

# Introduction to Computers and Programming

## Lab 11 (Week 13)

**Due date: 2020/12/10(Thur.)**

### Lab Description

Spotify is an online music stream service. In this lab, you are trying to use the Spotify Web API to get the information and the link of the song in the Spotify.

1. You need to send request to this URL: [https://i72ajh.deta.dev/spotify\\_id](https://i72ajh.deta.dev/spotify_id)  
This URL would return a json string with a random Spotify track ID

e.g.

```
{"spotify_id": "spotify:track:1Ri9P0ZPrqr6h0REDRdJBd"}
```

2. After getting the Spotify track ID, use the Spotify Web API to get the Information of this track. Print out track name, artist, album, and Spotify link of this track. Use comma(", ") to join artists if there are multiple artists.

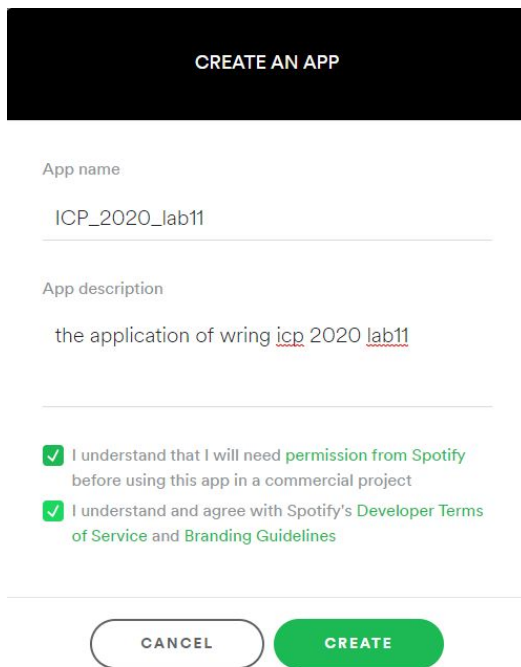
e.g.

```
track:    Oh Santa! (feat. Ariana Grande & Jennifer Hudson)
artists:  Mariah Carey, Ariana Grande, Jennifer Hudson
album:    Oh Santa! (feat. Ariana Grande & Jennifer Hudson)
link:     https://open.spotify.com/track/1Ri9P0ZPrqr6h0REDRdJBd
```

### How to use Spotify Web API

Before you use the Spotify Web API, make sure you have registered your application in the Spotify for Developer Dashboard.

- Spotify for Developer Dashboard: <https://developer.spotify.com/dashboard>  
If you don't have an account for Spotify, please register one.
- After log in, create an application by clicking "CREATE AN APP". Fill the form and click "CREATE".



The screenshot shows the 'CREATE AN APP' form in the Spotify Developer Dashboard. At the top is a black button labeled 'CREATE AN APP'. Below it, the 'App name' field contains 'ICP\_2020\_lab11'. The 'App description' field contains 'the application of wring icp 2020 lab11'. There are two green checkmarks indicating that the user understands the need for permission and agrees with the terms. At the bottom are 'CANCEL' and 'CREATE' buttons.

CREATE AN APP

App name

ICP\_2020\_lab11

App description

the application of wring icp 2020 lab11

☒ I understand that I will need permission from Spotify before using this app in a commercial project

☒ I understand and agree with Spotify's Developer Terms of Service and Branding Guidelines

CANCEL CREATE

- You would get “Client ID” and “Client Secret” for this application.

Typically, you use “Client ID” and “Client Secret” to request an access token from Spotify. When you send your request to the API, you need to add the token in your header, so that Spotify could return the data.

You can read a detailed description here:

<https://developer.spotify.com/documentation/general/guides/authorization-guide/#authorization-on-code-flow>

This is a very complex process. You can use a third-party API wrapper to help you handle the authorization flow. TA would give you example of initializing the package called “spotipy”.

- spotipy documentation: <https://spotipy.readthedocs.io>
- spotipy GitHub: <https://github.com/plamere/spotipy>

For what Spotify Web API can do, please check here:

<https://developer.spotify.com/documentation/web-api/reference/>

You may use Spotify Web API console to test the API and observe the results.

<https://developer.spotify.com/console/tracks/>

If you have any questions, please contact TAs.