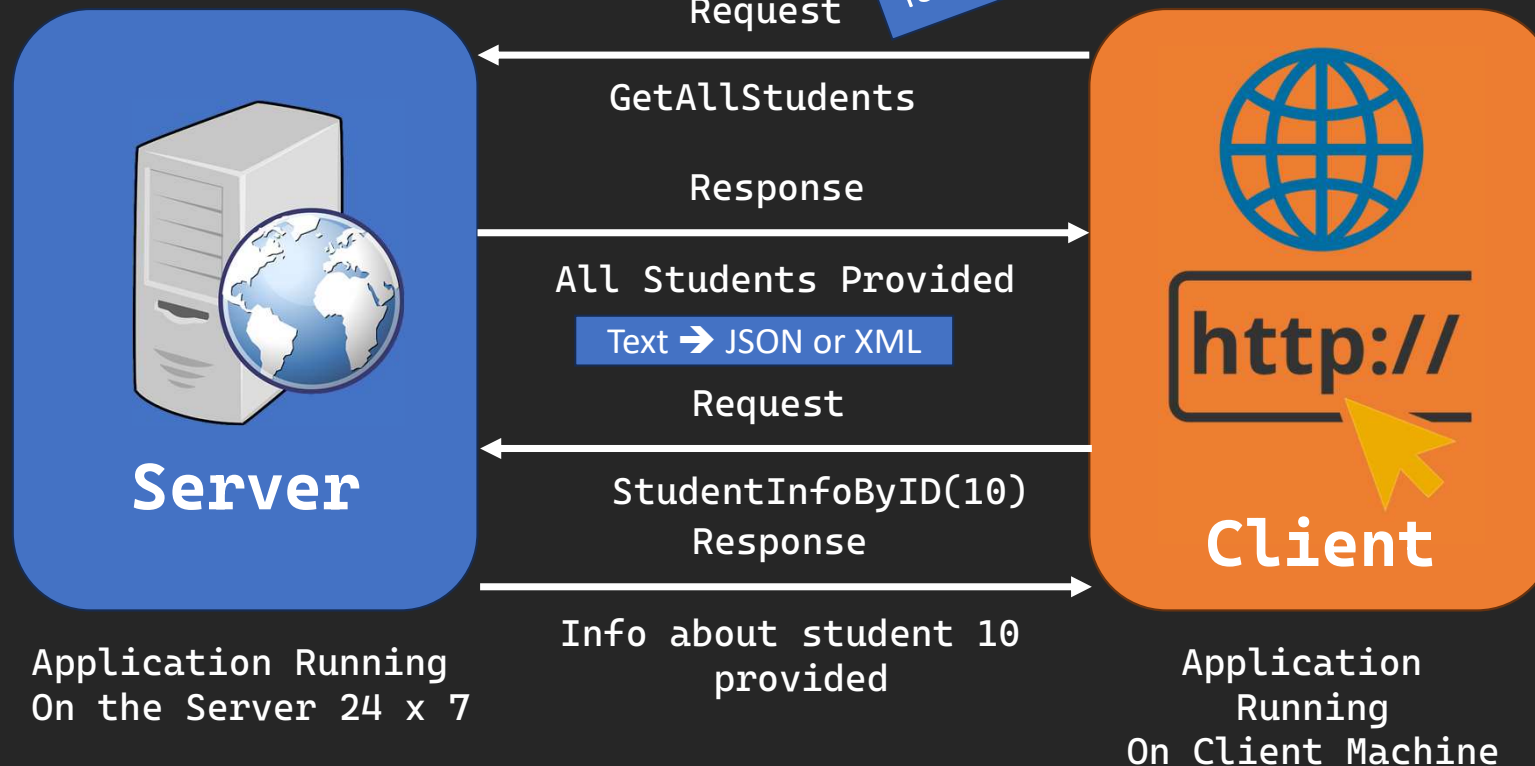
Client App:
- Mobile
- Desktop
- Web
- TV
- Car
- Windows Service
- Any App

OS:
- Windows
- Android
- Linux
- IOS
- Any OS

Languages:
- C#, Python, Java, C++..etc

Interoperability

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Mohammed Abu-Hadhoud
MBA, PMOC, PgMPD, PMPD, PMI-RMPD, CM, ITILF, MCPD, MCSD
26+ years of experience

Benefits of Web APIs:

- **Interoperability**
  - Cross-Platform Compatibility: Web APIs allow different software applications, regardless of platform or technology, to communicate with each other. This enables integration between various systems, including web, mobile, desktop, and server applications.

- **Reusability**
  - **Code Reuse**: APIs encapsulate functionality that can be reused across different projects. This reduces the need to write the same code multiple times, saving development time and effort.
  - **Service-Oriented Architecture**: APIs support the development of modular services that can be reused across different applications and projects.

- **Scalability**
  - **Efficient Scaling: APIs can handle a large number of requests and are designed to scale efficiently. This makes it easier to manage and distribute load across multiple servers and services.**
  - **Microservices Architecture: APIs enable the creation of microservices, allowing each service to be scaled independently based on demand.**

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Benefits of Web APIs:

- **Flexibility**
  - Agile Development: APIs allow for flexible and agile development practices. Developers can work on different parts of an application independently and integrate them using APIs.
  - Extensibility: APIs provide a way to extend the functionality of an application without modifying its core components. This facilitates adding new features and integrations.

- **Cost Efficiency**
  - Reduced Development Costs: By reusing existing APIs and services, organizations can reduce the costs associated with developing and maintaining custom solutions.
  - Operational Efficiency: APIs streamline processes and reduce the need for manual intervention, leading to cost savings and operational efficiencies.

Benefits of Web APIs:

- **Improved User Experience**
  - Dynamic Content: APIs enable the retrieval and display of dynamic content, improving the responsiveness and interactivity of applications.
  - Seamless Integrations: APIs allow for seamless integration with third-party services, providing users with a richer and more comprehensive experience.

- **Security**
  - Controlled Access: APIs can enforce authentication and authorization mechanisms to control access to data and services, ensuring that only authorized users can perform certain actions.
  - Data Protection: APIs can be designed to protect sensitive data through encryption, secure communication protocols (like HTTPS), and other security measures.

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Benefits of Web APIs:

- **Standardization**
  - Consistent Interfaces: APIs provide standardized interfaces for interacting with services, making it easier for developers to understand and use them.
  - Documentation: APIs are typically well-documented, providing clear guidelines and examples on how to use them effectively.

- **Innovation**
  - Faster Development: APIs allow developers to leverage existing services and functionalities, accelerating the development of new applications and features.
  - Ecosystem Growth: APIs foster the creation of ecosystems where developers can build on top of each other's work, driving innovation and collaboration.

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Benefits of Web APIs:

- **Automation**
  - Automated Processes: APIs enable the automation of tasks and processes. For example, APIs can be used to automate data retrieval, data entry, and interaction with third-party services.
  - Continuous Integration and Deployment: APIs support automated testing and deployment pipelines, improving the efficiency and reliability of the development process.

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