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from __future__ import print_function
import os.path
from googleapiclient.discovery import build
from google_auth_oauthlib.flow import InstalledAppFlow
from google.auth.transport.requests import Request
from google.oauth2.credentials import Credentials

# If modifying these scopes, delete the file token.json.
SCOPES = ['https://www.googleapis.com/auth/spreadsheets.readonly']

# The ID and range of a sample spreadsheet.
SAMPLE_SPREADSHEET_ID = '1BxiMVs0XRA5nFMdKvBdBZjgmUUqptlbs74OgvE2upms'
SAMPLE_RANGE_NAME = 'Class Data!A2:E'

def main():
    """Shows basic usage of the Sheets API.
    Prints values from a sample spreadsheet.
    """
    creds = None
    # The file token.json stores the user's access and refresh tokens, and is
    # created automatically when the authorization flow completes for the first
    # time.
    if os.path.exists('token.json'):
        creds = Credentials.from_authorized_user_file('token.json', SCOPES)
    # If there are no (valid) credentials available, let the user log in.
    if not creds or not creds.valid:
        if creds and creds.expired and creds.refresh_token:
            creds.refresh(Request())
        else:
            flow = InstalledAppFlow.from_client_secrets_file(
                'credentials.json', SCOPES, redirect_uri='urn:ietf:wg:oauth:2.0:oob') #
generation of the start of OAuth
            auth_url, _ = flow.authorization_url(prompt='consent') # generate a url for
authentication
            print(auth_url)
            code = input('Enter the authorization code: ') # enter the code between "
and " which will declare it as a string
            creds = flow.fetch_token(code=code) # converts the code to an OAuth object
            service = build('sheets', 'v4', credentials=creds) # creates a
connection to Google Sheets API

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# Call the Sheets API
sheet = service.spreadsheets() # makes sheet an object like Google Advanced Sheets
API
result = sheet.values().get(spreadsheetId=SAMPLE_SPREADSHEET_ID,
                             range=SAMPLE_RANGE_NAME).execute() #gets the values of
the spreadsheet and the range
values = result.get('values', []) #sets the result as an array

if not values:
    print('No data found.')
else:
    print('Name, Major:') #header row
    for row in values: #loop through each row
        # Print columns A and E, which correspond to indices 0 and 4.
        print('%s, %s' % (row[0], row[4])) #print column A and col E

if __name__ == '__main__': #safety to prevent calling main() by accident in the
commandline
    main() #runs the main function

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