

API Testing



India.com wants to show weather info from **Weather.com**

weather.com/weather/today/||bf6b847044989367b0f337e738057988f4f781a137165a3b6d5f5169ecfd341f

The Weather Channel An IBM Business Search City or Zip Code

The Weather Channel Delhi, India

Today Hourly 10 Day Weekend Monthly Radar

Delhi, India As of 11:22 pm IST

59°

Haze

Day 73° • Night 49°

Watch: Bird's-Eye View Of Destructive Tornado

Today's Forecast for Delhi, India

| Morning | Afternoon | Evening | Overnight |
|---------|-----------|---------|-----------|
| 63° | 70° | 60° | 52° |
| ☁️ | ☁️ | ☁️ | ☁️ |
| -- | -- | -- | 1% |

Next Hours

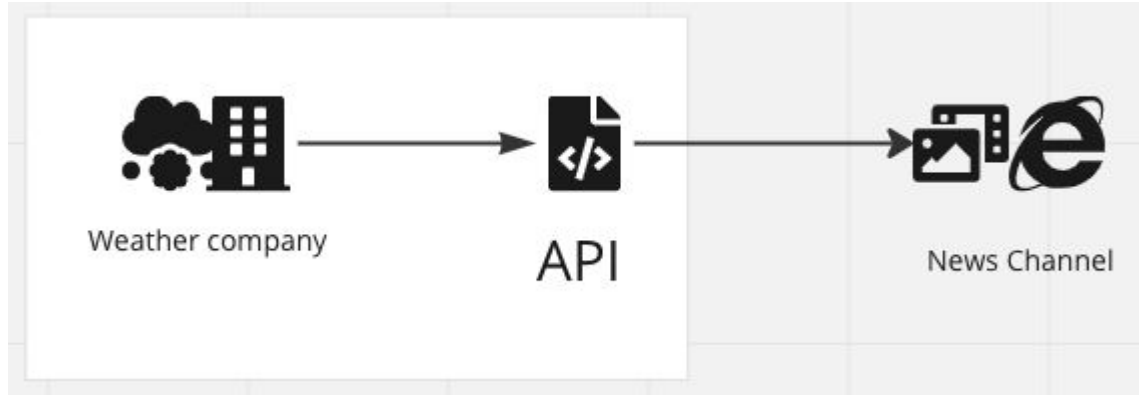
Weather.com

API (Application Programming Interface)

What is an API???

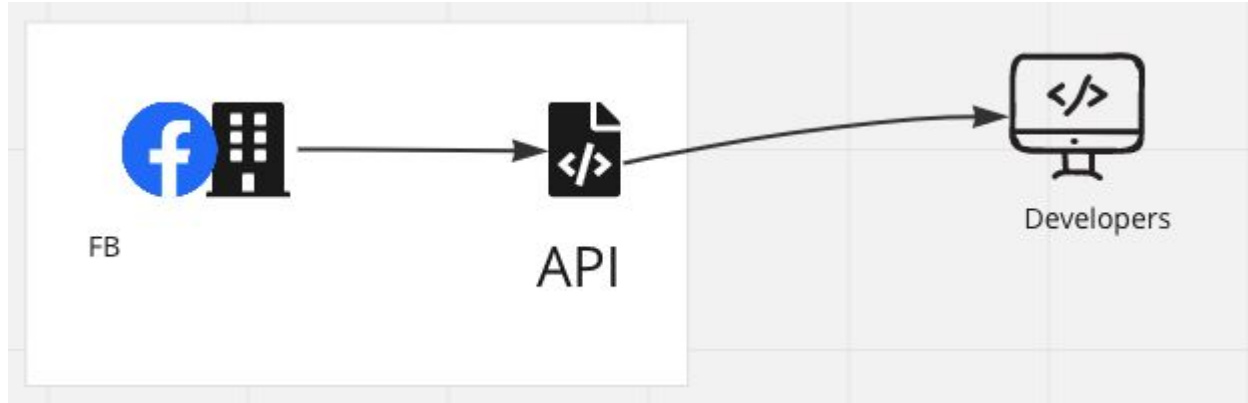
- Simply remember it's a **Piece of code**
 - That can Create, Read, Update and Delete data (CRUD)

What is an API - Example 1



Secure
Authenticate
Fast
Make money

What is an API - Example 2



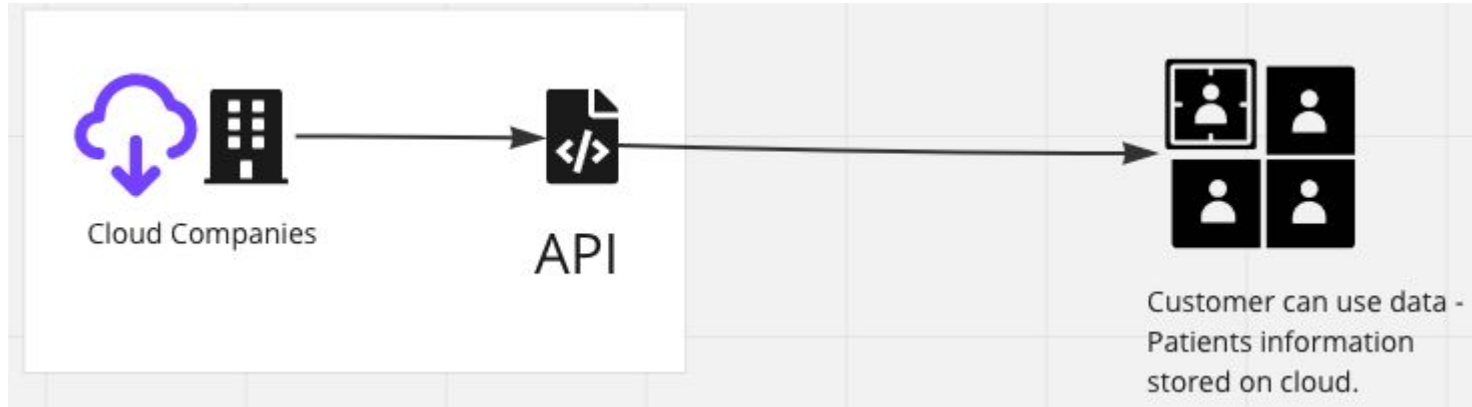
Secure
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Make money

What is an API - Example 3



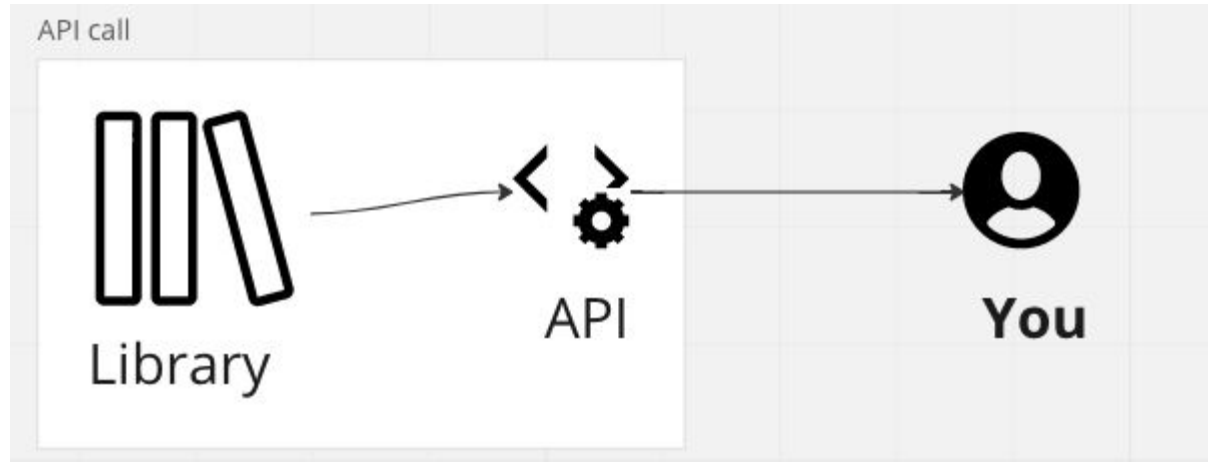
Secure
Authenticate
Fast
Make money

What is an API - Example 4



Secure
Authenticate
Fast
Make money

API Testing example 5



Sample postman request

The screenshot displays a Postman interface for a GET request. The URL is `https://openlibrary.org/api/books?bibkeys=ISBN:0201558025,LCCN:93005405&format=json`. The request includes two query parameters: `bibkeys` and `format`. The response is a JSON array of book details.

1 URL

2 Request details
Parameter
Authorizations
Header
Body

3 Send Request

| KEY | VALUE | DESCRIPTION |
|--|--|-------------|
| <input checked="" type="checkbox"/> <code>bibkeys</code> | <code>ISBN:0201558025,LCCN:93005405</code> | |
| <input checked="" type="checkbox"/> <code>format</code> | <code>json</code> | |
| Key | Value | Description |

4 Response

```
1  {
2    "ISBN:0201558025": {
3      "bib_key": "ISBN:0201558025",
4      "info_url": "https://openlibrary.org/books/OL1429649W/Concrete_mathematics",
5      "preview": "restricted",
6      "preview_url": "https://archive.org/details/concretemathemat00grah_444",
7      "thumbnail_url": "https://covers.openlibrary.org/b/id/135182-S.jpg"
8    },
9    "LCCN:93005405": {
10     "bib_key": "LCCN:93005405",
11     "info_url": "https://openlibrary.org/books/OL1397864M/Zen_speaks",
12     "preview": "restricted"
13   }
14 }
```

API components

- API URL
 - <https://openlibrary.org>
- Path
 - /api/books
- Methods
 - What operation this api will perform (Create, Read, Update, Delete) or CRUD
 - Get, Post, Update, Delete etc
- Request details
 - Parameters, Auth, Header, Body
- Status code
 - 200, 400, 500, 401
- Response Body
 - What response we received for a request.

How does a **QA person think**
while working on a **API user story**

Thank you

API (Application Programming Interface)

How does it work??? - More details

- Decide what data points to add
- Decide who can access
- Decide usage
- Discuss infrastructure needs
 - Server
 - Databases
 - Tables
 - How to populate tables

API (Application Programming Interface)

Why???

- a. Existing methods are time consuming and complex
- b. Anyone can go and grab information (No Auth)
- c. No monetization
- d. No cap
- e. Not secure
- f. Performance issues
- g. No dependencies