pip install spotipy

Requirement already satisfied: spotipy in /usr/local/lib/python3.11/dist-packages (2.25.0)
Requirement already satisfied: redis>=3.5.3 in /usr/local/lib/python3.11/dist-packages (from spotipy)
Requirement already satisfied: requests>=2.25.0 in /usr/local/lib/python3.11/dist-packages (from spoti Requirement already satisfied: urllib3>=1.26.0 in /usr/local/lib/python3.11/dist-packages (from spoti Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.11/dist-packages (from requests Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.11/dist-packages (from re

```
name: Espresso,
       'release_date': '2024-04-12',
       'release_date_precision': 'day',
       'uri': 'spotify:album:5quMTd5zeI9yW5UDua8wS4',
       'artists': [{'external_urls': {'spotify':
     'https://open.spotify.com/artist/74KM79TiuVKeVCqs8QtB0B'},
          'href': 'https://api.spotify.com/v1/artists/74KM79TiuVKeVCqs80tB0B',
         'id': '74KM79TiuVKeVCqs8QtB0B',
         'name': 'Sabrina Carpenter',
         'type': 'artist',
         'uri': 'spotify:artist:74KM79TiuVKeVCqs8QtB0B'}],
       'external_urls': {'spotify': 'https://open.spotify.com/album/5quMTd5zeI9yW5UDua8wS4'},
       'total_tracks': 1},
       'artists': [{'external_urls': {'spotify':
     'https://open.spotify.com/artist/74KM79TiuVKeVCqs8QtB0B'},
         'href': 'https://api.spotify.com/v1/artists/74KM79TiuVKeVCqs80tB0B',
         'id': '74KM79TiuVKeVCqs8QtB0B',
         'name': 'Sabrina Carpenter',
         'type': 'artist',
         'uri': 'spotify:artist:74KM79TiuVKeVCqs8QtB0B'}],
       'disc_number': 1,
       'track number': 1,
       'duration_ms': 175459,
       'external_ids': {'isrc': 'USUM72403305'},
       'external_urls': {'spotify': 'https://open.spotify.com/track/2qSkIjg1o9h3YT9RAgYN75'},
       'href': 'https://api.spotify.com/v1/tracks/2qSkIjg1o9h3YT9RAgYN75',
       'id': '2qSkIjg1o9h3YT9RAgYN75',
       'name': 'Espresso',
       'popularity': 86,
       'uri': 'spotify:track:2qSkIjg1o9h3YT9RAgYN75',
data['items'][0]['track']['album']['id']
    '5quMTd5zeI9yW5UDua8wS4'
data['items'][0]['track']['album']['name']
→ 'Espresso'
data['items'][0]['track']['album']['release_date']
→ '2024-04-12'
data['items'][0]['track']['album']['total tracks']
→ 1
data['items'][0]['track']['album']['external_urls']['spotify']
   'https://open.spotify.com/album/5quMTd5zeI9yW5UDua8wS4'
album_list = []
for row in data['items']:
    album_id = row['track']['album']['id']
    album name = row['track']['album']['name']
    album_release_date = row['track']['album']['release_date']
    album_total_tracks = row['track']['album']['total_tracks']
    album url = row['track']['album']['external urls']['spotify']
   album_element = {'album_id': album_id, 'name': album_name,
                     'release_date': album_release_date,
                     'total tracks': album total tracks, 'url':album url}
    album_list.append(album_element)
```

```
artist_list = []
for row in data['items']:
  for key, value in row.items():
    if key == "track":
      for artist in value['artists']:
        artist_dict = {'artist_id': artist['id'], 'artist_name':artist['name'],
                        'external_url': artist['href']}
        artist list.append(artist dict)
song list = []
for row in data['items']:
  song id = row['track']['id']
  song name = row['track']['name']
  song_duration = row['track']['duration_ms']
  song_url = row['track']['external_urls']['spotify']
  song popularity = row['track']['popularity']
  song_added = row['added_at']
  album_id = row['track']['album']['id']
  artist_id = row['track']['album']['artists'][0]['id']
  song_element = {'song_id':song_id,'song_name':song_name,'duration_ms':song_duration,'url':song_url,
                  'popularity':song popularity,'song added':song added,'album id':album id,
                  'artist id':artist id
                  }
  song list.append(song element)
Double-click (or enter) to edit
album df = pd.DataFrame.from dict(album list)
album_df.head()
```

**₹** album id name release date total tracks u 0 5quMTd5zel9yW5UDua8wS4 Espresso 2024-04-12 https://open.spotify.com/album/5quMTd5zel9yW5l Die With 10FLiwfpbxLmW8c25Xvc2N 2024-08-16 https://open.spotify.com/album/10FLjwfpbxLmW8 1 A Smile HIT ME HARD 2 2024-05-17 7aJuG4TFXa2hmE4z1yxc3n 10 https://open.spotify.com/album/7aJuG4TFXa2hmE AND SOFT eternal 71PfP4E9roOXAudea1aPGw https://open.spotify.com/album/71PfP4E9roOXAu 3 2024-03-08 13 sunshine Beautiful 4 29aSKB1qPEbN0Qf9OPSQpw 2024-01-18 https://open.spotify.com/album/29aSKB1qPEbN0C Things

Next steps: Generate code with album\_df 

• View recommended plots 

New interactive sheet

album\_df.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 100 entries, 0 to 99
Data columns (total 5 columns):
                    Non-Null Count
 #
     Column
                                    Dtype
 0
     album id
                    100 non-null
                                    object
                    100 non-null
 1
     name
                                    object
     release date 100 non-null
                                    object
```

```
3 total_tracks 100 non-null int64
4 url 100 non-null object
dtypes: int64(1), object(4)
memory usage: 4.0+ KB

artist_df = pd.DataFrame.from_dict(artist_list)

song_df = pd.DataFrame.from_dict(song_list)

album_df['release_date'] = pd.to_datetime(album_df['release_date'])

Double-click (or enter) to edit

song_df['song_added'] = pd.to_datetime(song_df['song_added'])
```