In [2]:

```python
# Import the necessary modules
import requests
from bs4 import BeautifulSoup
import arcpy
import os
```

In [2]:

```python
# Set the variable for the URL of data page
data = "https://resources.gisdata.mn.gov/pub/data/elevation/lidar/examples/lidar_sample/las
```

In [3]:

```python
# Get the website data
page = requests.get(data)
```

In [4]:

```python
# Build the BeautifulSoup item from the website data
parser = BeautifulSoup(page.text,"html.parser")
```

In [5]:

```python
# Find the string includes "4342-12-05.las"
target = parser.find_all('a',string='4342-14-05.las')
```

In [6]:

```python
# Add the original url in front of the link
for link in target:
    dwn='https://resources.gisdata.mn.gov/pub/data/elevation/lidar/examples/lidar_sample/la
```

In [12]:

```python
# Get the data and save it
r = requests.get(dwn, allow_redirects=True)
open(r'D:\2021-spring\ArcGIS\Lab2\Lab2\4342-14-05.las', 'wb').write(r.content)
```

Out[12]:

349403619

In [13]:

```
# Convert the las data to TIN
arcpy.env.workspace = r'D:\2021-spring\ArcGIS\Lab2\Lab2'
arcpy.LasDatasetToTin_3d('4342-14-05.las', 'TIN_1405','NONE', '', None, 100000000, 1, "CLIP
```

Out[13]:

Output

D:\2021-spring\ArcGIS\Lab2\Lab2\TIN_1405

Messages

Start Time: 2021年2月17日 上午 12:23:08

Succeeded at 2021年2月17日 上午 12:23:30 (Elapsed Time: 21.93 seconds)

In [14]:

```
# Convert the las data to DEM
arcpy.conversion.LasDatasetToRaster("4342-14-05.las", 'DEM_1405')
```

Out[14]:

Output

D:\2021-spring\ArcGIS\Lab2\Lab2\DEM_1405

Messages

Start Time: 2021年2月17日 上午 12:24:11

Succeeded at 2021年2月17日 上午 12:24:14 (Elapsed Time: 2.82 seconds)

In [4]:

```
dem_path = r'D:\2021-spring\ArcGIS\Lab2\Lab2\dem_1405'

aprx = arcpy.mp.ArcGISProject(r'D:\2021-spring\ArcGIS\Lab2\Lab2\Lab2.aprx')
dem = aprx.listMaps()[0]
dem.addDataFromPath(dem_path)
```

Out[4]:

<arcpy._mp.Layer at 0x22aaee3c608>

In [7]:

```
tin_path = r'D:\2021-spring\ArcGIS\Lab2\Lab2\TIN_1405'

aprx = arcpy.mp.ArcGISProject(r'D:\2021-spring\ArcGIS\Lab2\Lab2\Lab2.aprx')
tin = aprx.listMaps()[0]
tin.addDataFromPath(tin_path)
```

Out[7]:

<arcpy._mp.Layer at 0x22aa71d6608>

In [7]:

```
aprx = arcpy.mp.ArcGISProject(r'D:\2021-spring\ArcGIS\Lab2\Lab2\Lab2.aprx')
```

In [5]:

```python
dem = aprx.listLayouts("DEM")[0]
```

In [6]:

```python
dem.exportToPDF(r'D:\2021-spring\ArcGIS\Lab2\Lab2\DEM.pdf')
```

Out[6]:

```
'D:\\2021-spring\\ArcGIS\\Lab2\\Lab2\\DEM.pdf'
```

In [8]:

```python
tin = aprx.listLayouts("TIN")[0]
```

In [9]:

```python
tin.exportToPDF(r'D:\2021-spring\ArcGIS\Lab2\Lab2\TIN.pdf')
```

Out[9]:

```
'D:\\2021-spring\\ArcGIS\\Lab2\\Lab2\\TIN.pdf'
```

In [ ]: