

## LESSON 2

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# GOOGLE MAPS API

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# APPLICATION PROGRAMMING INTERFACE

- ▶ API is a very generic term and can have many different meanings / concepts associated with it
- ▶ Simply put it is code and tools that allow your program to interact with another program (literally an Interface for your to Program someone else's Application)

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# RESTFUL APIS

- ▶ Last week we briefly looked at RESTful APIs, which respond to a request with data.
- ▶ URL is formatted by what we are asking for...if you want posts, it will be: <apiURL>/posts, if you wants users: /users, a specific user: /users/<userId>
- ▶ Example is the JSON placeholder API: <https://jsonplaceholder.typicode.com/>
- ▶ REST is a full specification, but that is less important. If you hear REST, think "just data, usually JSON".

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# SOFTWARE DEVELOPMENT KIT

- ▶ SDKs are collections of pre-made JS functions you can use to interact with an API
- ▶ They allow you to easily use an external service in your application
- ▶ They allow you do more than just access data; think adding widgets or buttons to your site (Facebook, Google, Soundcloud)
- ▶ Usually have in-depth documentation

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# GOOGLE MAPS

- ▶ Sometimes a service will offer an SDK as well as a REST API...this is the case with Google Maps.
- ▶ Google Maps provides an SDK to easily add maps, markers, or directions to your application.
- ▶ They also have REST APIs we can query for geocoding or distance data
- ▶ Is free under a certain quota

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## ACCESSING THE API

- ▶ Most commercial APIs require you to register for an API key. This is a unique code which identifies your application as the one requesting data
- ▶ This is so the company offering the services knows when to start charging you money
- ▶ It is also to prevent abuse, for example making 1000's of requests a second to try and take down the service
- ▶ For the exercises I will share my key, for the assignments you will need your own