What is Web API and why we use it ?

> API stands for Application Programming Interface

> It can be accessed over the web using the HTTP protocol

> If an application is to be used on a distributed system and to provide services on different devices like laptops, mobiles, etc then web API services are used. Web API is the enhanced form of the web application

Difference b/w APIs and WEB-API

> If an application is to be used on a distributed system and to provide services on different devices like laptops, mobiles, etc then web API services are used. Web API is the enhanced form of the web application

> Web-API is a subset of API.

Main purpose of creating a Web-API/API is same i.e to create a connection between b/w different servers.

API created using:-

- TCP
- SMTP
- HTTP

Web-API created using:-

- HTTP

In [ ]:

```
```

In [ ]:

```
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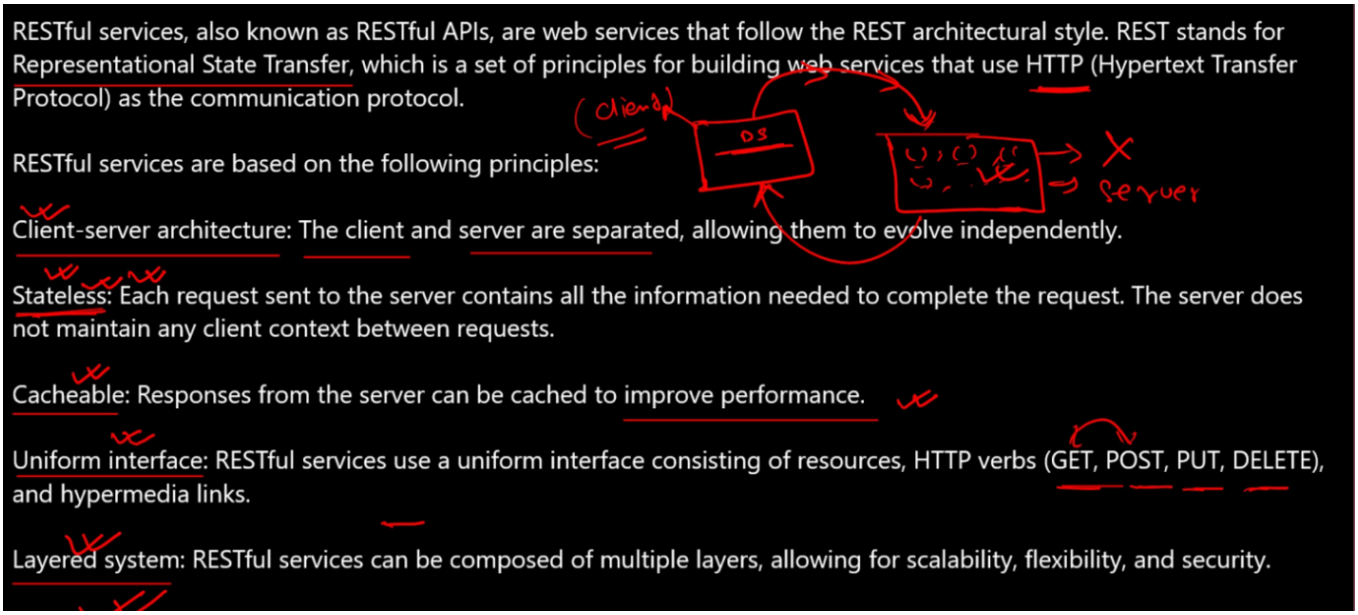
Rest and Soap Architecture

REST stands for **Representational State Transfer**.

SOAP API	REST API
Simple Object Access Protocol	Representational State Transfer
Works over HTTP, HTTPS, SMTP, XMPP	Works over HTTP and HTTPS
Highly structured/typed	Simplicity,flexibility,scalibility, Less structured -> less bulky data
Because it is XML based and relies on SOAP, it works with WSDL	It works with GET, POST, PUT, DELETE
more secure	less secure
Transports data in standard XML format.	Generally transports data in JSON. It is based on URI. Because REST follows stateless model, REST does not enforces message format as XML or JSON etc
Designed with large enterprise applications in mind	Designed with mobile devices in mind

> WSDL- web service discription language



In [1]:

```
!python --version
```

```
Python 3.9.13
```

In [2]:

```
!python --update
```

```
unknown option --update
usage: python [option] ... [-c cmd | -m mod | file | -] [arg] ...
Try `python -h' for more information.
```

In [ ]:

```
```