

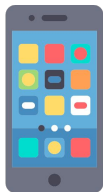


How The Internet Works

Learning Goals

- Develop a mental model of how the internet works
- Understand what it means to request a resource over the internet
- Understand what an API is
- Understand how to query APIs in Python

How do we get the news?



What's the headline today?

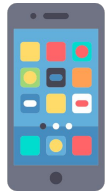
"Mexicans Await Results in Election Expected to Lead to First Female President"



What's the headline in the movies section?

"A Nigerian Filmmaker Hungry to Elevate Nollywood's Thrills"

Inspecting these interactions



What's the headline today?

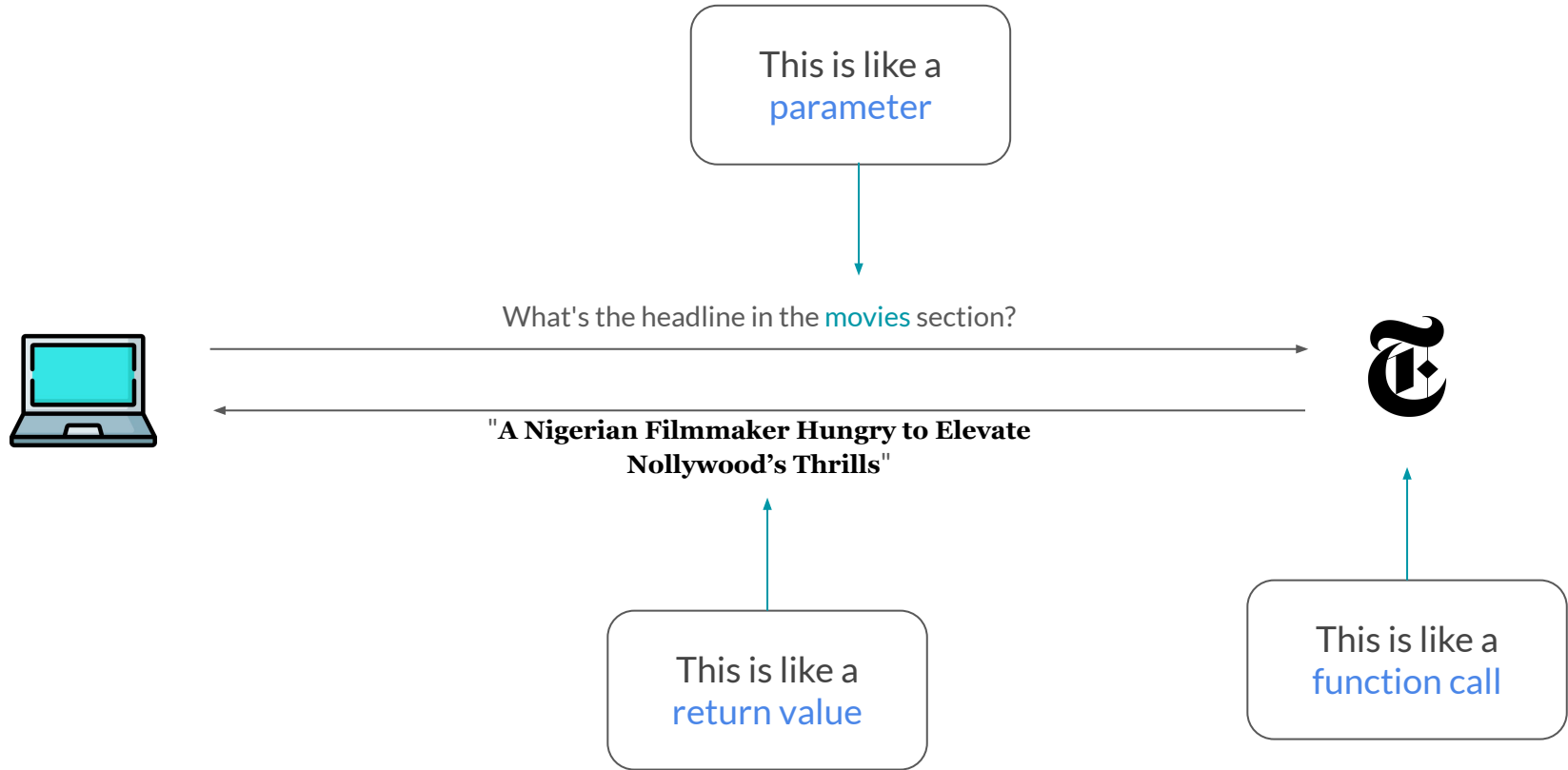


**"Mexicans Await Results in Election Expected to Lead
to First Female President"**

This is like a
return value

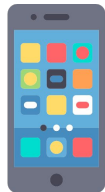
This is like a
function call

Inspecting these interactions



What would that function look like?

```
def get_headline(search)
```



```
get_headline({})
```



```
get_headline({"section": "movies"})
```

What would that function look like?

This is an [API](#), or Application Programming Interface

```
def get_headline(search)
```

Instructions for calling `get_articles`

- * The search parameter should be a dictionary
- * If 'search' has a 'section' key/value pair, get the headline for that section
- * If 'search' has a 'date' key/value pair, get the headline for that date. Otherwise, get the deadline today
- * If 'search' has a 'language' key/value pair, get the headline for that language
- * ...

Understanding APIs

Instead of calling functions, we **query URLs**

GET `www.nytimes.com/headlines?<search>`

Understanding APIs

Instead of calling functions, we **query** URLs

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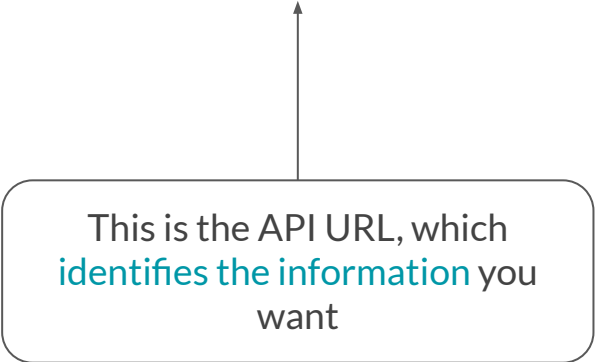
'GET' means that you want to **fetch something** from an API

Understanding APIs

Instead of calling functions, we **query** URLs

GET **www.nytimes.com/headlines?**<search>

This is the API URL, which
identifies the information you
want

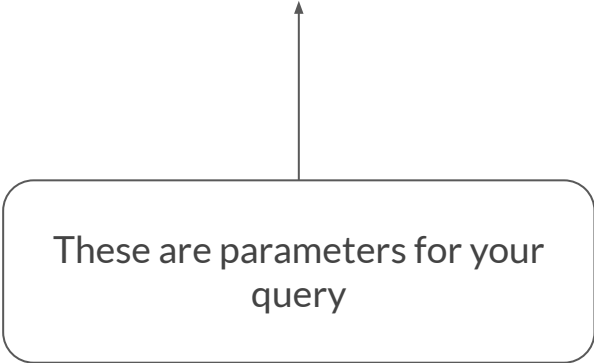


Understanding APIs

Instead of calling functions, we **query** URLs

GET `www.nytimes.com/headlines?<search>`

These are parameters for your
query

A diagram consisting of a purple-outlined rounded rectangle containing the text "These are parameters for your query". A vertical arrow points from the top center of this box to the green-colored parameter "<search>" in the URL "www.nytimes.com/headlines?<search>" shown in the block above.

Sample requests

GET `www.nytimes.com/headlines`

Get the current headline of the New York Times

GET `www.nytimes.com/headlines?section=movies`

Get the current headline of the movies section of New York Times

POST `www.nytimes.com/comments`

Make a comment on an article

How does an API know who you are?



I want to query
your API!

Ok! Whenever you
query me, give me
the secret number
42 so I know you're
allowed to make
requests



```
GET www.nytimes.com/headlines?api_key=42&section=movies
```

So, how do we do this in Python?

```
import requests
```