

#API \Rightarrow Application programming interfaces

So in order to add functionalities to your websites you take api from internet & you can use it at your end.

Ex:- there is weather api exist from internet & you can add it directly to your website as api

\Rightarrow An api is set of commands, functions, protocols & objects that programmers can use to create software or interact with external system

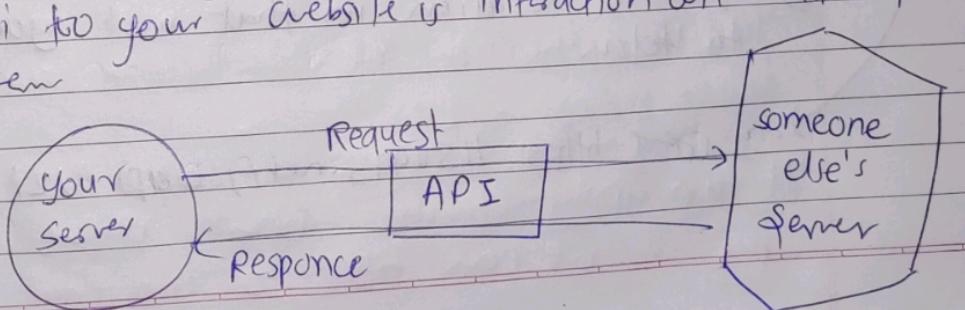
① Data from internet

Data in api are most abstract where you can use functionality for that but do not have permission to know what is background of that data

\Rightarrow jquery is a Api

Say you create a application with jquery so in that case you're creating an api

\Rightarrow while pulling weather information from weather api to your website is interaction with external system



⇒ API attributes

- ① Endpoints
- ② Paths
- ③ Parameters
- ④ Authentication

Endpoint is website which you use to access some external api

GET https://sv443.net/jokeapi/v2/joke/

Endpoint

so sometime you have to specify specific path after the endpoint in order to access api

⇒ so lets try for programming joke

GET https://sv443.net/jokeapi/v2/joke/programming

Endpoint

↑
Path

⇒ Endpoint is like root of api

⇒ path is location in that root you want to fetch

or GET https://sv443.net/jokeapi/v2/joke/dark

parameters

⇒ some functionalities are not implemented with path as search query so parameters can be used after endpoint & path (if have any) just add ? & then type key value pair query

So SU443 website

key ⇒ is & contains

Value ⇒ custom

So

Endpoint Path
 GET https://su443.net/jokeapi/v2/jokes/dark
 & ?contains=debugging
 ↑ ↓
 Key Value Parameter

multiple parameters are passed with & separator

Ex endpoint / path & ?contains=hell & blacklist=hello
 parameters parameter 2
 & operator

only first parameter is followed by ? & after that first parameter we have to & (and operator)

http://su443.net/jokeapi/v2/jokes?contains=debugging&blacklist=hello



#authentication

So many time a api has lot of demand so they ~~want~~ want to know the customer & limit them for using so for limiting their client here we use authentication

⇒ Every time you make request for api it will go through authentication & ~~keep~~ api will back your apps

⇒ So for a weather api just you have sign up & then you will get a api key for authentication

⇒ here we pass authentication key as parameter called appid

& appid = key

⇒ So as whole url will access

Sample of api

⇒ Endpoint may be different for different website

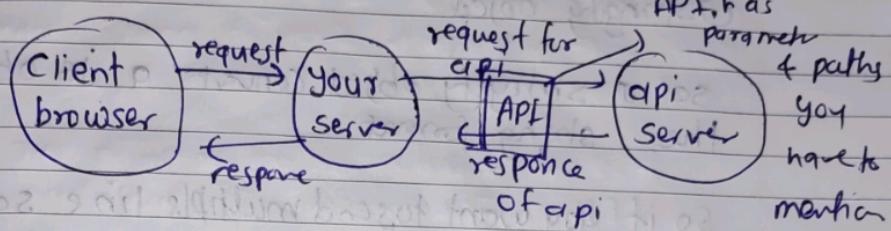
To fetch the api we will use a application called postman

It can apply specific fulfil request like get post & we can able to use that postman

Output of api is in .json format

So can understand same & Study about api

① Flowchart of client server & api



We have to use node https package when it has parameters called response which show response you get after the api request

② After receiving response we have to parse json from it

→ So if you apply on function for data such you can get a hexadecimal Json code which show output in hexadecimal character set

```
response.on("data", function(data) {
```

```
    console.log(data);
```

```
});
```

Now convert hexadecimal to JSON:-

Code ⇒ JSON.parse(hexadecimal-data);

ign & from that you're now able convert data
in to the JSON file & then into object

① Stringify object

so if you want to convert a JS object to
the string format

so if you want to send multiple line so
use

res.write(" ") ;

you can use res.write("\n") ;

and at end just

res.send(" ") → for large no. of
elements

which is not recommended as it will take lot of time

but most common way is to use

which is mentioned in lecture notes

(it is advised to use "blob") as opposed

to normal response object

printed as (blob) is stored

in memory which is faster

most of times better to use

(blob) instead of response object