APIs

A program sends an API request to a web server, the web server queries and retrieves the data and returns it to program in JSON format

**Examples:**

# Make a GET request to get the latest position of the ISS from the OpenNotify API.

response = requests.get("http://api.open-notify.org/iss-now.json")

status\_code = response.status\_code -> response status

content = response.content -> response in json format

res\_python\_obj = response.json() -> response in python object format

headers = response.headers —> is a dictionary —> ‘content-type’ key has the information of what data is returned and how to decode it

headers[‘content-type’] —> is of application/json format —> thats why we were able to decode it using response.json()

**status codes:**

* 200 - Everything went okay, and the server returned a result (if any).
* 301 - The server is redirecting you to a different endpoint. This can happen when a company switches domain names, or an endpoint's name has changed.
* 401 - The server thinks you're not authenticated. This happens when you don't send the right credentials to access an API.
* 400 - The server thinks you made a bad request. This can happen when you don't send the information the API requires to process your request, among other things. (for eg., we forgot to send parameters)
* 403 - The resource you're trying to access is forbidden; you don't have the right permissions to see it.
* 404 - The server didn't find the resource you tried to access.

**json**

* json.dumps - converts python object to json string
* json.loads - converts json string to python object

**Authentication**

token as a header

* specify headers as a dictionary —> and pass it as an arg to requests

**Pagination**

* to limit records returned —> per\_page and page are sent as params

**POST requests**

requests.post(“”, headers, params, json = payload)

**PATCH**

We use PATCH requests when we want to change a few attributes of an object, but don't want to resend the entire object to the server. Maybe we just want to change the name of our repository, for example.

**PUT**

We use PUT requests to send the complete object we're revising as a replacement for the server's existing version.

**DELETE**

The DELETE request removes objects from the server. We can use the DELETE request to remove repositories.

**Web scrapping**

first\_paragraph = parser.find\_all("p", id="first")[0]

second\_inner\_paragraph\_text = parser.find\_all("p", class\_ = "inner-text")[1]

## CSS selectors by class

first\_outer\_text = parser.select(".outer-text")[0].text

## CSS selectors by id

second\_text = parser.select("#second")[0].text

## Multiple nested CSS selectors

parser.select(“body table …”)