```
In [ ]:  import requests
         from requests_oauthlib import OAuth2Session
         import importlib
         import keys
         importlib.reload(keys)
         import json
         import pprint
```

```
In [ ]:  keychain = keys.keychain
         client_id = keychain['spotify']['client_id']
         scope = keychain['spotify']['scope']
         redirect = keychain['spotify']['redirect_uris'][1]
```

```
In [ ]:  session = OAuth2Session(client_id, scope=scope, redirect_uri=redirect)
         auth_url, state = session.authorization_url(keychain['spotify']['auth_ur
         i'])
         print(auth_url)
```

```
In [ ]:  import webbrowser
         webbrowser.open(auth_url)
```

```
In [ ]:  code = 'AQCpsAuAeA0wrDBIv7iiypmjw-4RQx9M3t8Qn8sp5_C2puy_CegGyJmNNTer5Fcm
         fYBJc_wZzOu_kxhylwMOTGRvv67Z3-lk1kBY4cR07DhRYKiUmyr5ajqtU9FrLXAFk4-dihf8
         U_HuPw8n4TeLTRRSjSt94pzL3imwkkvq38ezI8sw1xKM4gs6IudIOUiAc7T5fjPv-Nj8bXaB
         wmu4t-Y'
```

```
In [ ]:  token = session.fetch_token(keychain['spotify']['token_uri'],
                                       code=code,
                                       client_secret=keychain['spotify']['cl
         ient_secret'])
         print(token)
```

```
In [ ]:  importlib.reload(keys)
         keychain = keys.keychain

         keychain['spotify']
```

```
In [ ]:  D ={}
         D['access_token'] = token['access_token']
         url = 'https://api.spotify.com/v1/me'
         response = requests.get(url, params=D)
```

```
In [ ]:  print(response.status_code, response.headers)
```

```
In [ ]:  pp = pprint.PrettyPrinter(indent=2)
         retval = json.loads(response.text)
         pp.pprint(retval)
```

In [ ]:
```python
def user():
    D = {}
    D['access_token'] = token['access_token']
    url = 'https://api.spotify.com/v1/me'
    response = requests.get(url, params=D)
    user_info = json.loads(response.text)
    return user_info['id']
user_id = user()
print(user_id)
```

In [ ]:
```python
def playlists(user_id):
    D = {}
    D['access_token'] = token['access_token']
    url = 'https://api.spotify.com/v1/users/{}/playlists'
    response = requests.get(url.format(user_id), params=D)
    playlists = json.loads(response.text)
    playlist_id = [playlists['items'][item]['id'] for item in range(len(
playlists['items']))]
    return playlist_id

playlists = playlists(user_id)
print(playlists)
```

In [ ]:
```python
def tracks(user_id, playlists):
    D = {}
    D['access_token'] = token['access_token']
    url = 'https://api.spotify.com/v1/users/{}/playlists/{}/tracks'
    track_ids = []
    for item in playlists:
        response = requests.get(url.format(user_id,item), params=D)
        if response.status_code == 200:
            tracks = json.loads(response.text)
            #pp.pprint(tracks)
            track_id = []
            for items in range(len(tracks['items'])):
                tracks_id = [tracks['items'][items]['track']['id'] for i
tems in range(len(tracks['items']))]
            track_ids.append(tracks_id)
    return track_ids

track_ids = tracks(user_id, playlists)
```

```
In [ ]:  def tracks(user_id, playlists):
             D = {}
             D['access_token'] = token['access_token']
             url = 'https://api.spotify.com/v1/users/{}/playlists/{}/tracks'
             track_ids = []
             for item in playlists:
                 response = requests.get(url.format(user_id,item), params=D)
                 if response.status_code == 200:
                     tracks = json.loads(response.text)
                     #pp.pprint(tracks)
                     track_id = []
                     for items in range(len(tracks['items'])):
                         tracks_id = [tracks['items'][items]['track']['id'] for i
         tems in range(len(tracks['items']))]
                         track_ids.append(tracks_id)
             return track_ids

         track_ids = tracks(user_id, playlists)
```

```
In [ ]:  def audio(user_id, playlists, track_ids):
             D = {}
             D['access_token'] = token['access_token']
             url = 'https://api.spotify.com/v1/audio-features/{}'
             song_ids = []
             for items in track_ids:
                 for item in items:
                     response = requests.get(url.format(item), params=D)
                     songs = json.loads(response.text)
                     song_audio = []
                     pp.pprint(songs)
                     for item in range(len(songs)):
                         valence = [songs['valence']]
             #return valence
         audio(user_id, playlists, track_ids)
```