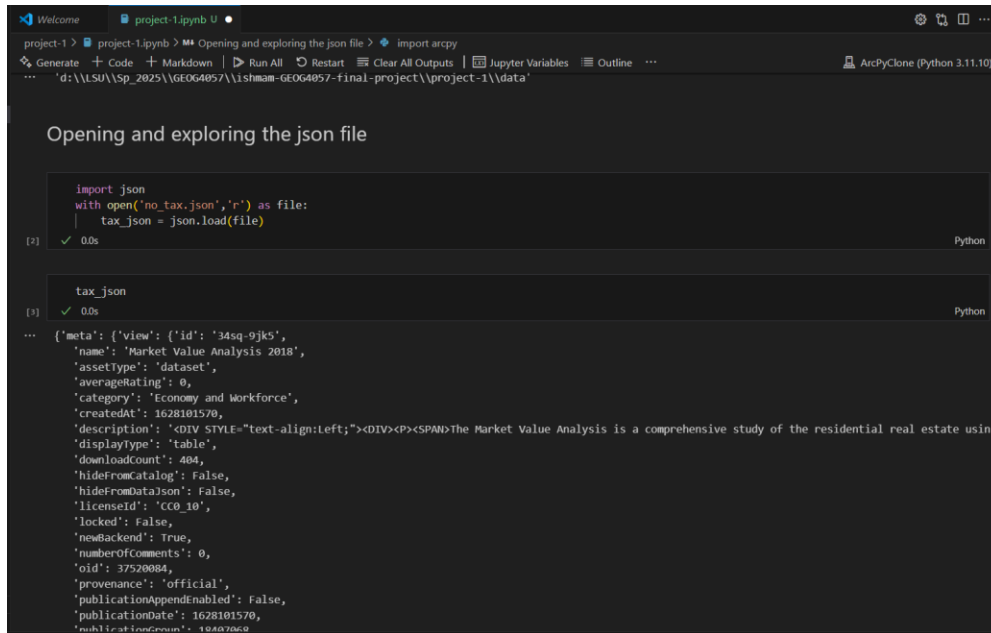


GEOG 4057 – Guided Project 1

Step 1: Opening and exploring the json file



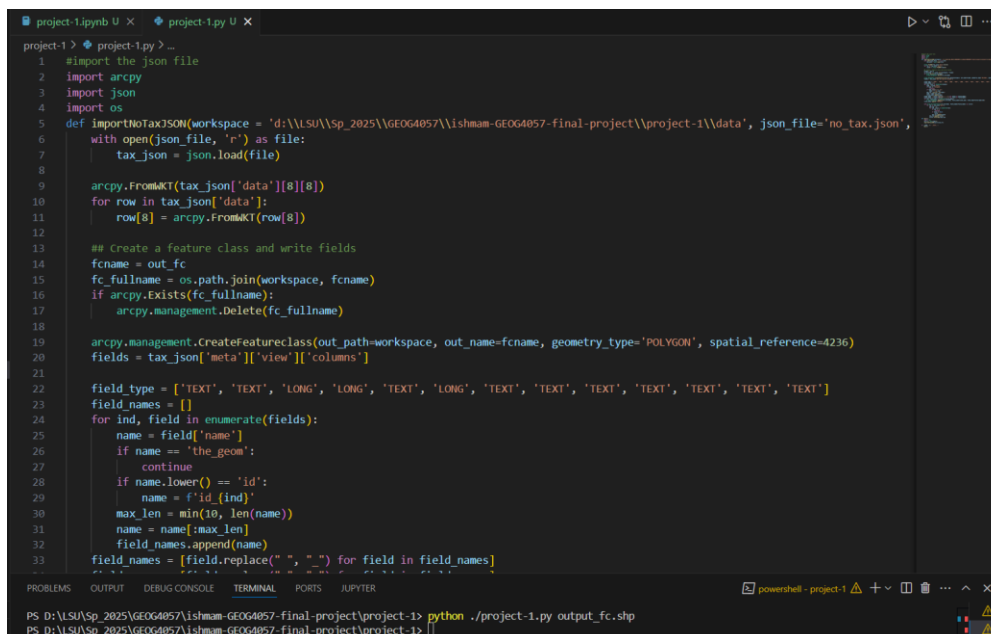
The screenshot shows a Jupyter Notebook interface with a dark theme. The title bar indicates the file is 'project-1.ipynb'. The code cell contains the following Python code:

```
import json
with open('no_tax.json', 'r') as file:
    tax_json = json.load(file)
```

The output cell displays the loaded JSON data as a Python dictionary. The 'meta' key contains a dictionary with various metadata fields, and the 'data' key contains a list of data rows. The first row of data is shown as a list of values.

```
{
  'meta': {
    'view': {'id': '3dsq-9jks',
             'name': 'Market Value Analysis 2018',
             'assetType': 'dataset',
             'averageRating': 0,
             'category': 'Economy and Workforce',
             'createdAt': 1628101570,
             'description': '<DIV STYLE="text-align:Left;"><DIV><P><SPAN>The Market Value Analysis is a comprehensive study of the residential real estate usin',
             'displayType': 'table',
             'downloadCount': 404,
             'hideFromCatalog': False,
             'hideFromData': False,
             'licenseId': 'CC0_10',
             'locked': False,
             'newBackend': True,
             'numberOfComments': 0,
             'oid': 37520084,
             'provenance': 'official',
             'publicationAppendEnabled': False,
             'publicationDate': 1628101570,
             'publishFromScreen': 10407060
    },
    'data': [
      [
        '3dsq-9jks',
        'Market Value Analysis 2018',
        'dataset',
        0,
        'Economy and Workforce',
        1628101570,
        '<DIV STYLE="text-align:Left;"><DIV><P><SPAN>The Market Value Analysis is a comprehensive study of the residential real estate usin',
        'table',
        404,
        False,
        False,
        True,
        0,
        37520084,
        'official',
        False,
        1628101570,
        10407060
      ]
    ]
  }
}
```

Step 2: Convert json to shapefile (full code provided in the GitHub repository as project_1.py)



The screenshot shows a Jupyter Notebook interface with a dark theme. The title bar indicates the file is 'project-1.py'. The code cell contains the following Python code:

```
import arcpy
import json
import os

def importTaxJSON(workspace = 'D:\\\\SU\\Sp_2025\\GEOG4057\\ishmam-GEOG4057-final-project\\project-1\\data', json_file='no_tax.json',
                  with open(json_file, 'r') as file:
    tax_json = json.load(file)

    arcpy.FromMKT(tax_json['data'][0][8])
    for row in tax_json['data']:
        row[8] = arcpy.FromMKT(row[8])

    ## Create a feature class and write fields
    fcname = out_fc
    fc_fullname = os.path.join(workspace, fcname)
    if arcpy.Exists(fc_fullname):
        arcpy.management.Delete(fc_fullname)

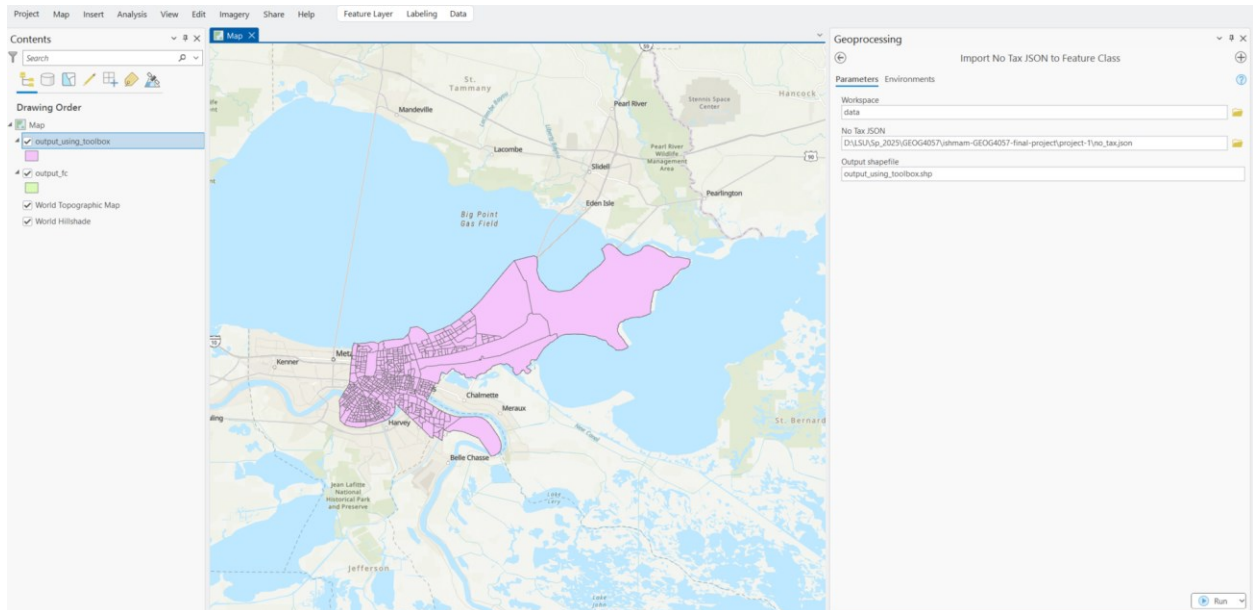
    arcpy.management.CreateFeatureclass(out_path=workspace, out_name=fcname, geometry_type='POLYGON', spatial_reference=4236)
    fields = tax_json['meta']['view']['columns']

    field_type = ['TEXT', 'TEXT', 'LONG', 'LONG', 'TEXT', 'LONG', 'TEXT', 'TEXT', 'TEXT', 'TEXT', 'TEXT', 'TEXT']
    field_names = []
    for ind, field in enumerate(fields):
        name = field['name']
        if name == 'the_geom':
            continue
        if name.lower() == 'id':
            name = f'id_{ind}'
        max_len = min(10, len(name))
        name = name[:max_len]
        field_names.append(name)
    field_names = [field.replace(" ", "_") for field in field_names]
```

The terminal output at the bottom shows the command to run the script:

```
PS D:\\SU\\Sp_2025\\GEOG4057\\ishmam-GEOG4057-final-project\\project-1> python ./project-1.py output_fc.shp
PS D:\\SU\\Sp_2025\\GEOG4057\\ishmam-GEOG4057-final-project\\project-1>
```

Step 3: Achieving the same task but by creating a python toolbox



Link to Github repository:

<https://github.com/ishmamshahid/ishmam-GEOG4057-final-project/tree/main/project-1>