

Application Programming Interface (API)

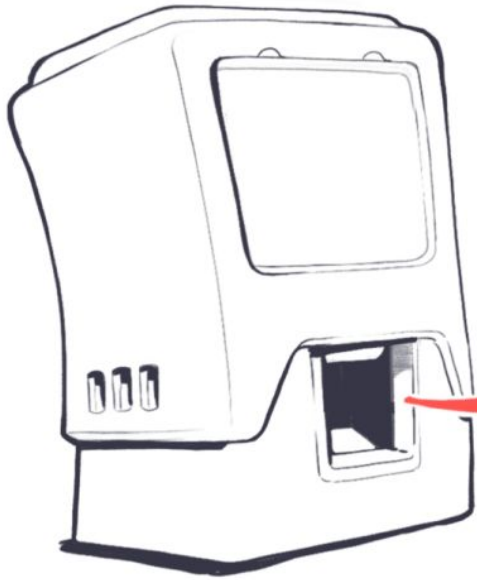
Source: <https://maggieappleton.com/api>

What is an API?

A Software intermediary that allows to connect two systems to share information / instructions.

Hide the complexity of a system exposing just an easy to consume interface.

Allow external system to interact with internal systems through a well defined set of rules, providing functionality to external systems while keeping the logic for such functionality hidden.



AN

APPLICATION PROGRAMMING INTERFACE

anyone
fancy a
chat?

IS A SYSTEM THAT
ALLOWS **one**
PROGRAM TO LET
OTHER PROGRAMS
TALK TO IT



Just Like Humans
Interact With
PROGRAMS THROUGH
a **USER**
INTERFACE,

THE WHOLE
CODE BASE OF
an APP

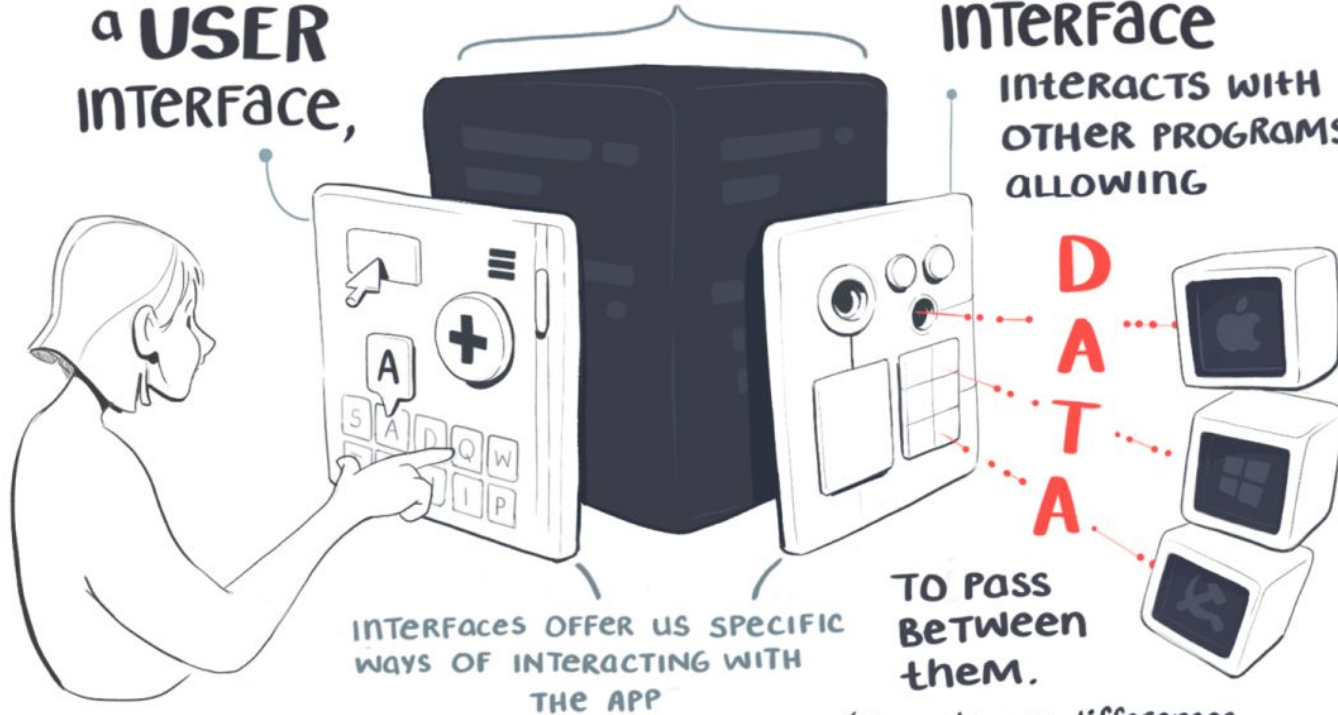
A PROGRAM INTERFACE

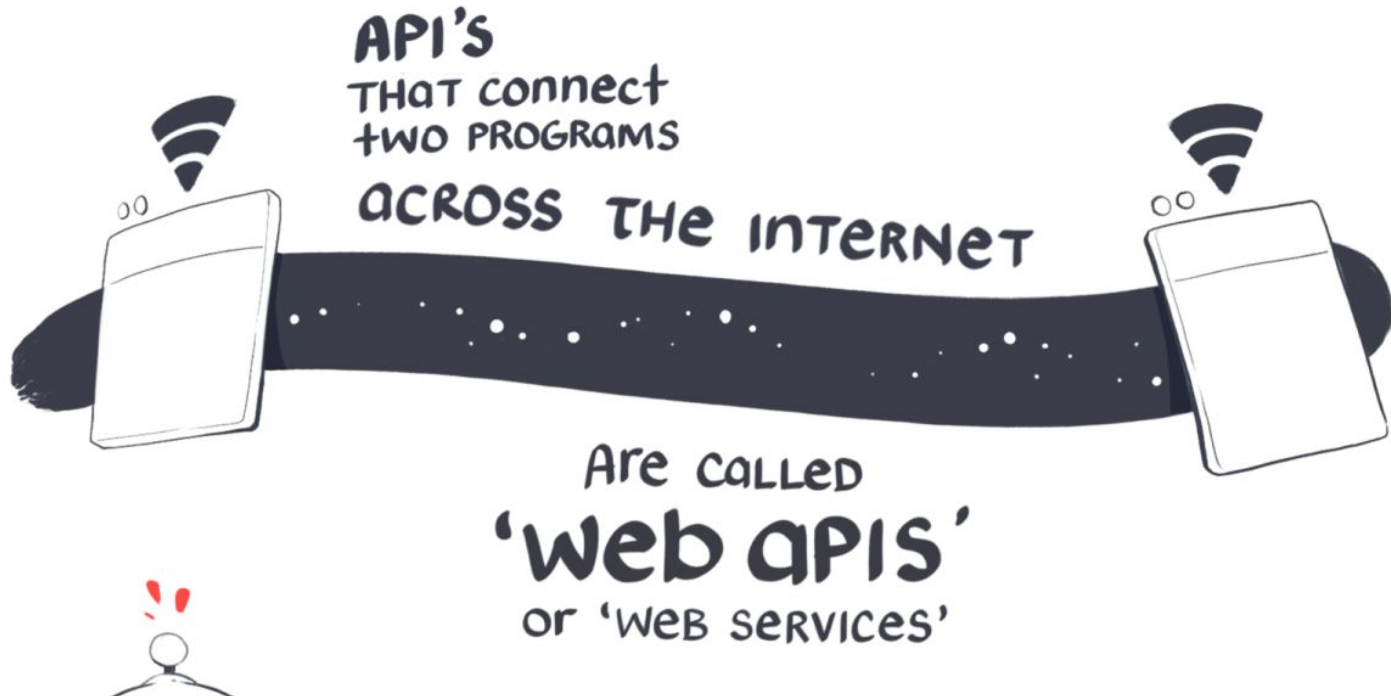
INTERACTS WITH
OTHER PROGRAMS,
ALLOWING

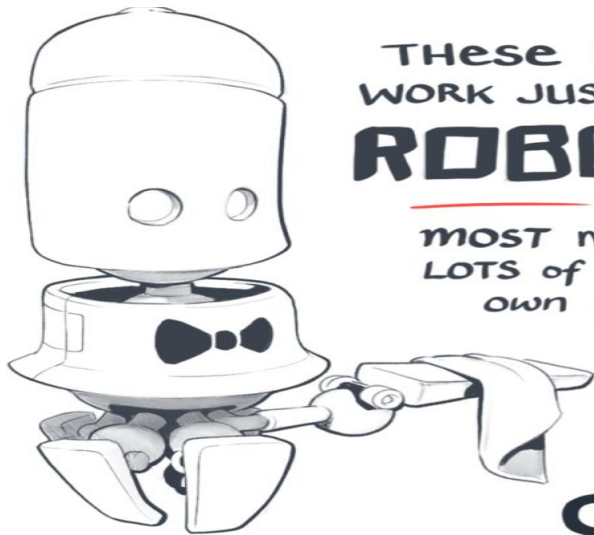
**D
A
T
A**

TO PASS
BETWEEN
them.

(Despite any differences
in hardware, software,
or political beliefs)







THESE WEB API'S WORK JUST LIKE TINY **ROBO-WAITERS**

MOST MAJOR WEBSITES WITH
LOTS of DATA WILL BUILD THEIR
OWN **ROBO-WAITER API.**

THAT WAITER SERVES
THEIR DATA TO OTHER
APPS & WEBSITES



nasa's
API SERVES
SPACE DATA



Google's
MAPS
API SERVES
maps



Instagram's
API SERVES
images



each API waiter has a
— **menu** OF OPTIONS THAT
TELLS YOU WHAT KINDS
OF DATA YOU CAN ORDER

every APP HAS ITS OWN DISTINCT
MENU OF CHOICES, AND GUIDELINES
FOR HOW TO ORDER - THIS MENU
& ORDERING GUIDE IS CALLED

THE DOCUMENTATION

**YOU TELL THE
ROBO-WAITER
WHAT DATA YOU
WANT, AND THEY
DASH OFF TO FETCH
IT FOR YOU**

can I have all
the images
tagged
#KINGKITTY?



YouTube API example

IF YOU'RE BUILDING
a WEBSITE, and WANT
TO ADD a
YOUTUBE
VIDEO TO IT

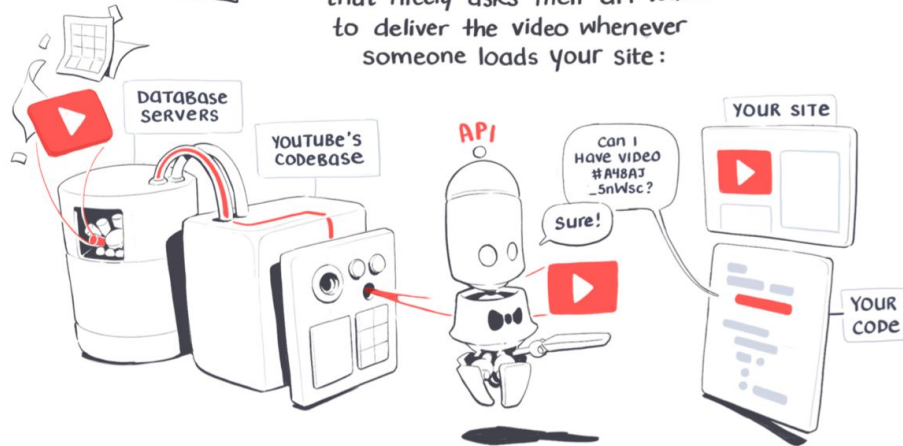
YOU'D READ the

AND THEN add a LINE
TO YOUR SOURCE CODE...

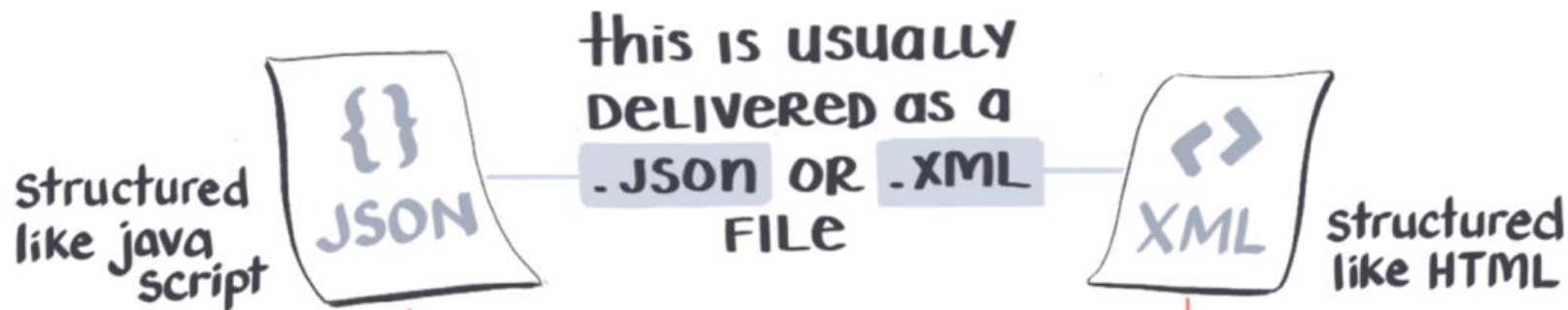
GET [https://www.googleapis.com/youtube/v3/
videos?id=A48AJ_5nWsc](https://www.googleapis.com/youtube/v3/videos?id=A48AJ_5nWsc)

this is a
"GET"
request
which we'll
dig into in
PART II of
this series

that nicely asks their API waiter
to deliver the video whenever
someone loads your site:



this is usually
delivered as a
.JSON OR .XML
FILE



```
{  
  "video": {  
    "id": "A4bAJ_5nWsc",  
    "publishedAt": "2019-04-20",  
    "title": "The Best Video"  
  }  
}
```

```
<video>  
  <id>A4bAJ_5nWsc</id>  
  <publishedAt>2019-04-20</publishedAt>  
  <title>The Best Video</title>  
</video>
```