



Welcome to this session: APIs

The session will start shortly...

Questions? Drop them in the chat.
We'll have dedicated moderators
answering questions.





What is Safeguarding?

Safeguarding refers to actions and measures aimed at protecting the human rights of adults, particularly vulnerable individuals, from abuse, neglect, and harm.



To report a safeguarding concern reach out to us via email:
safeguarding@hyperiondev.com

Live Lecture Housekeeping:

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly.
- No question is daft or silly - ask them!
- For all non-academic questions, please submit a query:
www.hyperiondev.com/support
- To report a safeguarding concern reach out to us via email:
safeguarding@hyperiondev.com
- If you are hearing impaired, please kindly use your computer's function through Google chrome to enable captions.



Stay Safe Series:

Mastering Online Safety One Week/step at a Time

While the digital world can be a wonderful place to make education and learning accessible to all, it is unfortunately also a space where harmful threats like online radicalisation, extremist propaganda, phishing scams, online blackmail and hackers can flourish.

As a component of this BootCamp the **Stay Safe Series** will/is designed to guide you through essential measures in order to protect yourself & your community from online dangers, whether they target your privacy, personal information or even attempt to manipulate your beliefs.

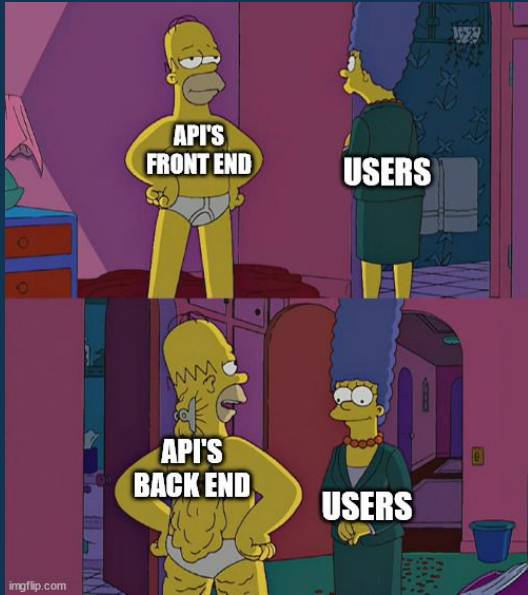
Pause Before You Post:

Managing Your Digital Presence

- Impact on Reputation.
- Permanent Record.
- Privacy Concerns.
- Miscommunication.
- Influence on Others.
- Professional Implications.
- Mental Well-being.



APIs



Learning Outcomes

- ❖ Define APIs
- ❖ Explain why we use APIs
- ❖ Identify different types of APIs
- ❖ Explain how APIs work when a user makes a request.



Software Engineering

Imagine you're building a mobile app that shows weather data — how would your app get the latest weather information?



Software Engineering

Can you think of everyday applications or devices that might use APIs to function?



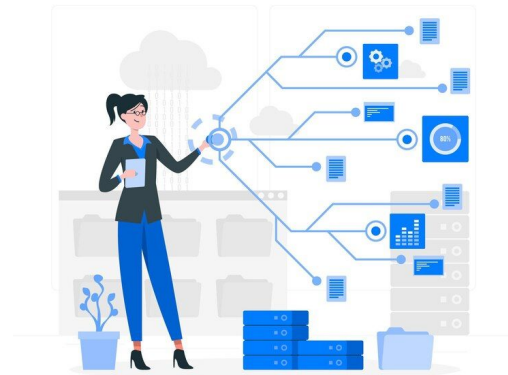
What is an API?

- An API (Application Programming Interface) is a set of rules and protocols that allows different software applications to communicate with each other.



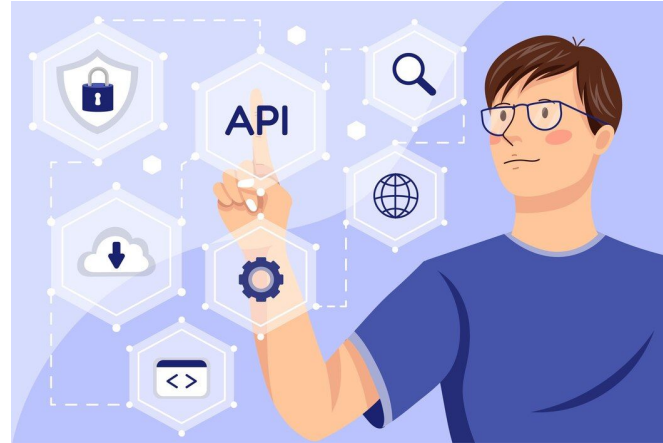
Why do we use APIs?

- Enable Communication Between Systems
- Promote Reusability
- Improve Efficiency
- Enhance Security
- Encourage Scalability



Advantages

- Improves Efficiency
- Facilitates Integration
- Enhances Security
- Supports Automation
- Encourages Innovation



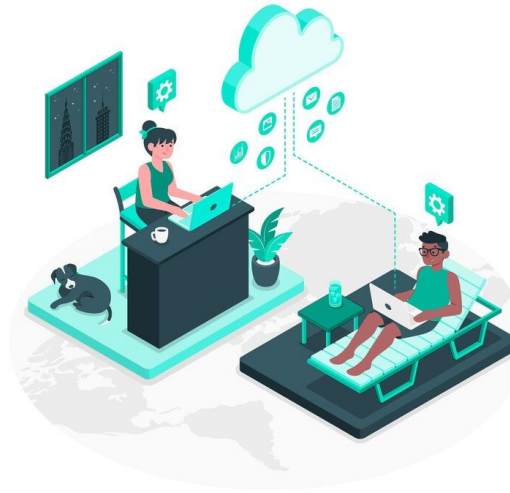
Disadvantages

- Security Risks
- Complexity
- Maintenance Overhead
- Dependency Issues
- Rate Limits and Costs



API Accessibility

- Open APIs (Public APIs)
- Partner APIs
- Internal APIs (Private APIs)



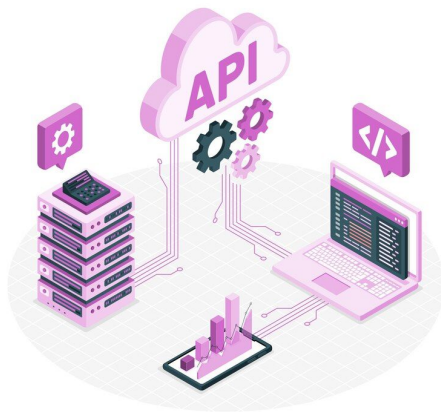
API Functionality

- Web APIs
- Operating System APIs
- Database APIs
- Hardware APIs



API Architecture

- REST APIs (Representational State Transfer)
- SOAP APIs (Simple Object Access Protocol)



How does an API work?

- Step 1: **The Client Sends a Request**
 - This includes
 - The Endpoint (URL)
 - The HTTP Method
 - Header
 - Body
- Step 2: **The API Processes the Request**
 - The API receives the request and verifies it's validity.
 - If everything is valid, the API retrieves or processes the data.

How does an API work?

- Step 3: **The API Sends a Response**
 - This includes
 - Status Code
 - Headers
 - Response Body
- Step 4: **The Client Uses the Data**
 - The client receives the response and processes the data.

Polls

Please have a look at the poll notification and select an option.

What does API stand for?

- A. Advanced Programming Interface
- B. Application Programming Interface
- C. Automated Process Integration
- D. Application Process Integration

Polls

Please have a look at the poll notification and select an option.

Which protocol is most commonly used for web APIs?

- A. FTP
- B. SMTP
- C. HTTP/HTTPS
- D. TCP

Polls

Please have a look at the poll notification and select an option.

Which HTTP method is used to retrieve data from an API?

- A. POST
- B. GET
- C. DELETE
- D. PUT

Q & A SECTION

**Please use this time to ask
any questions relating to the
topic, should you have any.**

**Thank you
for attending**



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