Who is that GraphQL all my friends are talking about?

GraphQL 101

<me>

Software Engineer

Former MagmaLabs / FreeAgent Software

FLOSS advocate

Heavy Metal and Beer lover

Host the RubyGDL community

Founder @ elbuencodigo.com

In Gregory Sallust I trust

@FerPeralesM

WDT

#WebDevTalks

</me>

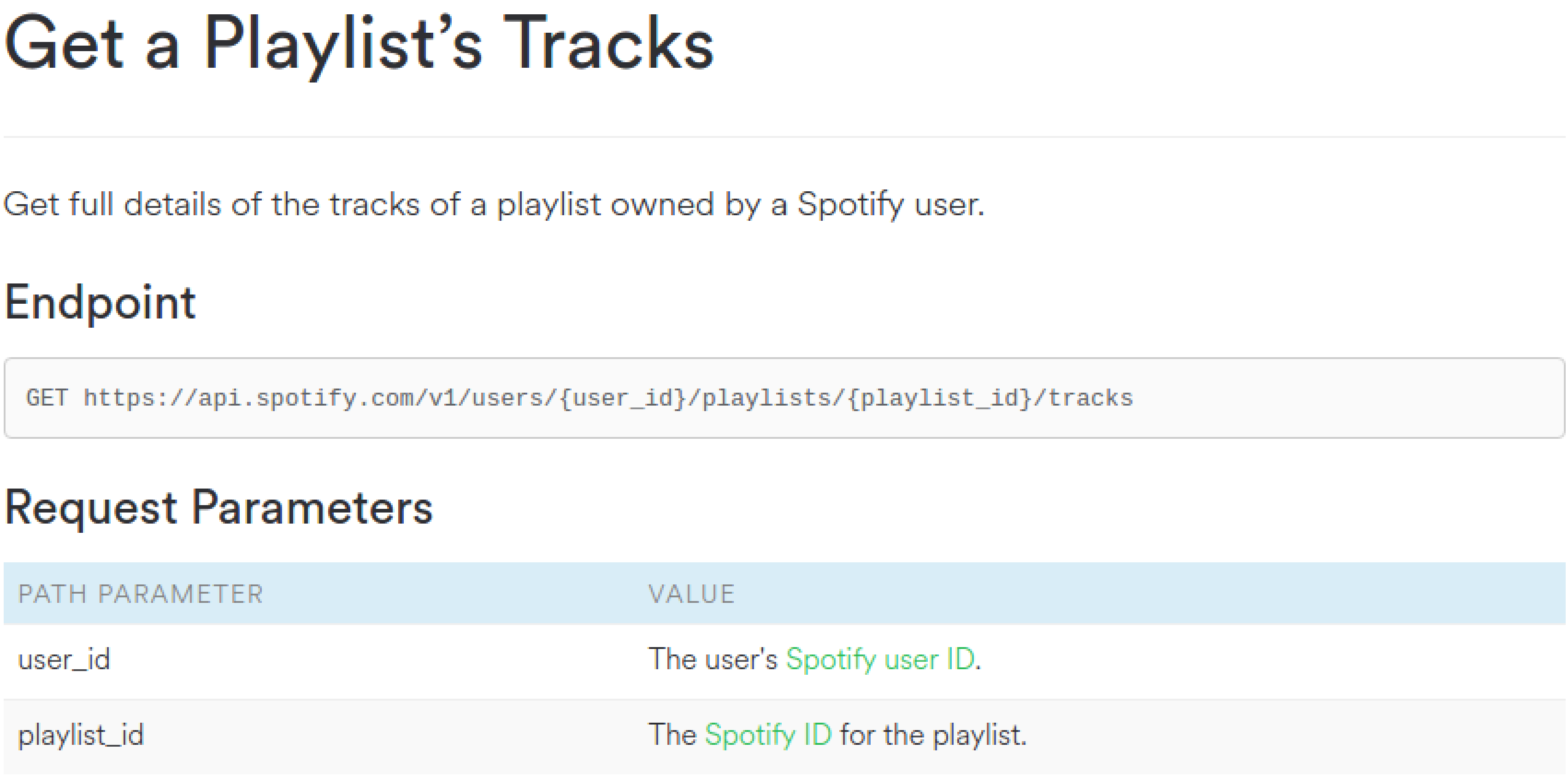
What is GraphQL?

2012

REST

Spotify

Goal: get the name of all the tracks from a playlist called “Starred” created by an specific user



Get a Playlist’s Tracks

Get full details of the tracks of a playlist owned by a Spotify user.

Endpoint

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```

Request Parameters

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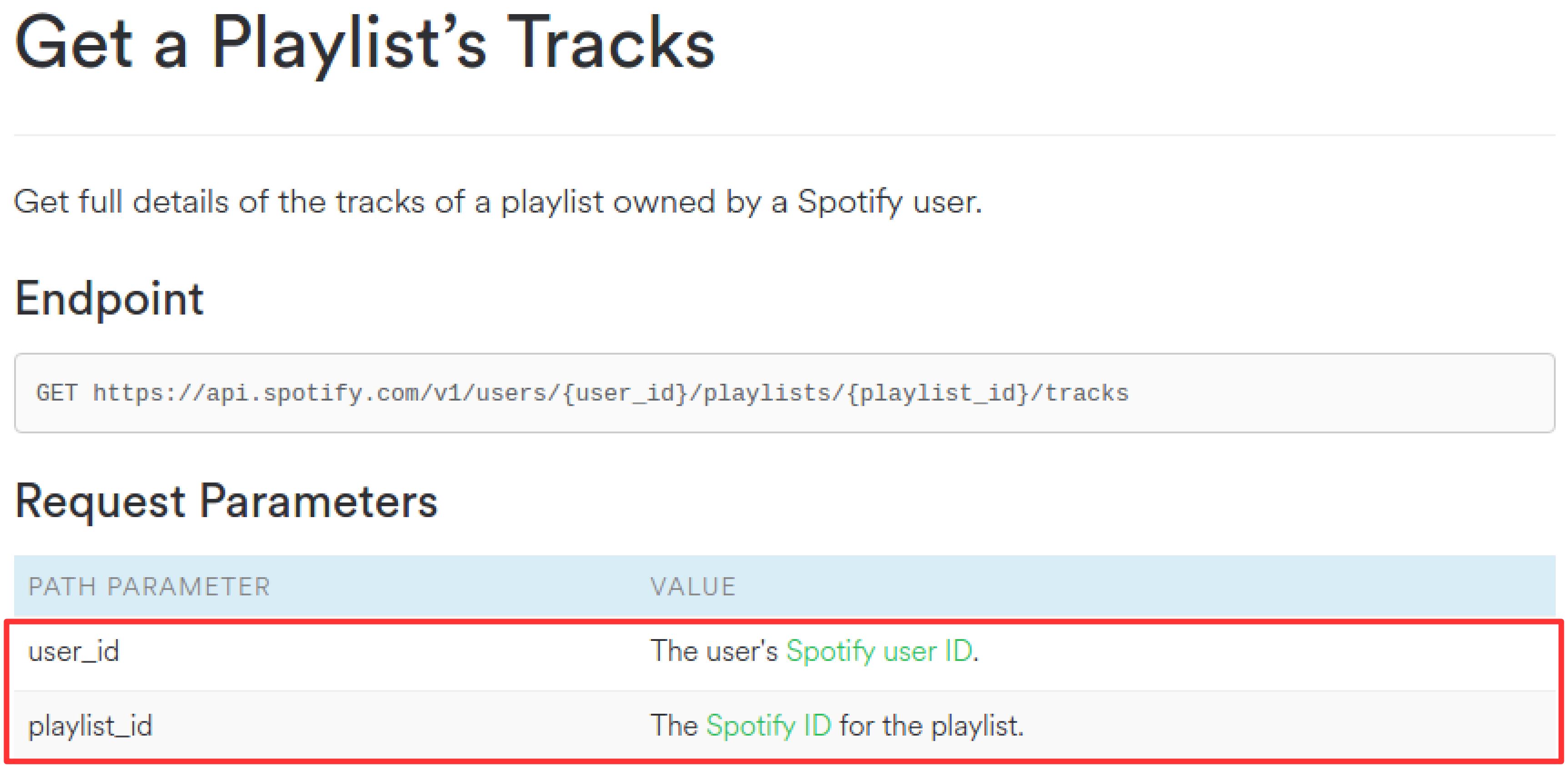

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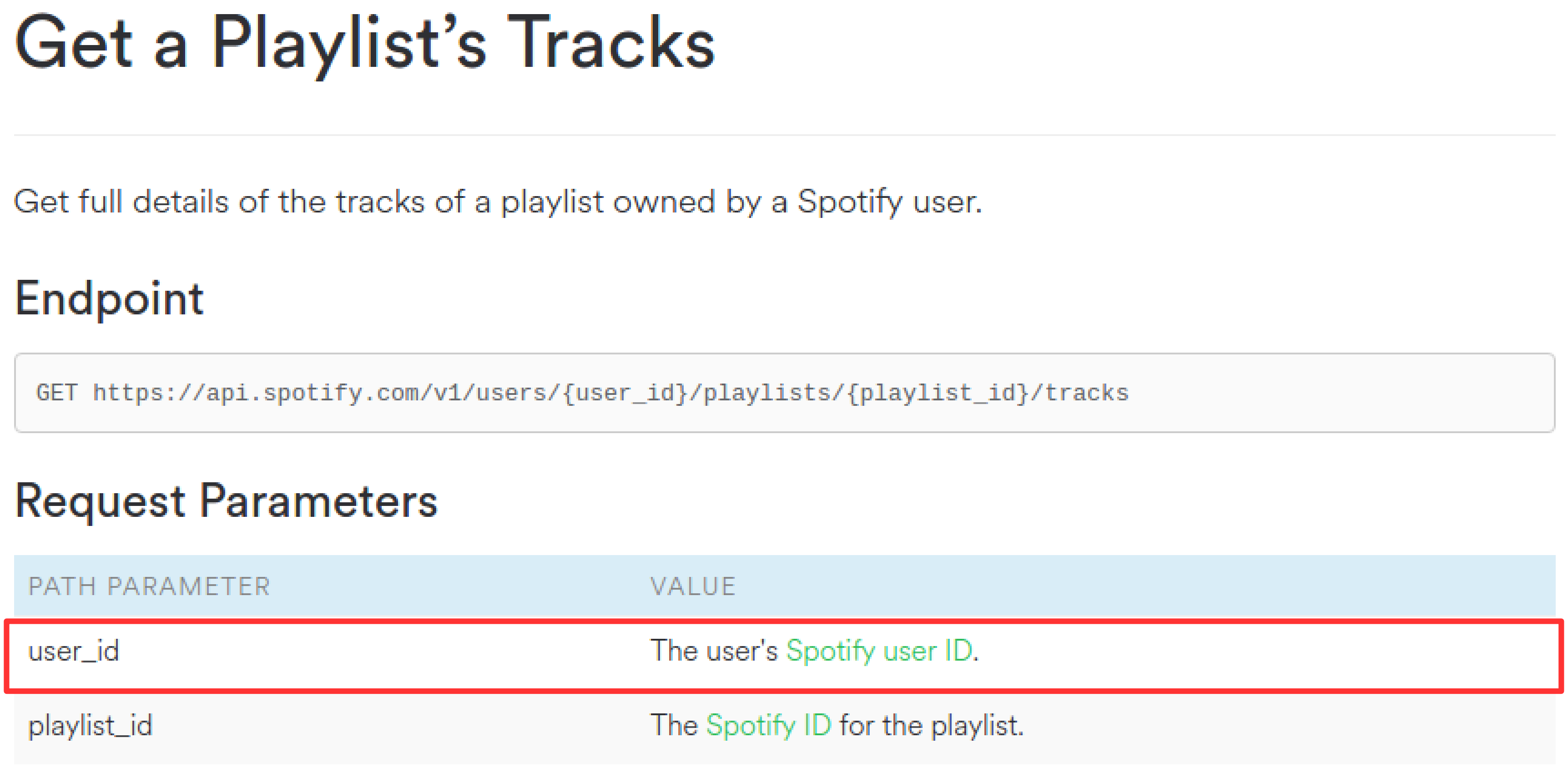

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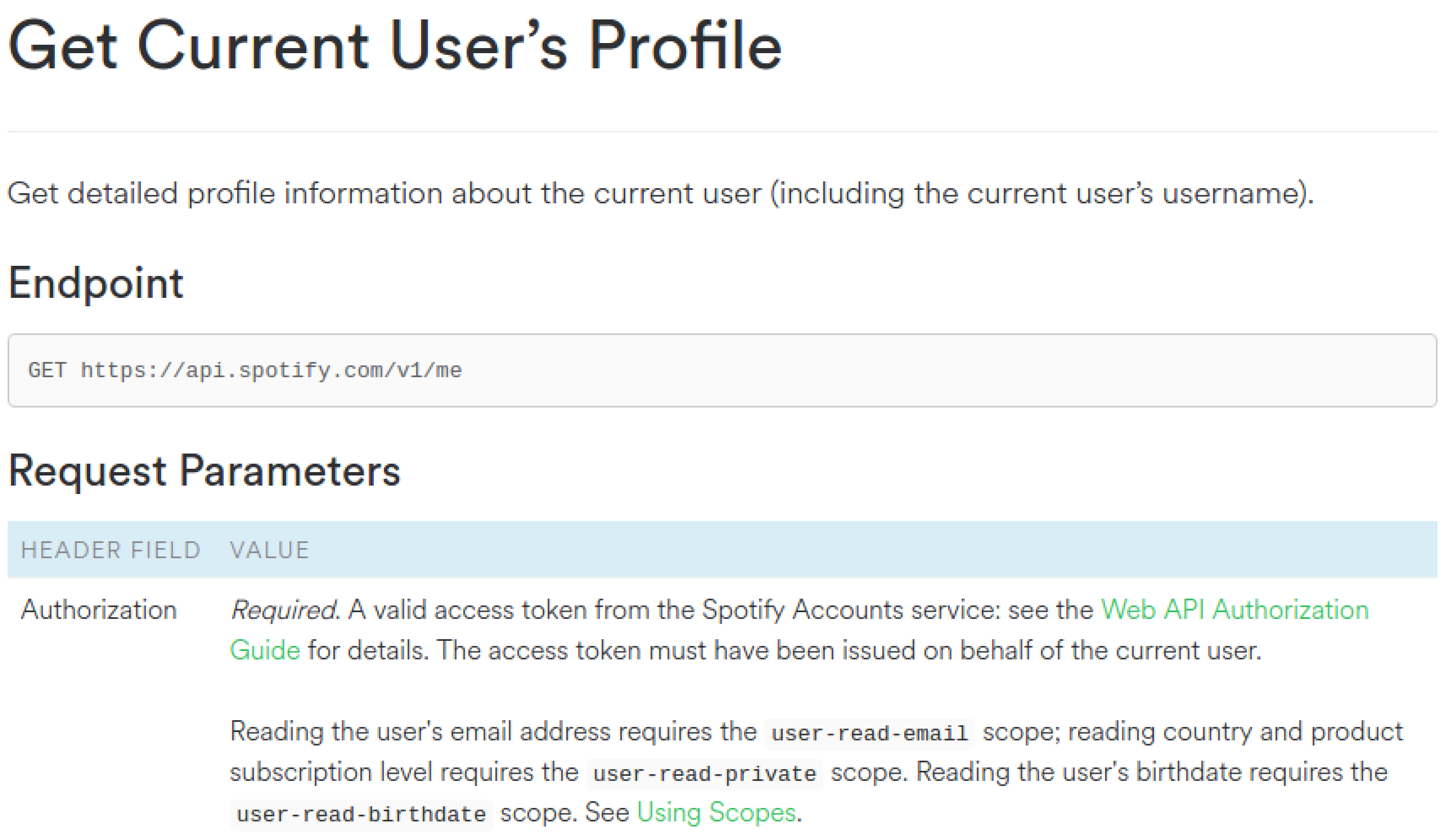


Get Current User’s Profile

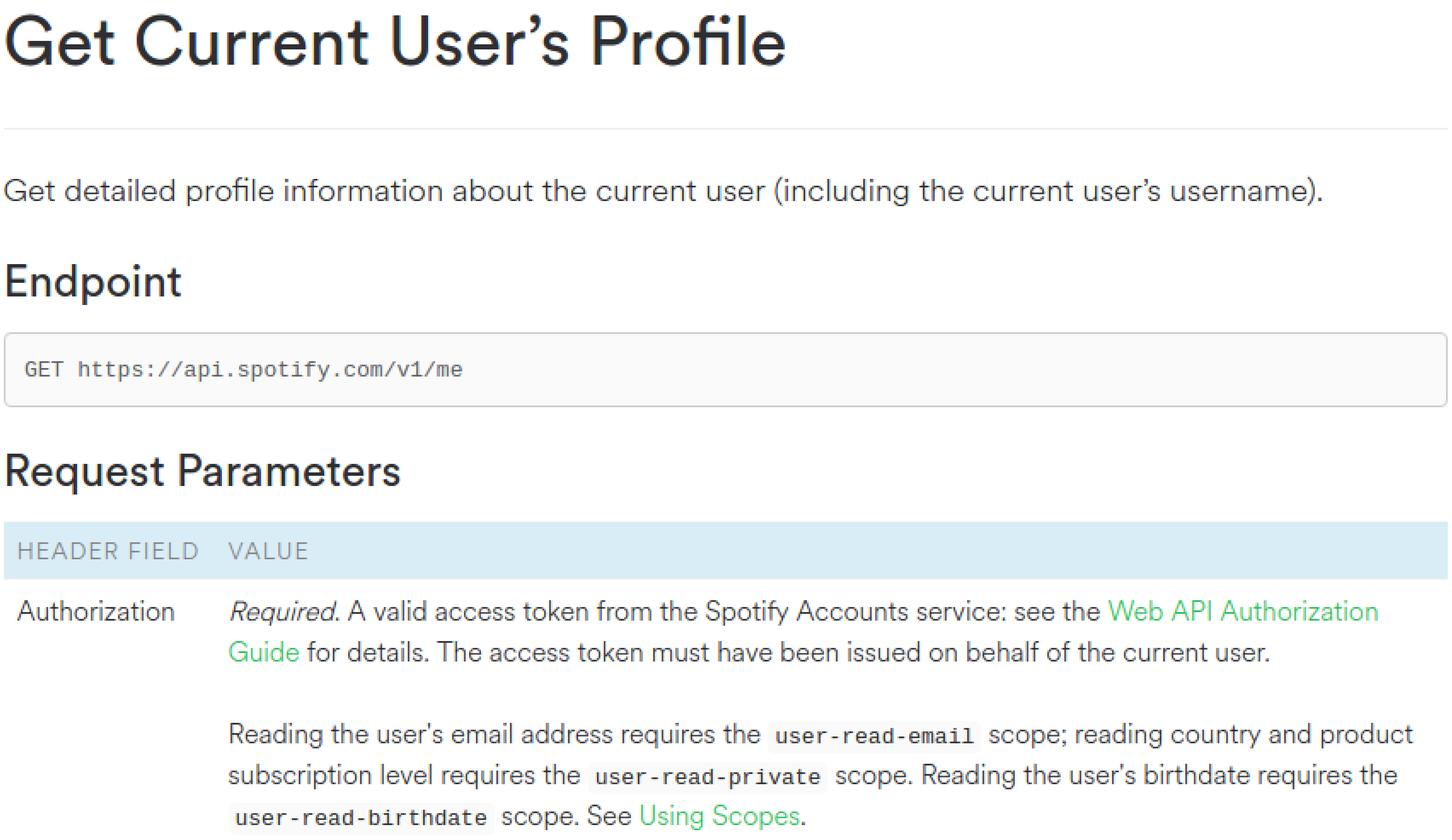
Get detailed profile information about the current user (including the current user’s username).

Endpoint

```
GET https://api.spotify.com/v1/me
```

Request Parameters

HEADER FIELD	VALUE
Authorization	*Required.* A valid access token from the Spotify Accounts service: see the Web API Authorization Guide for details. The access token must have been issued on behalf of the current user. Reading the user's email address requires the `user-read-email` scope; reading country and product subscription level requires the `user-read-private` scope. Reading the user's birthdate requires the `user-read-birthdate` scope. See Using Scopes.



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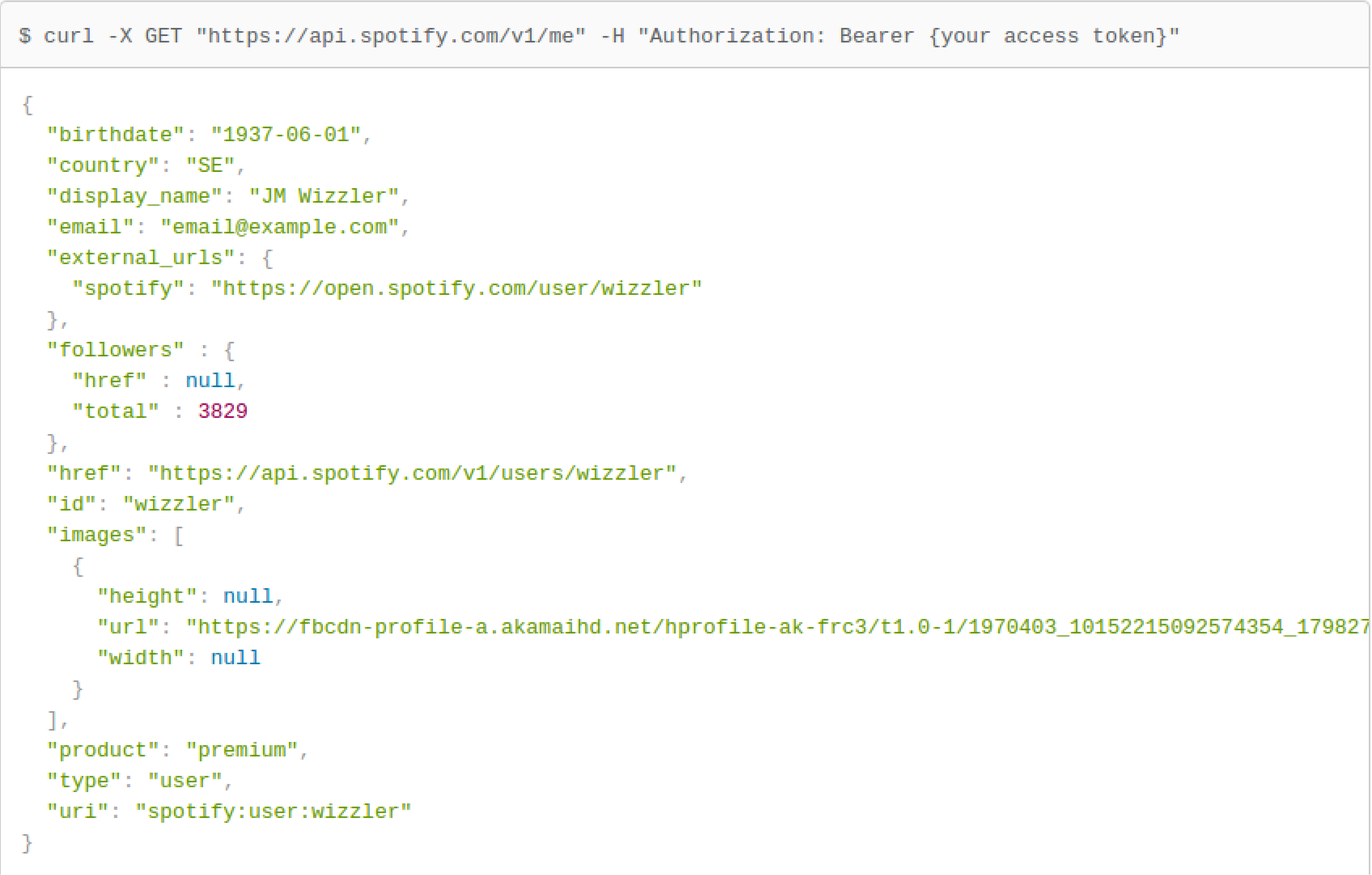
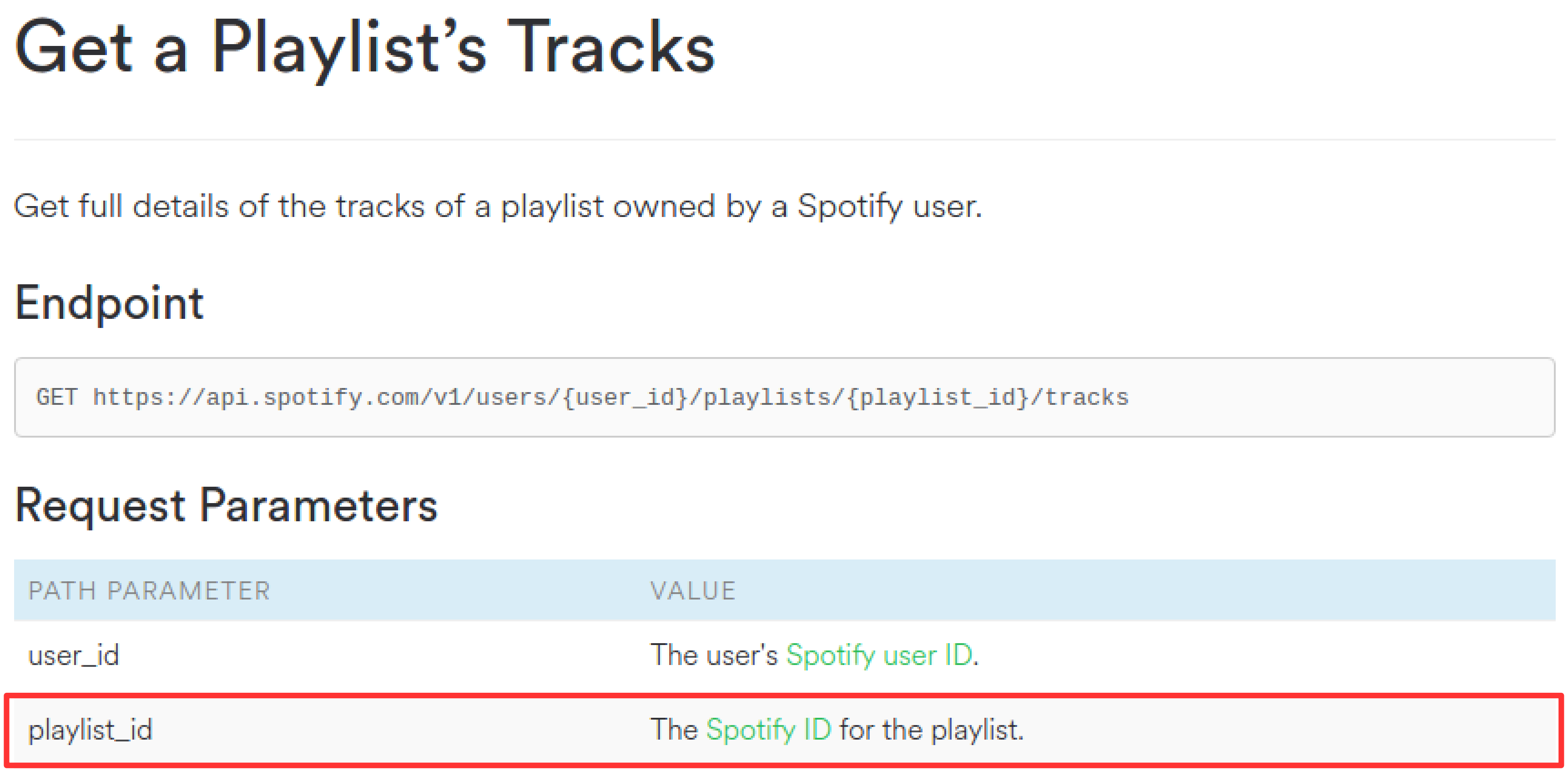


```
$ curl -X GET "https://api.spotify.com/v1/me" -H "Authorization: Bearer {your access token}"
```

```
{
  "birthdate": "1937-06-01",
  "country": "SE",
  "display_name": "JM Wizzler",
  "email": "email@example.com",
  "external_urls": {
    "spotify": "https://open.spotify.com/user/wizzler"
  },
  "followers" : {
    "href" : null,
    "total" : 3829
  },
  "href": "https://api.spotify.com/v1/users/wizzler",
  "id": "wizzler",
  "images": [
    {
      "height": null,
      "url": "https://fbcdn-profile-a.akamaihd.net/hprofile-ak-frc3/t1.0-1/1970403_10152215092574354_179827
      "width": null
    }
  ],
  "product": "premium",
  "type": "user",
  "uri": "spotify:user:wizzler"
}
```



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Request Parameters

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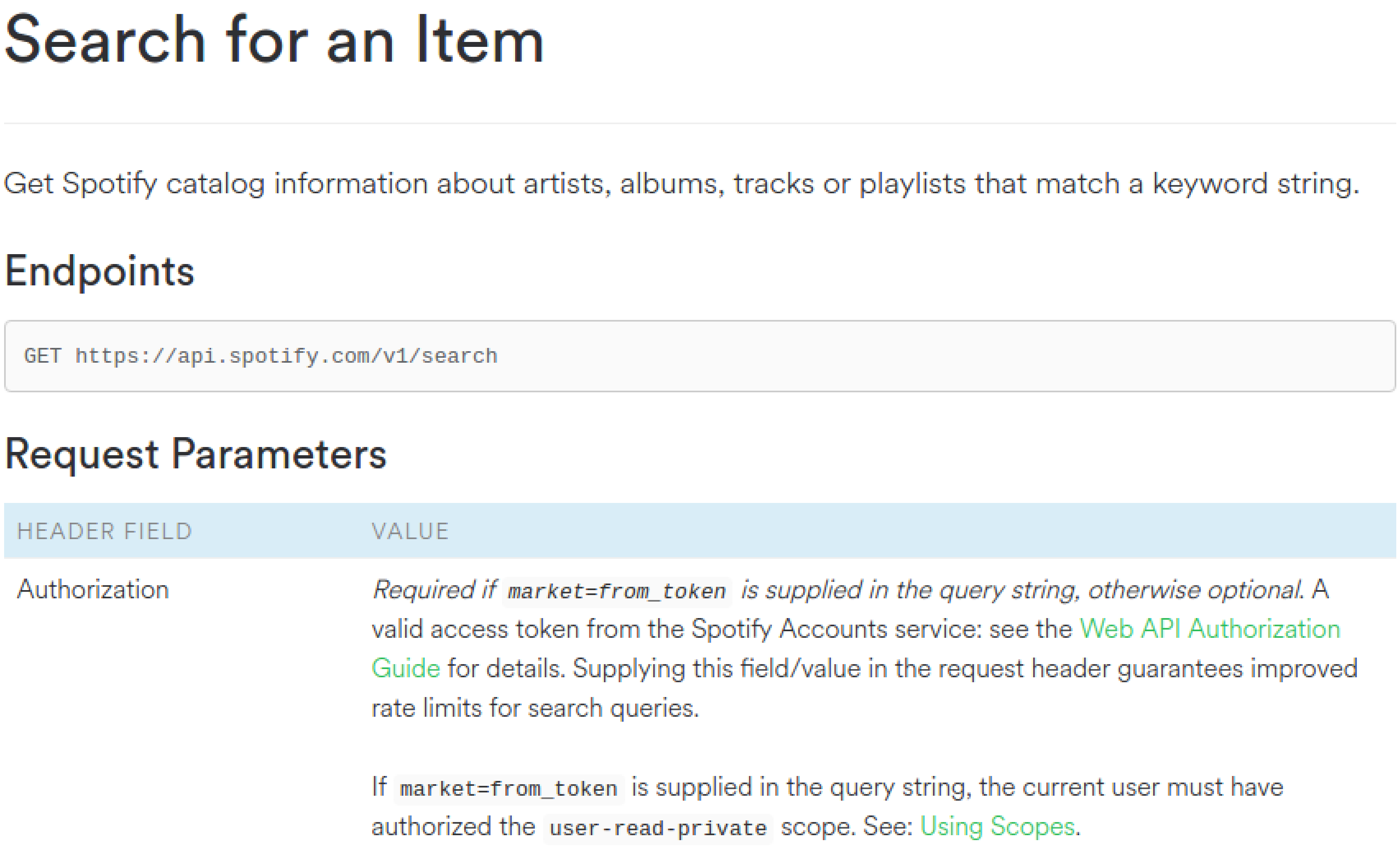


Search for an Item

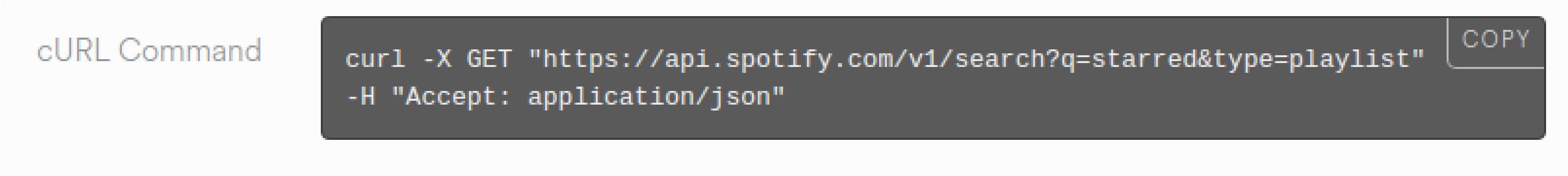
Get Spotify catalog information about artists, albums, tracks or playlists that match a keyword string.

Endpoints

```
GET https://api.spotify.com/v1/search
```

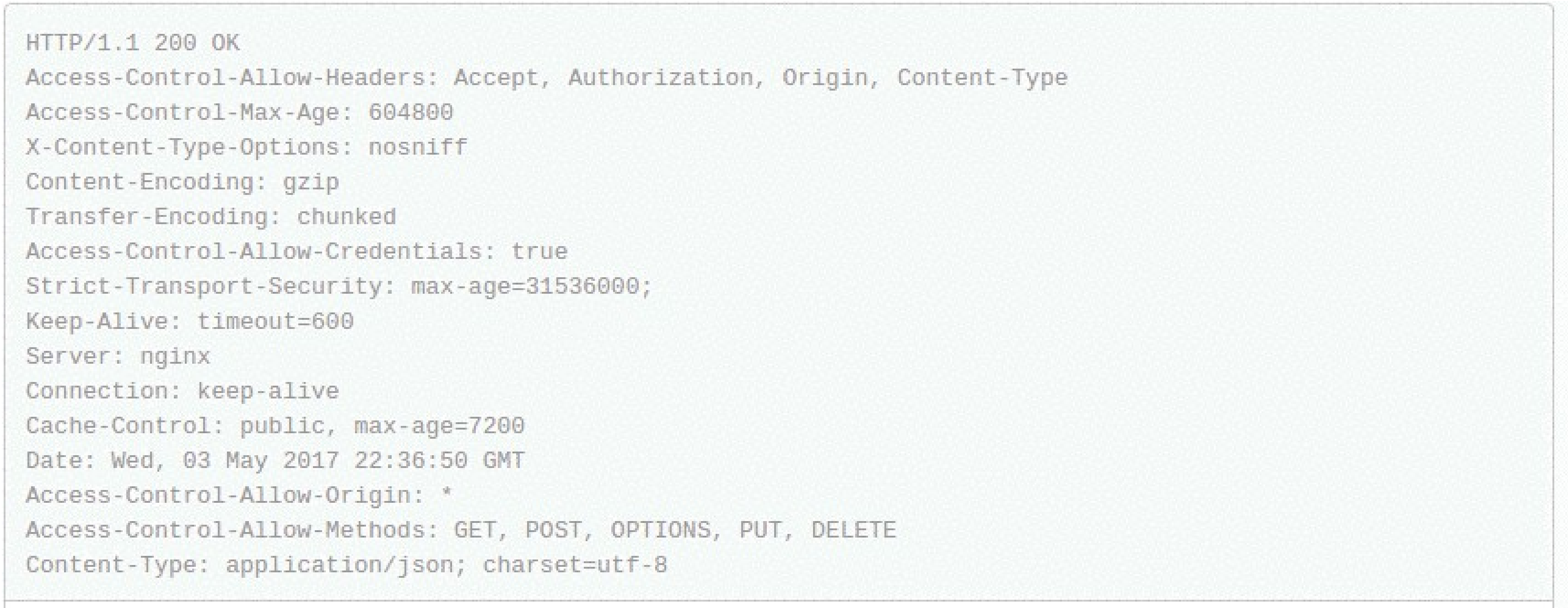
Request Parameters

HEADER FIELD	VALUE
Authorization	*Required if* `market=from_token` *is supplied in the query string, otherwise optional.* A valid access token from the Spotify Accounts service: see the Web API Authorization Guide for details. Supplying this field/value in the request header guarantees improved rate limits for search queries. If `market=from_token` is supplied in the query string, the current user must have authorized the `user-read-private` scope. See: Using Scopes.

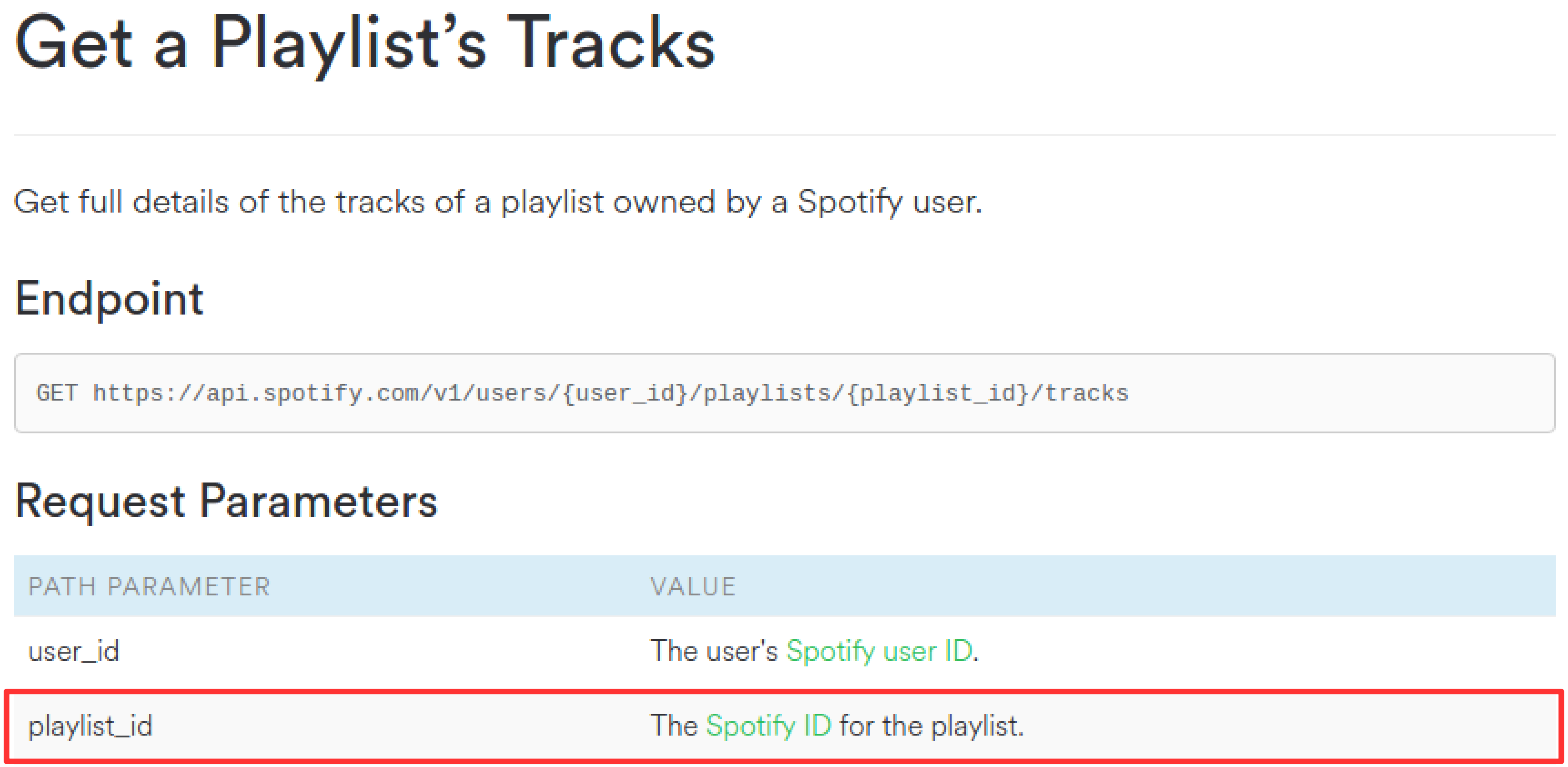


cURL Command

```
curl -X GET "https://api.spotify.com/v1/search?q=starred&type=playlist"
-H "Accept: application/json"
```



```
HTTP/1.1 200 OK
Access-Control-Allow-Headers: Accept, Authorization, Origin, Content-Type
Access-Control-Max-Age: 604800
X-Content-Type-Options: nosniff
Content-Encoding: gzip
Transfer-Encoding: chunked
Access-Control-Allow-Credentials: true
Strict-Transport-Security: max-age=31536000;
Keep-Alive: timeout=600
Server: nginx
Connection: keep-alive
Cache-Control: public, max-age=7200
Date: Wed, 03 May 2017 22:36:50 GMT
Access-Control-Allow-Origin: *
Access-Control-Allow-Methods: GET, POST, OPTIONS, PUT, DELETE
Content-Type: application/json; charset=utf-8
```



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Endpoint

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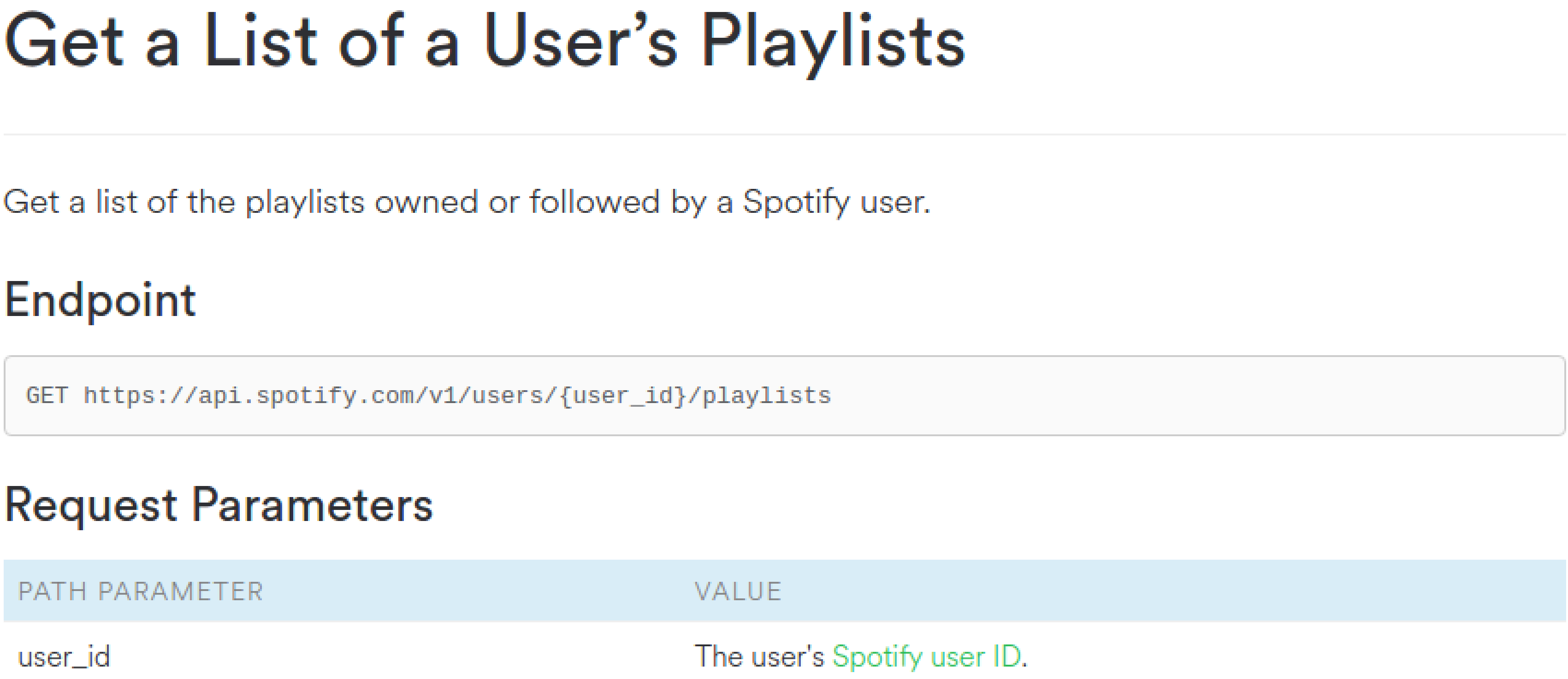


Get a List of a User’s Playlists

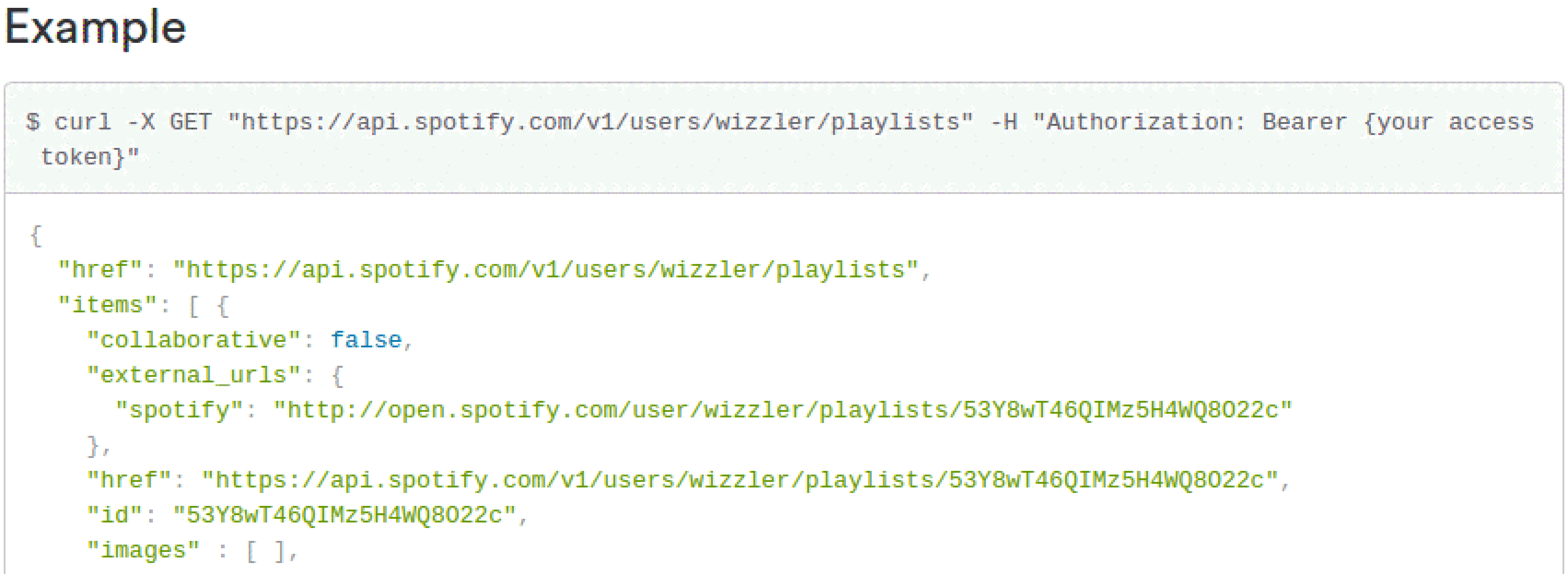
Get a list of the playlists owned or followed by a Spotify user.

Endpoint

```
GET https://api.spotify.com/v1/users/{user_id}/playlists
```

Request Parameters

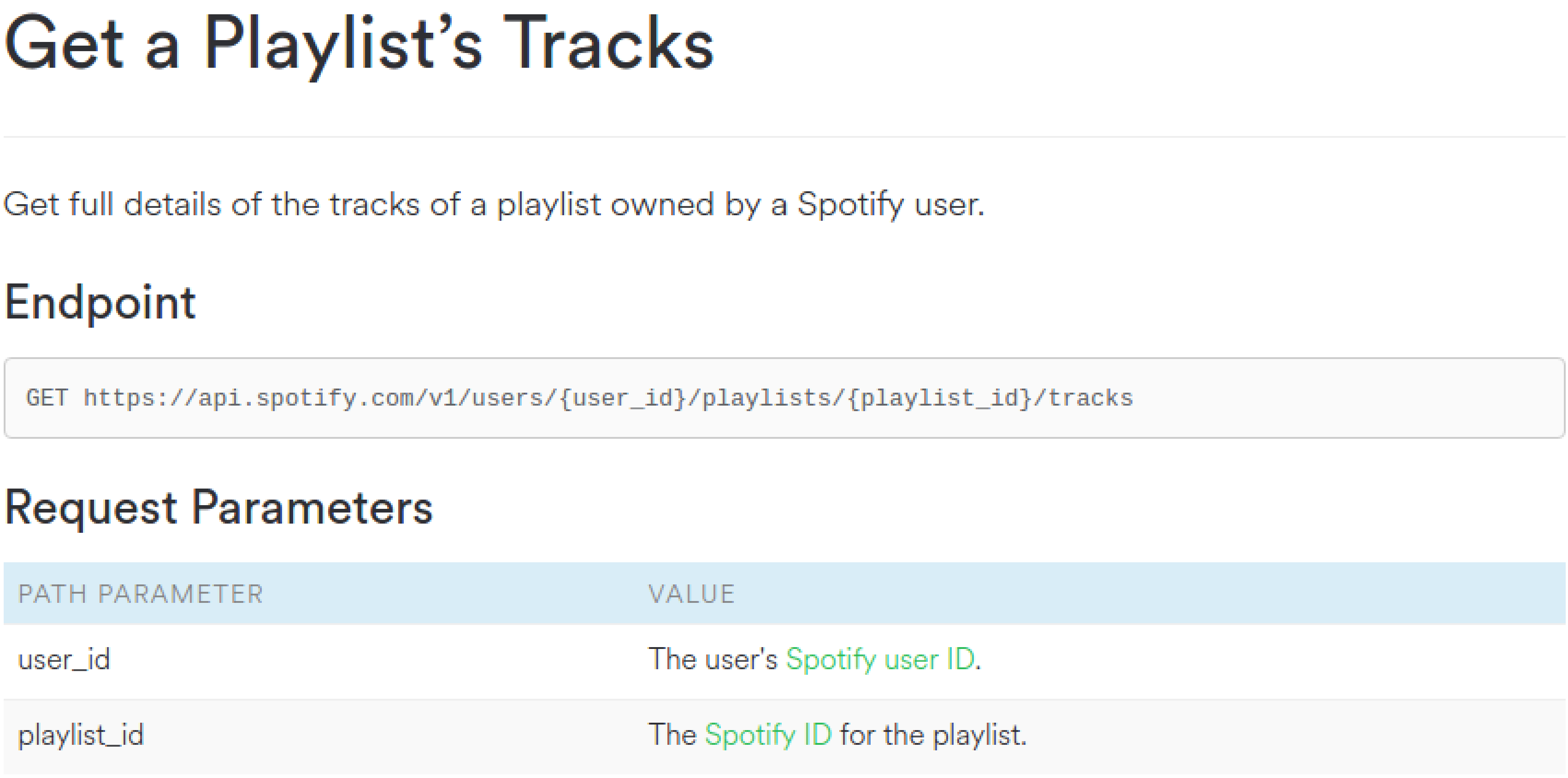
PATH PARAMETER	VALUE
user_id	The user's Spotify user ID.



Example

```
$ curl -X GET "https://api.spotify.com/v1/users/wizzler/playlists" -H "Authorization: Bearer {your access
 token}"
```

```
{
  "href": "https://api.spotify.com/v1/users/wizzler/playlists",
  "items": [ {
    "collaborative": false,
    "external_urls": {
      "spotify": "http://open.spotify.com/user/wizzler/playlists/53Y8wT46QIMz5H4WQ8O22c"
    },
    "href": "https://api.spotify.com/v1/users/wizzler/playlists/53Y8wT46QIMz5H4WQ8O22c",
    "id": "53Y8wT46QIMz5H4WQ8O22c",
    "images" : [ ],
```



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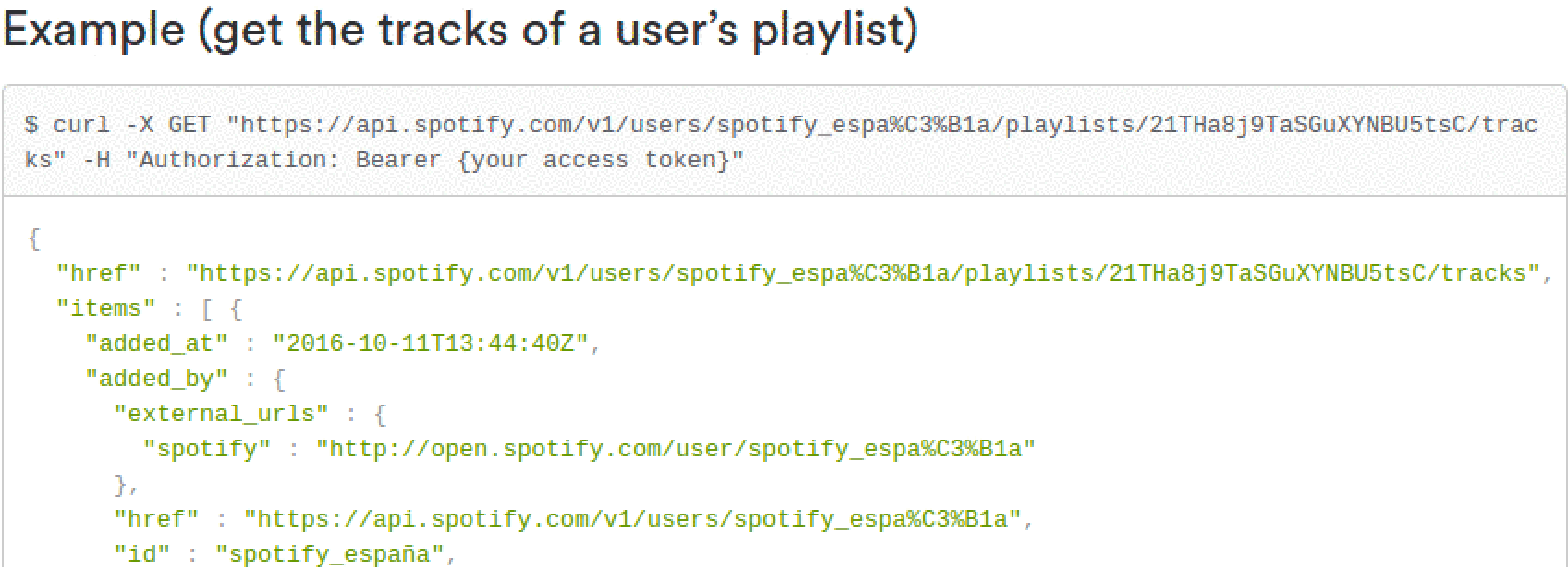


Example (get the tracks of a user’s playlist)

```
$ curl -X GET "https://api.spotify.com/v1/users/spotify_espa%C3%B1a/playlists/21THa8j9TaSGuXYNBU5tsC/trac
ks" -H "Authorization: Bearer {your access token}"
```

```
{
  "href" : "https://api.spotify.com/v1/users/spotify_espa%C3%B1a/playlists/21THa8j9TaSGuXYNBU5tsC/tracks",
  "items" : [ {
    "added_at" : "2016-10-11T13:44:40Z",
    "added_by" : {
      "external_urls" : {
        "spotify" : "http://open.spotify.com/user/spotify_espa%C3%B1a"
      },
      "href" : "https://api.spotify.com/v1/users/spotify_espa%C3%B1a",
      "id" : "spotify_españa",
```

Success!

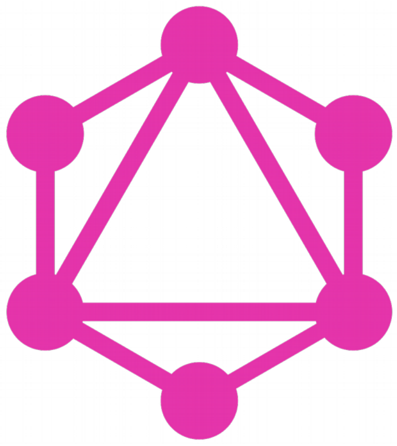
We **only** needed

3 HTTP calls

Do an **intensive** operation in our backend (searching for the playlist with the “Starred” name)

And getting **three** big payloads with unnecessary data*

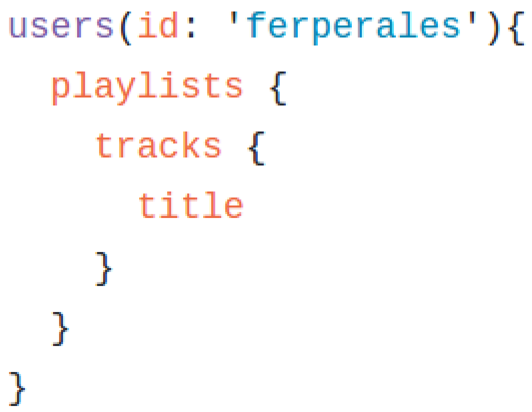
*for our needs



GraphQL is, as the name might suggest, a query language

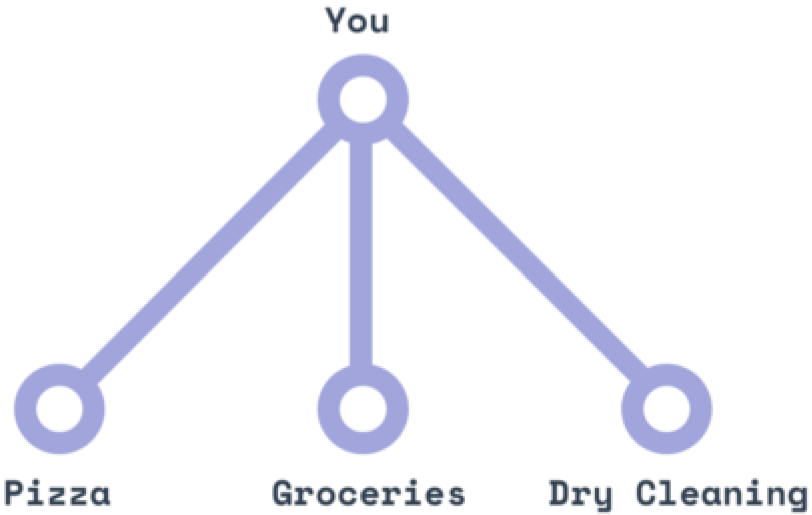
Advantages

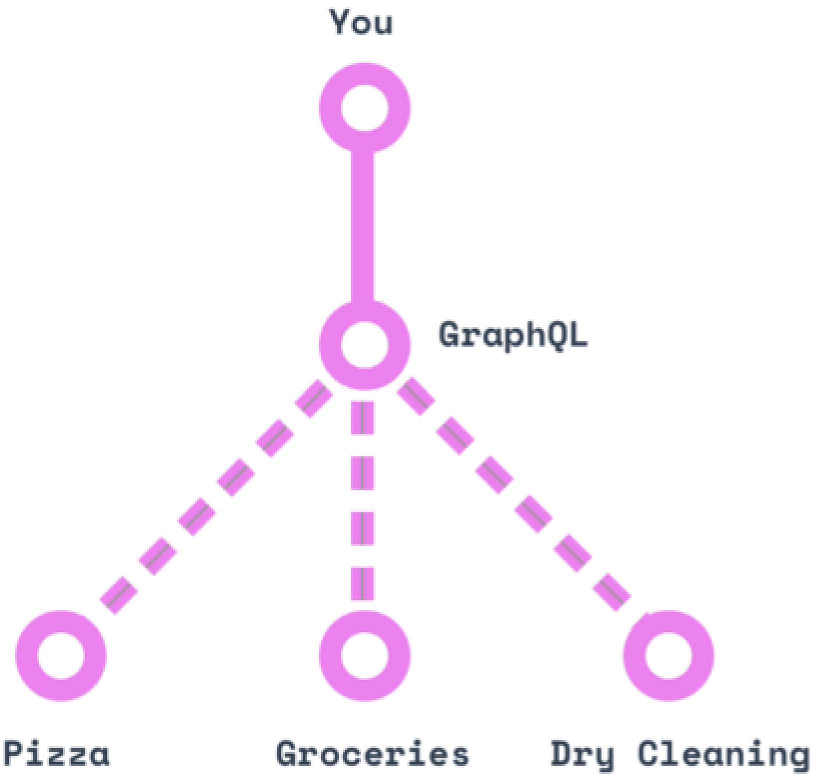
Get exactly what you want



```
users(id: 'ferperales'){
  playlists {
    tracks {
      title
    }
  }
}
```

Nesting

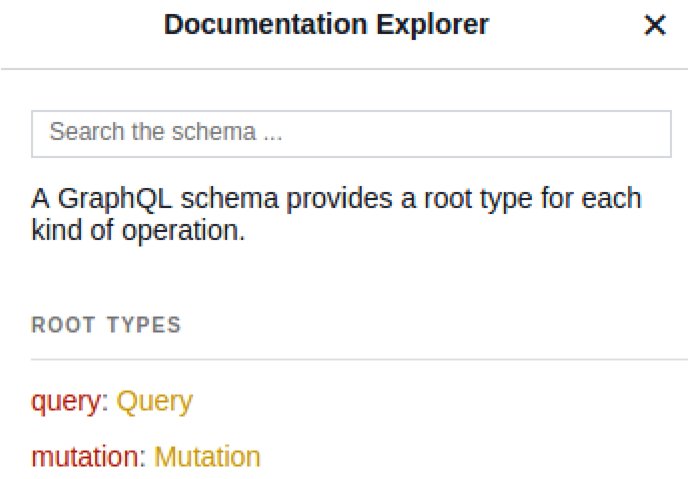

You
Pizza
Groceries
Dry Cleaning



You
GraphQL
Pizza
Groceries
Dry Cleaning

Strongly typed

Introspective



Documentation Explorer

A GraphQL schema provides a root type for each kind of operation.

ROOT TYPES

query: Query

mutation: Mutation

No versioning

Demo

FerPerales/graphql_demo

ferperales/graphql-101

Fuentes

https://medium.freecodecamp.com/so-whats-this-graphql-thing-i-keep-hearing-about-baf4d36c20cf

http://blog.codeship.com/an-introduction-to-graphql-via-the-github-api

http://facebook.github.io/graphql/

http://thenewstack.io/graphql-data-query-language-resource-guide

http://medium.freecodecamp.com/give-it-a-rest-use-graphql-for-your-apis-40a2761e6336

http://dev.to/reactiveconf/why-i-believe-graphql-will-come-to-replace-rest

¡Gracias!

@FerPeralesM

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