Collab workshop

A.P.I

Definition

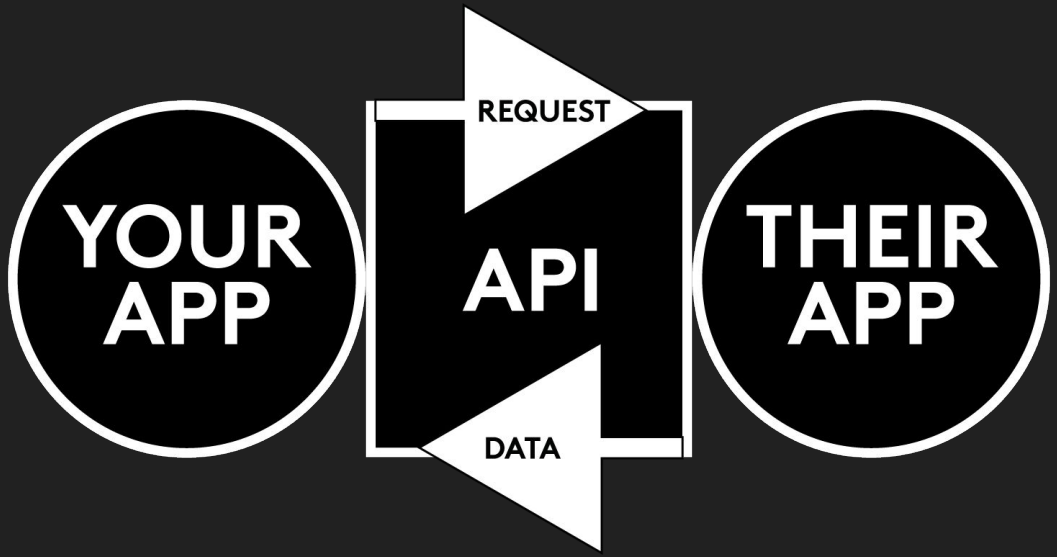
Application programming interface

(WIKI): (...) an application programming interface (API) is a set of routines, protocols, and tools for building software and applications

. Facilitates data integration

. Allows call with specifications

. Uniforms communication


YOUR APP
REQUEST
API
DATA
THEIR APP

Web API

. Interface between a online service and a custom independent application where the service shares its assets with the application.

Assets could be:

. Datas –users infos (Facebook) –messages (Twitter), …

. Images (Flickr, Photobucket, Getty Images, …)

. Videos (Youtube, Vimeo, ...)

. Sounds (Soundcloud, Deezer, ...)

Formats

All communication for web APIs are shared through http or https protocol.

. Depending on the platform you're working with, SDK's are available to simplify calls to the API. Usually, you can find many SDKs for a single API. Most of the time, the functionalities are equivalent, only the language methods differs.

Examples:

- SDKs for Soundcloud: Python, Ruby, Javascript
- SDKs for Facebook: iOS, Android, Javascript, PHP, Unity
- Cooper Hewit is based on a kind of REST (Representational State Transfer)

Different way to use it

For today’s example, we’ll use:

- Specific JS SDK (hides a little bit of the communication)
- Custom API Call (need to create our own call)
- A node module (need to run nodejs)

Example: SOUNDCLOUD JAVASCRIPT SDK

You need to include the SKS in your HTML page:

```
<script src="https://connect.soundcloud.com/sdk/sdk-3.0.0.j"></script>
```

You can include the SDK in a node script

```
npm install soundcloud
var SC = require('soundcloud');
```

Initialize your app:

```
SC.initialize({
  client_id: 'YOUR_CLIENT_ID',
  redirect_uri: 'http://example.com/callback'
});
```

Then use specific functions to access datas:

```
SC.get('users/forss').then(function(user){console.log('Forss', user);});
```

Example: COOPER HEWIT MUSEUM

- Create an creating an access token:
  It consists in creating an application and receiving an authorization code.
- Using methods provided by the service:
  https://api.collection.cooperhewitt.org/rest/?method=cooperhewitt.exhibitions.getList&access_token=936b87cbf3319477c412a4a2e28ca297&page=1&per_page=100
- Read the result and do something interesting with it

All datas are displayed as .json structure

- It’s important to know the available methods: https://collection.cooperhewitt.org/api/methods/

Let’s have fun with API

Arkanoid with
Soundcloud ambiences &
Cooper Hewitt Artworks &
Twitt each destroyed block !