



# Getting Data in Python

## Access APIs

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# What is API?

Many websites and web services provide **Application Programming Interfaces** (APIs), which allow you to get data **in a structured format**. This saves you the trouble of web scraping!

# Get Free API JSON FORMAT

These APIs are **serialized into JavaScript Object Notation (JSON)** format and does not need authentication

We will use **requests** library to **call/fetch** the API and **json** library to **load** the JSON file into Python Object (Dictionary or List)

# Get Free API JSON FORMAT

```
import requests
```

```
import json
```

```
url = requests.get(API Address URL)
```

```
# deserializing the JSON String Format into Python Object
```

```
data = json.loads(url.text)
```

```
# deserializing the JSON local file into Python Object
```

```
data = json.load(jsonfile)
```

# Get Free API XML Format

We can use beautifulsoup library to parse XML APIs

```
import requests
```

```
from bs4 import BeautifulSoup
```

```
xml = requests.get(API Address URL)
```

```
soup = BeautifulSoup(xml.content, 'lxml-xml')
```

# Warm Up Practice

**P1:** Find Free JSON APIs and try to access them in Python

**P2:** Write a Python script to get and read an xml file API. You can find the sitemap.xml for any website.

**P3:** Write a Python script to **read JSON file** locally.