

## App.py

```
import textwrap

from flask import Flask, render_template, request
from werkzeug.utils import secure_filename
import pandas as pd
import pyodbc
import numpy as np

app = Flask(__name__)

driver = '{ODBC Driver 17 for SQL Server}'
server_name = 'anonymous'
database_name = 'csvdatabase'
username = "anonymous"
password = "Yash@3277"
server =
'{{server_name}}.database.windows.net,1433'.format(server_name=server_name)
connection_string = textwrap.dedent('''
    Driver={driver};
    Server={server};
    Database={database};
    Uid={username};
    Pwd={password};
    Encrypt=yes;
    TrustServerCertificate=no;
    Connection Timeout=30;
''').format(
    driver=driver,
    server=server,
    database=database_name,
    username=username,
    password=password
)

conn = pyodbc.connect(connection_string)
cursor = conn.cursor()

@app.route('/', methods=['GET', 'POST'])
def index():
    if request.method == 'POST':
        f = request.files['csvupload']
        f.save(secure_filename(f.filename))
        df = pd.read_csv(f.filename)
        print(df)
        columns = df.columns
        print(df['magError'])
        df['mag'] = df['mag'].fillna(0.0)
        df['magType'] = df['magType'].fillna("NA")
        df['nst'] = df['nst'].fillna(0)
```

```

df['gap'] = df['gap'].fillna(0.0)
df['dmin'] = df['dmin'].fillna(0.0)
df['horizontalError'] = df['horizontalError'].fillna(0.0)
df['magError'] = df['magError'].fillna(0.0)
df['magNst'] = df['magNst'].fillna(0.0)
print(columns[0], columns[21])
cursor.execute('CREATE TABLE earthquake_data(Time nvarchar(50),
Latitude float, Longitude float, Depth float, Mag float NULL DEFAULT 0.0,
Magtype nvarchar(50) NULL DEFAULT 0.0, Nst int NULL DEFAULT 0.0, Gap float
NULL DEFAULT 0.0, Dmin float NULL DEFAULT 0.0, Rms float, Net nvarchar(50),
ID nvarchar(50), Updated nvarchar(50), Place nvarchar(MAX), Type
nvarchar(50), HorizontalError float NULL DEFAULT 0.0, DepthError float,
MagError float NULL DEFAULT 0.0, MagNst int NULL DEFAULT 0.0, Status
nvarchar(50), LocationSource nvarchar(50), MagSource nvarchar(50))')

for row in df.itertuples():
    print(row)
    cursor.execute("INSERT INTO csvdatabase.dbo.earthquake_data
VALUES (?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?)", row.time,
row.latitude, row.longitude, row.depth, row.mag, row.magType, row.nst,
row.gap, row.dmin, row.rms, row.net, row.id, row.updated, row.place,
row.type, row.horizontalError, row.depthError, row.magError, row.magNst,
row.status, row.locationSource, row.magSource)

    conn.commit()
    return 'file uploaded successfully'
return render_template("index.html")

@app.route('/eqcount', methods=['GET', 'POST'])
def eq_count():
    earthquakes = []
    if request.method == 'POST':
        magnitude = request.form.get('count')
        cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype,
Place, LocationSource from earthquake_data where Mag > ?", magnitude)
        for data in cursor:
            earthquakes.append(data)
        earthquake_len = len(earthquakes)
        return render_template('eq_count.html', earthquakes = earthquakes, length
= earthquake_len)

@app.route('/rangecount', methods=['GET', 'POST'])
def range_count():
    earthquakes = []
    if request.method == 'POST':
        startmag = request.form.get('startrange')
        stopmag = request.form.get('stoprange')
        timing = request.form.get('timerange')
        print(startmag, stopmag, timing)

        if timing == "Recent Week":
            time = '2021-06-05T00:00:00.000Z'
            cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag > ? and Mag < ?
and Time > ?", startmag, stopmag, time)

```

```

        for data in cursor:
            earthquakes.append(data)
    else:
        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag > ? and Mag <
?", startmag, stopmag)
        for data in cursor:
            earthquakes.append(data)
        earthquake_len = len(earthquakes)
        return render_template('range_count.html', earthquakes = earthquakes,
length = earthquake_len)

@app.route('/eqlocation', methods=['GET', 'POST'])
def eq_location():
    eq_area = []
    cursor.execute("SELECT Area = right(rtrim([place]),charindex('
',reverse(rtrim([place]))+' ')-1) From earthquake_data")
    for data in cursor:
        for value in data:
            eq_area.append(value)
    eq_area_list = list(set(eq_area))
    return render_template('eq_location.html', drop_down = eq_area_list)

@app.route('/eqoutput', methods=['GET', 'POST'])
def eq_output():
    earthquakes = []
    eq_area = []
    if request.method == 'POST':
        distance = request.form.get('dist')
        area = request.form.get('areas')
        cursor.execute("SELECT id ,latitude, longitude, place, Area =
right(rtrim([place]),charindex(' ',reverse(rtrim([place]))+' ')-1) From
earthquake_data where right(rtrim([place]),charindex('
',reverse(rtrim([place]))+' ')-1)= ? AND CAST (SUBSTRING
(place,0,PATINDEX('%km%',place)) as INT) >=?", area, distance)
        for data in cursor:
            earthquakes.append(data)
        earthquake_len = len(earthquakes)
        cursor.execute("SELECT Area = right(rtrim([place]),charindex('
',reverse(rtrim([place]))+' ')-1) From earthquake_data")
        for data in cursor:
            for value in data:
                eq_area.append(value)
        eq_area_list = list(set(eq_area))
        return render_template('eq_location.html', earthquakes = earthquakes,
length = earthquake_len, drop_down = eq_area_list)

@app.route('/earthquakeclusters', methods=['GET', 'POST'])
def earthquake_clusters():
    earthquakes1 = []
    earthquakes2 = []
    earthquakes3 = []
    earthquakes4 = []
    earthquakes5 = []

```

```

earthquakes6 = []
earthquakes7 = []
earthquakes8 = []
earthquakes9 = []
earthquakes10 = []
if request.method == 'POST':
    clusterby = request.form.get('cluster')

    if clusterby == "Magnitude":
        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>' -2.0' and
Mag<' -1.0'")
        for data in cursor:
            earthquakes1.append(data)
        earthquake_len1 = len(earthquakes1)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>' -1.0' and
Mag<0.0")
        for data in cursor:
            earthquakes2.append(data)
        earthquake_len2 = len(earthquakes2)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>0.0 and
Mag<1.0")
        for data in cursor:
            earthquakes3.append(data)
        earthquake_len3 = len(earthquakes3)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>1.0 and
Mag<2.0")
        for data in cursor:
            earthquakes4.append(data)
        earthquake_len4 = len(earthquakes4)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>2.0 and
Mag<3.0")
        for data in cursor:
            earthquakes5.append(data)
        earthquake_len5 = len(earthquakes5)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>3.0 and
Mag<4.0")
        for data in cursor:
            earthquakes6.append(data)
        earthquake_len6 = len(earthquakes6)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>4.0 and
Mag<5.0")
        for data in cursor:
            earthquakes7.append(data)
        earthquake_len7 = len(earthquakes7)

```

```

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>5.0 and
Mag<6.0")
        for data in cursor:
            earthquakes8.append(data)
        earthquake_len8 = len(earthquakes8)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>6.0 and
Mag<7.0")
        for data in cursor:
            earthquakes9.append(data)
        earthquake_len9 = len(earthquakes9)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where Mag>7.0 and
Mag<8.0")
        for data in cursor:
            earthquakes10.append(data)
        earthquake_len10 = len(earthquakes10)

    return render_template('mag_clusters.html', earthquakes1 =
earthquakes1, length1= earthquake_len1, earthquakes2 = earthquakes2, length2=
earthquake_len2, earthquakes3 = earthquakes3, length3= earthquake_len3,
earthquakes4 = earthquakes4, length4= earthquake_len4, earthquakes5 =
earthquakes5, length5= earthquake_len5, earthquakes6 = earthquakes6, length6=
earthquake_len6, earthquakes7 = earthquakes7, length7= earthquake_len7,
earthquakes8 = earthquakes8, length8= earthquake_len8, earthquakes9 =
earthquakes9, length9= earthquake_len9, earthquakes10 = earthquakes10,
length10= earthquake_len10)

elif clusterby == 'Magnitude Type':
    types = []
    cursor.execute("select distinct Magtype from earthquake_data")
    for data in cursor:
        types.append(data)
    print(types)

    cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[0])
    for data in cursor:
        earthquakes1.append(data)
    earthquake_len1 = len(earthquakes1)

    cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[1])
    for data in cursor:
        earthquakes2.append(data)
    earthquake_len2 = len(earthquakes2)

    cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[2])
    for data in cursor:

```

```

        earthquakes3.append(data)
        earthquake_len3 = len(earthquakes3)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[3])
        for data in cursor:
            earthquakes4.append(data)
            earthquake_len4 = len(earthquakes4)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[4])
        for data in cursor:
            earthquakes5.append(data)
            earthquake_len5 = len(earthquakes5)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[5])
        for data in cursor:
            earthquakes6.append(data)
            earthquake_len6 = len(earthquakes6)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[6])
        for data in cursor:
            earthquakes7.append(data)
            earthquake_len7 = len(earthquakes7)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[7])
        for data in cursor:
            earthquakes8.append(data)
            earthquake_len8 = len(earthquakes8)

        cursor.execute("select Time, Latitude, Longitude, Depth, Mag,
Magtype, Place, LocationSource from earthquake_data where
Magtype=?",types[8])
        for data in cursor:
            earthquakes9.append(data)
            earthquake_len9 = len(earthquakes9)

    return render_template('magtype_cluster.html', earthquakes1 =
earthquakes1, length1= earthquake_len1, earthquakes2 = earthquakes2, length2=
earthquake_len2, earthquakes3 = earthquakes3, length3= earthquake_len3,
earthquakes4 = earthquakes4, length4= earthquake_len4, earthquakes5 =
earthquakes5, length5= earthquake_len5, earthquakes6 = earthquakes6, length6=
earthquake_len6, earthquakes7 = earthquakes7, length7= earthquake_len7,
earthquakes8 = earthquakes8, length8= earthquake_len8, earthquakes9 =
earthquakes9, length9= earthquake_len9)

@app.route('/nightquake', methods=['GET', 'POST'])
def night_quake():

```

```

earthquakes = []
if request.method == 'POST':
    magnitude = request.form.get('night')
    cursor.execute("select time,mag from earthquake_data where (cast(time as
time) not between '08:00:00' and '18:00:00') and mag > ?", magnitude)
    for data in cursor:
        earthquakes.append(data)
    earthquake_len = len(earthquakes)
    return render_template('night_quake.html', earthquakes = earthquakes,
length = earthquake_len)

if __name__ == '__main__':
    app.run()

```

index.html

```

<!DOCTYPE html>
<html>
<head>
    <title>Assignment 2</title>
</head>
<body>
<div style="text-align: center">
    <h1>Yaswanth Janardhan Konduru</h1>
    <h3>1001741845</h3>
</div>
<div>
    <form action="{{url_for('index')}}" enctype=multipart/form-data
method="POST" style="width:30%;">
        <fieldset>
            <legend>CSV Upload</legend>
            <label for="csvupload">Select the CSV file to upload</label>
            <input type="file" id="csvupload" name="csvupload"><br><br>
            <input type="submit" value="Upload">
        </fieldset>
    </form>
    <form action="{{url_for('eq_count')}}" enctype=multipart/form-data
method="POST" style="width:30%;">
        <fieldset>
            <legend>Search Earthquakes</legend>
            <label for="count">Search for earthquakes with magnitude greater
than</label>
            <input type="text" id="count" name="count"><br><br>
            <a href="/eqcount"><input type="submit" value="Find"></a>
        </fieldset>
    </form>
    <form action="{{url_for('range_count')}}" enctype=multipart/form-data
method="POST" style="width:30%;">
        <fieldset>
            <legend>Search Earthquakes with range</legend>
            <label>Search for earthquakes with magnitude range and

```

```

time</label><br><br>
    <label for="count">Start range</label>
    <input type="text" id="startrange" name="startrange">
    <label for="count">End range</label>
    <input type="text" id="stoprange" name="stoprange"><br><br>
    <label for="timerange">Select the time range</label>
    <input type="radio" name="timerange" id="timerange" value="Recent
Week">Recent Week
    <input type="radio" name="timerange" value="Month">Month<br><br>
    <a href="/rangecount"><input type="submit" value="Find"></a>
  </fieldset>
</form>

  <form action="{{url_for('earthquake_clusters')}}" enctype=multipart/form-
data method="POST" style="width:30%;">
    <fieldset>
      <legend>Earthquake Clusters</legend>
      <label>Select an option to clusters the
earthquakes</label><br><br>
      <input type="radio" name="cluster" value="Magnitude">Magnitude
      <input type="radio" name="cluster" value="Magnitude
Type">Magnitude Type<br><br>
      <a href="/earthquakeclusters"><input type="submit"
value="Find"></a>
    </fieldset>
  </form>

  <form action="{{url_for('night_quake')}}" enctype=multipart/form-data
method="POST" style="width:30%;">
    <fieldset>
      <legend>Search Earthquakes</legend>
      <label for="night">Enter the mag values to search for earthquakes
during night</label>
      <input type="text" id="night" name="night"><br><br>
      <a href="/nightquake"><input type="submit" value="Find"></a>
    </fieldset>
  </form>

  <form action="{{url_for('eq_location')}}" enctype=multipart/form-data
method="POST" style="width:30%;">
    <fieldset>
      <legend>Earthquake based on location</legend>
      <label>Find earthquakes that were near (20 km, 50 km?) of a
specified location.</label>
      <a href="/eqlocation"><input type="submit" value="Find"></a>
    </fieldset>
  </form>
</div>
</body>
</html>

```



## Night\_quake.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Assignment 2</title>
</head>
<body>
<div style="text-align: center">
  <h1>Yaswanth Janardhan Konduru</h1>
  <h3>1001741845</h3>
</div>
<div>
  <table style="border:1px solid black">
    <tr style="border:1px solid black">
      <th style="border:1px solid black">Time</th>
      <th style="border:1px solid black">Mag</th>
    </tr>
    {% for values in earthquakes %}
    <tr style="border:1px solid black">
      {% for data in values %}
        <td style="border:1px solid black">{{data}}</td>
      {% endfor %}
    </tr>
    {% endfor %}
  </table>
  <h3>Count of earthquakes is:</h3>
  <h5>{{length}}</h5>
</div>
</body>
</html>
```

## Magtype\_cluster.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Assignment 2</title>
</head>
<body>
<div style="text-align: center">
  <h1>Yaswanth Janardhan Konduru</h1>
  <h3>1001741845</h3>
</div>
<div>
  <table style="border:1px solid black">
    <tr style="border:1px solid black">
      <th style="border:1px solid black">Time</th>
      <th style="border:1px solid black">Latitude</th>
      <th style="border:1px solid black">Longitude</th>
      <th style="border:1px solid black">Depth</th>
      <th style="border:1px solid black">Mag</th>
      <th style="border:1px solid black">Magtype</th>
      <th style="border:1px solid black">Place</th>
    </tr>
  </table>
</div>
```

```

        <th style="border:1px solid black">LocationSource</th>
    </tr>
    {% for values in earthquakes1 %}
    <tr style="border:1px solid black">
        {% for data in values %}
        <td style="border:1px solid black">{{data}}</td>
        {% endfor %}
    </tr>
    {% endfor %}
</table>
<h3>Count of earthquakes where Mag Type is md</h3>
<h5>{{length1}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes2 %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes where Mag Type is mwr</h3>
    <h5>{{length2}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes3 %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes where Mag Type is mb</h3>

```

```

    <h5>{{length3}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes4 %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes where Mag Type is mh</h3>
    <h5>{{length4}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes5 %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes where Mag Type is mw</h3>
    <h5>{{length5}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
        </tr>

```

```

        <th style="border:1px solid black">Place</th>
        <th style="border:1px solid black">LocationSource</th>
    </tr>
    {% for values in earthquakes6 %}
    <tr style="border:1px solid black">
        {% for data in values %}
        <td style="border:1px solid black">{{data}}</td>
        {% endfor %}
    </tr>
    {% endfor %}
</table>
<h3>Count of earthquakes where Mag Type is mb_lg</h3>
<h5>{{length6}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes7 %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes where Mag Type is mww</h3>
    <h5>{{length7}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes8 %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>

```

```

    <h3>Count of earthquakes where Mag Type is NA</h3>
    <h5>{{length8}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes9 %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes where Mag Type is ml</h3>
    <h5>{{length9}}</h5>
</div>
</body>
</html>

```

## Mag\_clusters.html

```

<!DOCTYPE html>
<html>
<head>
    <title>Assignment 2</title>
</head>
<body>
<div style="text-align: center">
    <h1>Yaswanth Janardhan Konduru</h1>
    <h3>1001741845</h3>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes1 %}

```

```

        <tr style="border:1px solid black">
            {% for data in values %}
                <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
    {% endfor %}
</table>
<h3>Count of earthquakes with MAG between -2.0 and -1.0 is:</h3>
<h5>{{length1}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes2 %}
            <tr style="border:1px solid black">
                {% for data in values %}
                    <td style="border:1px solid black">{{data}}</td>
                {% endfor %}
            </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes with MAG between -1.0 and 0.0 is:</h3>
    <h5>{{length2}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes3 %}
            <tr style="border:1px solid black">
                {% for data in values %}
                    <td style="border:1px solid black">{{data}}</td>
                {% endfor %}
            </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes with MAG between 0.0 and 1.0 is:</h3>
    <h5>{{length3}}</h5>
</div>
</div>

```

```

<table style="border:1px solid black">
  <tr style="border:1px solid black">
    <th style="border:1px solid black">Time</th>
    <th style="border:1px solid black">Latitude</th>
    <th style="border:1px solid black">Longitude</th>
    <th style="border:1px solid black">Depth</th>
    <th style="border:1px solid black">Mag</th>
    <th style="border:1px solid black">Magtype</th>
    <th style="border:1px solid black">Place</th>
    <th style="border:1px solid black">LocationSource</th>
  </tr>
  {% for values in earthquakes4 %}
  <tr style="border:1px solid black">
    {% for data in values %}
    <td style="border:1px solid black">{{data}}</td>
    {% endfor %}
  </tr>
  {% endfor %}
</table>
<h3>Count of earthquakes with MAG between 1.0 and 2.0 is:</h3>
<h5>{{length4}}</h5>
</div>
<div>
  <table style="border:1px solid black">
    <tr style="border:1px solid black">
      <th style="border:1px solid black">Time</th>
      <th style="border:1px solid black">Latitude</th>
      <th style="border:1px solid black">Longitude</th>
      <th style="border:1px solid black">Depth</th>
      <th style="border:1px solid black">Mag</th>
      <th style="border:1px solid black">Magtype</th>
      <th style="border:1px solid black">Place</th>
      <th style="border:1px solid black">LocationSource</th>
    </tr>
    {% for values in earthquakes5 %}
    <tr style="border:1px solid black">
      {% for data in values %}
      <td style="border:1px solid black">{{data}}</td>
      {% endfor %}
    </tr>
    {% endfor %}
  </table>
  <h3>Count of earthquakes with MAG between 2.0 and 3.0 is:</h3>
  <h5>{{length5}}</h5>
</div>
<div>
  <table style="border:1px solid black">
    <tr style="border:1px solid black">
      <th style="border:1px solid black">Time</th>
      <th style="border:1px solid black">Latitude</th>
      <th style="border:1px solid black">Longitude</th>
      <th style="border:1px solid black">Depth</th>
      <th style="border:1px solid black">Mag</th>
      <th style="border:1px solid black">Magtype</th>
      <th style="border:1px solid black">Place</th>
      <th style="border:1px solid black">LocationSource</th>
    </tr>

```

```

        {% for values in earthquakes6 %}
        <tr style="border:1px solid black">
            {% for data in values %}
                <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes with MAG between 3.0 and 4.0 is:</h3>
    <h5>{{length6}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes7 %}
        <tr style="border:1px solid black">
            {% for data in values %}
                <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes with MAG between 4.0 and 5.0 is:</h3>
    <h5>{{length7}}</h5>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes8 %}
        <tr style="border:1px solid black">
            {% for data in values %}
                <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes with MAG between 5.0 and 6.0 is:</h3>
    <h5>{{length8}}</h5>
</div>

```



```

<div>
  <table style="border:1px solid black">
    <tr style="border:1px solid black">
      <th style="border:1px solid black">Time</th>
      <th style="border:1px solid black">Latitude</th>
      <th style="border:1px solid black">Longitude</th>
      <th style="border:1px solid black">Depth</th>
      <th style="border:1px solid black">Mag</th>
      <th style="border:1px solid black">Magtype</th>
      <th style="border:1px solid black">Place</th>
      <th style="border:1px solid black">LocationSource</th>
    </tr>
    {% for values in earthquakes9 %}
    <tr style="border:1px solid black">
      {% for data in values %}
      <td style="border:1px solid black">{{data}}</td>
      {% endfor %}
    </tr>
    {% endfor %}
  </table>
  <h3>Count of earthquakes with MAG between 6.0 and 7.0 is:</h3>
  <h5>{{length9}}</h5>
</div>
<div>
  <table style="border:1px solid black">
    <tr style="border:1px solid black">
      <th style="border:1px solid black">Time</th>
      <th style="border:1px solid black">Latitude</th>
      <th style="border:1px solid black">Longitude</th>
      <th style="border:1px solid black">Depth</th>
      <th style="border:1px solid black">Mag</th>
      <th style="border:1px solid black">Magtype</th>
      <th style="border:1px solid black">Place</th>
      <th style="border:1px solid black">LocationSource</th>
    </tr>
    {% for values in earthquakes10 %}
    <tr style="border:1px solid black">
      {% for data in values %}
      <td style="border:1px solid black">{{data}}</td>
      {% endfor %}
    </tr>
    {% endfor %}
  </table>
  <h3>Count of earthquakes with MAG between 7.0 and 8.0 is:</h3>
  <h5>{{length10}}</h5>
</div>
</body>
</html>

```

Range\_count.html

```

<!DOCTYPE html>
<html>
<head>

```

```

    <title>Assignment 2</title>
</head>
<body>
<div style="text-align: center">
    <h1>Yaswanth Janardhan Konduru</h1>
    <h3>1001741845</h3>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>
            <th style="border:1px solid black">Mag</th>
            <th style="border:1px solid black">Magtype</th>
            <th style="border:1px solid black">Place</th>
            <th style="border:1px solid black">LocationSource</th>
        </tr>
        {% for values in earthquakes %}
        <tr style="border:1px solid black">
            {% for data in values %}
            <td style="border:1px solid black">{{data}}</td>
            {% endfor %}
        </tr>
        {% endfor %}
    </table>
    <h3>Count of earthquakes is:</h3>
    <h5>{{length}}</h5>
</div>
</body>
</html>

```

Eq\_count.html

```

<!DOCTYPE html>
<html>
<head>
    <title>Assignment 2</title>
</head>
<body>
<div style="text-align: center">
    <h1>Yaswanth Janardhan Konduru</h1>
    <h3>1001741845</h3>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">Time</th>
            <th style="border:1px solid black">Latitude</th>
            <th style="border:1px solid black">Longitude</th>
            <th style="border:1px solid black">Depth</th>

```

```

        <th style="border:1px solid black">Mag</th>
        <th style="border:1px solid black">Magtype</th>
        <th style="border:1px solid black">Place</th>
        <th style="border:1px solid black">LocationSource</th>
    </tr>
    {% for values in earthquakes %}
    <tr style="border:1px solid black">
        {% for data in values %}
        <td style="border:1px solid black">{{data}}</td>
        {% endfor %}
    </tr>
    {% endfor %}
</table>
<h3>Count of earthquakes is:</h3>
<h5>{{length}}</h5>
</div>
</body>
</html>

```

Eq\_location.html

```

<!DOCTYPE html>
<html>
<head>
    <title>Assignment 2</title>
</head>
<body>
<div style="text-align: center">
    <h1>Yaswanth Janardhan Konduru</h1>
    <h3>1001741845</h3>
</div>
<div>
    <form action="{{url_for('eq_output')}}" enctype=multipart/form-data
method="POST" style="width:30%;">
        <fieldset>
            <legend>Earthquake based on location</legend>
            <label>Find earthquakes that were near (20 km, 50 km?) of a
specified location.</label><br><br>
            <label for="dist">Distance</label>
            <input type="text" id="dist" name="dist"><br><br>
            <label for="areas">Select the Area</label>
            <select name="areas" id="areas">
                {% for values in drop_down %}
                <option value="{{values}}">{{values}}</option>
                {% endfor %}
            </select>
            <a href="/eqoutput"><input type="submit" value="Find"></a>
        </fieldset>
    </form>
</div>
<div>
    <table style="border:1px solid black">
        <tr style="border:1px solid black">
            <th style="border:1px solid black">ID</th>

```

```
        <th style="border:1px solid black">Latitude</th>
        <th style="border:1px solid black">Longitude</th>
        <th style="border:1px solid black">Place</th>
        <th style="border:1px solid black">Area</th>
    </tr>
    {% for values in earthquakes %}
    <tr style="border:1px solid black">
        {% for data in values %}
        <td style="border:1px solid black">{{data}}</td>
        {% endfor %}
    </tr>
    {% endfor %}
</table>
<h3>Count of earthquakes is:</h3>
<h5>{{length}}</h5>
</div>
</body>
</html>
```