In [2]:
```
import arcpy
import requests
import io
import os
import zipfile
```

In [4]:
```
#arcpy.env.workspace = r'G:\My Drive\GIS 5571\Lab2.1\Lab2.1\Lab2.gdb
#working_dir = workspace
```

ETL Data

In [ ]:
```
#las_file = r'https://resources.gisdata.mn.gov/pub/data/elevation/lidar/examples/lidar_sample/las/4342-12-05.las'\n"
```

In [ ]:
```
#las_actual.content = requests.post(las_file)
```

In [ ]:
```
#path_to_las= os.path.join(working_dir, 'output.las')
```

In [ ]:
```
#with open (path_to_las, 'wb') as f:
        f.write(las_actual.content)
```

In [ ]:
```
#arcpy.management.CreateLasDataset('outputlas.las', 'lasdatasetoutput.lasd')
```

Convert LAS Raster

In [ ]:
```
#arcpy.conversion.LasDatasetToRaster("4342-12-06.las", r"g:\My Drive\GIS 5571\Lab2.1\Lab2.1\Lab2.gdb\TIN2", "ELEVATION", "BINNING AVERAGE LINEAR", "FLOAT", "CELLSIZE", 10, 1)
```

Export DEM as PDF

In [ ]:
```
# aprx= arcpy.mpArcGISProject(r"G:\My Drive\GIS 5571\Lab2.2\lab2.2.aprx")
```

In [ ]:
```
#lyt = aprx.listLayouts("DEM*")[0]
```

In [ ]:
```
#lyt.exportToPDF(r"G:\My Drive\GIS 5571\Lab2.2\Output\DEM.pdf" , resolution = 300)
```

Convert Raster to TIN

In [ ]:
```
#arcpy.ddd.RasterTin("TIN2", r"G:\My Drive\GIS 5571\Lab2.1\Lab2.1\TIN3", 9.56,
1500000, 1)
```

Export TIN as PDF

In [ ]:
```
#lyt = aprx.listLayouts("TIN*")[0]
```

In [ ]:
```
#lyt.exportToPDF(r"G:\My Drive\GIS 5571\Lab2.2\Output\TIN.pdf" , resolution =
 300)
```

Explore 2D/3D visualization

In [ ]:
```
#visualization was done inside of the map viewer for easy of use
```