Problem - 4 (Spring 2024)

Due date: 21 March 2024

1. Write a computer program to generate a nearest-neighbor map/table of N points listed in file 'xyz300.txt'. Assume that the nearest neighbor(s) of a point lies within a radial distance of 2.8 units. See the data file for details. Use the data format discussed in the class for presenting your results.

2. A nearest-neighbor map or a connectivity table of 19 points is given in file 'NNmap.txt'. Use this map to produce a generalized k-th neighbor map for each point. Check your results for k=2, 3 and 4.

   Note: Use of any functions from MatLab, Python, or ready-made codes from internet are not permitted.