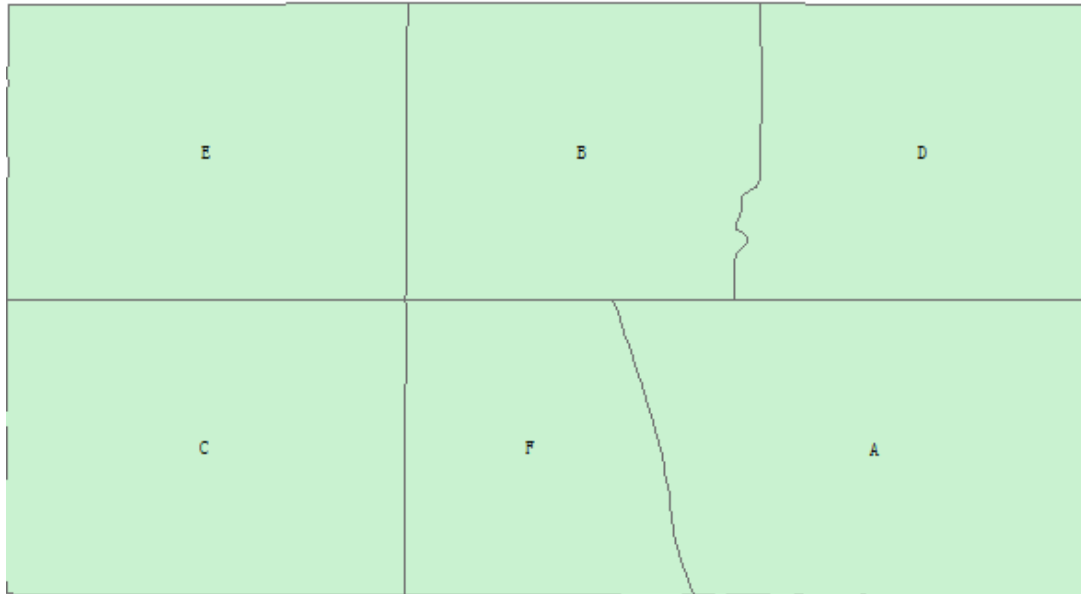# GEOG 1180 Introduction to Geo-Programming

Lab 10 Location Analysis

The polygons "A, B, C, D, E, F" represent six neighborhoods in Salt Lake City. The city government plans to build a new fire station to more efficiently respond to the service calls from these neighborhoods. There are five potential locations for this fire station. You must choose the best one among the five potential locations using systematic methods in location science. The number of expected emergency calls per week in the neighborhood areas are saved in *call_list* of the file "Assignment10.py". The distances between each potential location and neighborhood area are saved in *dis_array*. The best location is the one that minimizes the total weighted travel distance (i.e. weighted travel distance is *calls × distance*). The total weighted travel distance is the summation of distances between potential locations and neighborhoods, multiplied by the number of emergency calls for each neighborhood.

Please download the "Assignment10.py" and fill the blanks to calculate and print out the minimum total weighted distance and the index of the optimal location.

Please submit the python script file "Assignment10.py" to Canvas.