Python - REST API's, Requests and JSON

What is an API

- Application Programming Interface
- SOA - Service Oriented Architecture

What is a REST API
Representational State Transfer

- API Key
- Limits
- Rate Limiting
- Caching ???
- A web page for computers…
  - Provides data in XML, JSON or HTML
- Example =
  - https://www.ipify.org/
  - https://ip-api.com/
  - https://restcountries.com/
  - https://github.com/public-apis/public-apis

What is JSON

- JavaScript Object Notation
- Standardized way to send data on Internet.
- Name/ Value Pairs
- Example = http://ip-api.com/json/151.101.3.5

Requests Module

- python3 -m pip install requests
- get('http://www.cnn.com')
  - Allows you to pull in the data from a web page as a variable value
- Example = get.py

Reading REST Response

- .status_code
- .headers
- .text
- .json()
- Example = Next Slide / IPIFY Example

IPIFY.org - External IP Address

- https://www.ipify.org/
  - Free Use Without Limit
- https://api.ipify.org
- https://api.ipify.org?format=json
- Example = ipify.py

Pretty JSON - dumps

- Think of JSON as Nested Sets
- dumps turns JSON into formatted String
- Example = json-pretty.py

Labs

- lab-restrict.py
- lab-language.py
- lab-geo.py