Functions:

1. Function to read in data
    a. A function that reads 15 cities and then extracts temperature of the data will be needed
    b. Finds the average of the temperature data for each city
2. Function to find euclidean distance between each city
    a. The temperature of all cities is in 1 big array and the function finds the euclidean distance by subtracting each list from the big array by the next list in the big array and it returns a value which is used in the plot.ly part in the program

Program:

The program itself uses plot.ly and the graph must be downloaded from the website. The dendrogram is graphed using an array shaped 15 by 15. The program has the file names hard coded and the city names are the file names with the .txt removed. I used https://plot.ly/python/dendrogram/#set-orientation-and-add-labels for help plotting the dendrogram. The dendrogram plots to the online database on plot.ly. The data is added to one list and then the euclidean distance between each city with the total temperature data is found and that is plotted