In this thread I would like to discuss what API design is. I will define the term API. I will discuss what APIs are. I will also discuss why APIs are used and I will discuss when APIs should be used. So, what is an API?

The term API stands for Application Programming Interface. “Application programming interfaces, or APIs, simplify software development and innovation by enabling applications to exchange data and functionality easily and securely.” (Education, 2022) As APIs are critical to connecting applications on the web, API design is the foundation. As developers, we are the ones who are building these APIs. As such, their design needs to be helpful and simple. (Lauret, 2019). APIs should be used when developers want to enhance functionality, reduce development cost, increase development speed, and bring satisfaction to users. A simple definition of API design means “providing an effective interface that helps your API’s consumers better understand, use, and integrate with them while helping you maintain it effectively.” (September 27, n.d.) Some best practices for API design are listed below:

* **Easy to read and work with**: A well designed API will be easy to work with, and its resources and associated operations can quickly be memorized by developers who work with it constantly.
* **Hard to misuse:**Implementing and integrating with an API with good design will be a straightforward process and writing incorrect code will be a less likely outcome. It has informative feedback and doesn’t enforce strict guidelines on the API’s end consumer.
* **Complete and concise:** Finally, a complete API will make it possible for developers to make full- fledged applications against the data you expose. Completeness happens over time usually, and most API designers and developers incrementally build on top of existing APIs. It is an ideal which every engineer or company with an API must strive towards.

(Best Practices in API Design, n.d.)

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