

Introduction to API's

- What are they?
- How do they work?
- Why using them?
- REST API's
- Use example in code
- Examples of public API's

A.P.I. =

Application Programming Interface

An API is set of rules and protocols which will enable 2 or more parties to communicate

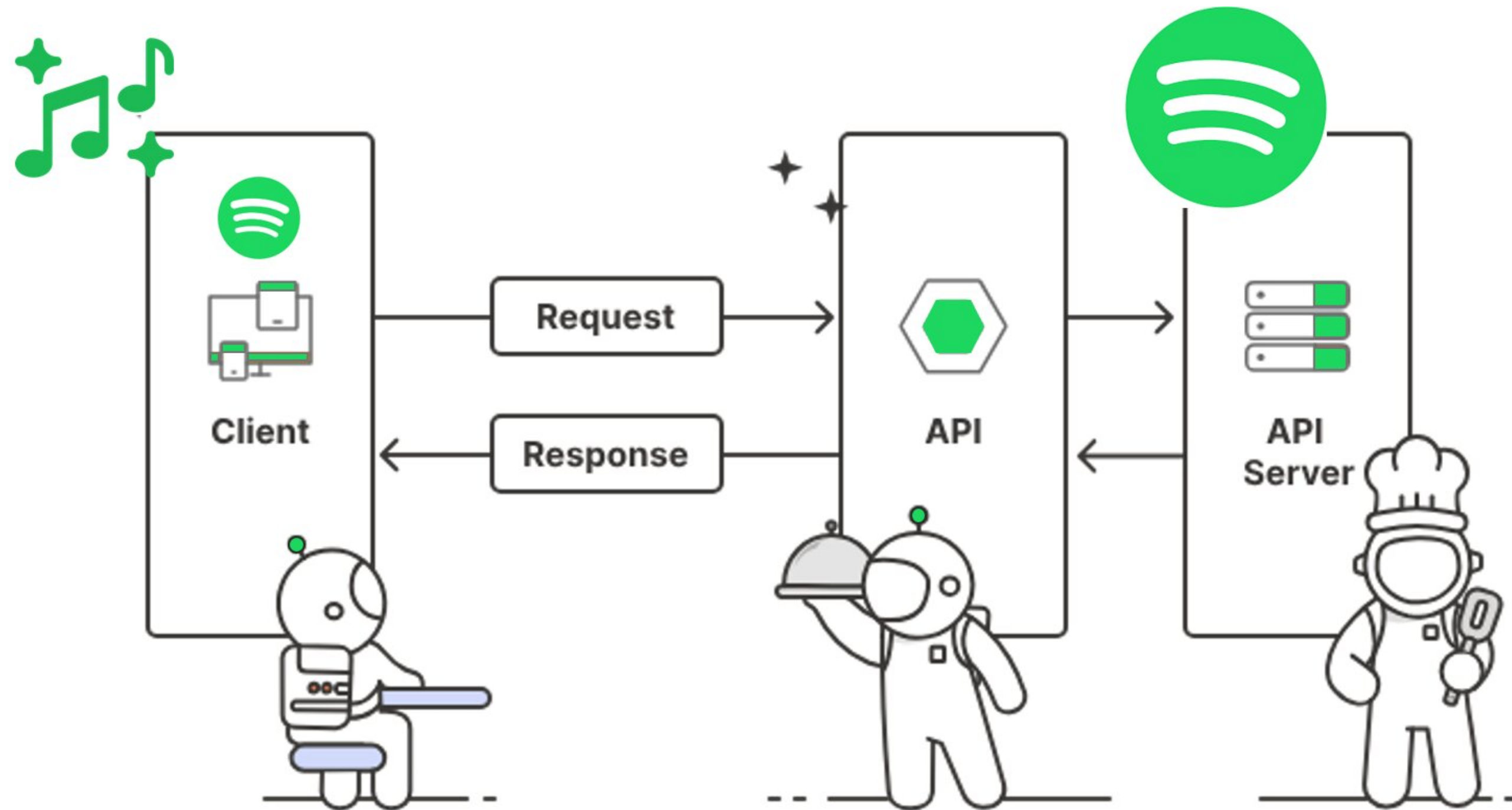
Visualizing the concept



An interface made easy for you to understand will send a **request** to another party.

This other party will send a **response** back.

Visualizing the concept



Why using API's ?

- Remotely control objects
- Communicate with other parties regardless of the language spoken
- Access functionalities already written by others
- Abstract away difficult mechanisms
- Access data rapidly without having to store it



REST API's

REST = REpresentational State Transfer

- URL endpoints
- Use HTTP requests:
 - GET
 - POST
 - DELETE/PUT
- Use of headers (metadata that will influence how the request will be processed)
- Information is exchanged in a pre-defined format (often JSON).
- Responses come with a HTTP status code

Calling an API in JS

```
const apiKey = 'your_api_key_here';
const apiUrl = 'https://api.example.com/data';

const requestOptions = {
  method: 'GET',
  headers: {
    'Authorization': `Bearer ${apiKey}`,
  },
};

fetch(apiUrl, requestOptions)
  .then(response => {
    if !response.ok) {
      throw new Error('Network response was not ok');
    }
    return response.json();
  })
  .then(data => {
    outputElement.textContent = JSON.stringify(data, null, 2);
  })
  .catch(error => {
    console.error('Error:', error);
  });
```

Example of sites with Public API's

- Spotify
- TMDB (The Movie Database)
- Meteomatics : weather forecasts
- The Cocktail DB

Great tutorial !

<https://www.youtube.com/watch?v=WXsD0ZgxjRw>