import numpy as np

import scipy.stats as S

def readdata(filename):

fileobj = open(filename, 'r')

outputstr = fileobj.readlines()

fileobj.close()

outputarray = np.zeros(len(outputstr))

for i in np.arange(len(outputstr)):

outputarray[i] = float(outputstr[i])

return outputarray

data1 = readdata('hw3\_01srh1.txt')

data2 = readdata('hw3\_01srh2.txt')

data3 = readdata('hw3\_06srh1.txt')

data4 = readdata('hw3\_06srh2.txt')

data5 = readdata('hw3\_mlcape1.txt')

data6 = readdata('hw3\_micape2.txt')

mean1 = np.mean(data1)

mean2 = np.mean(data2)

mean3 = np.mean(data3)

mean4 = np.mean(data4)

mean5 = np.mean(data5)

mean6 = np.mean(data6)

median1 = np.median(data1)

median2 = np.median(data2)

median3 = np.median(data3)

median4 = np.median(data4)

median5 = np.median(data5)

median6 = np.median(data6)

stdev1 = np.std(data1)

stdev2 = np.std(data2)

stdev3 = np.std(data3)

stdev4 = np.std(data4)

stdev5 = np.std(data5)

stdev6 = np.std(data6)

iqr1 = S.iqr(data1)

iqr2 = S.iqr(data2)

iqr3 = S.iqr(data3)

iqr4 = S.iqr(data4)

iqr5 = S.iqr(data5)

iqr6 = S.iqr(data6)

skewness1 = S.skew(data1)

skewness2 = S.skew(data2)

skewness3 = S.skew(data3)

skewness4 = S.skew(data4)

skewness5 = S.skew(data5)

skewness6 = S.skew(data6)

kurtosis1 = S.kurtosis(data1)

kurtosis2 = S.kurtosis(data2)

kurtosis3 = S.kurtosis(data3)

kurtosis4 = S.kurtosis(data4)

kurtosis5 = S.kurtosis(data5)

kurtosis6 = S.kurtosis(data6)

print('mean: '+str(mean1)+' , '+str(mean2)+' , '+str(mean3)+' , '+str(mean4)+' , '+str(mean5)+' , '+str(mean6))

print('median: '+str(median1)+' , '+str(median2)+' , '+str(median3)+' , '+str(median4)+' , '+str(median5)+' , '+str(median6))

print('Standard Deviation: '+str(stdev1)+' , '+str(stdev2)+' , '+str(stdev3)+' , '+str(stdev4)+' , '+str(stdev5)+' , '+str(stdev6))

print('Interquartile Range: '+str(iqr1)+' , '+str(iqr2)+' , '+str(iqr3)+' , '+str(iqr4)+' , '+str(iqr5)+' , '+str(iqr6))

print('Skewness: '+str(skewness1)+' , '+str(skewness2)+' , '+str(skewness3)+' , '+str(skewness4)+' , '+str(skewness5)+' , '+str(skewness6))

print('Kurtosis: '+str(kurtosis1)+' , '+str(kurtosis2)+' , '+str(kurtosis3)+' , '+str(kurtosis4)+' , '+str(kutosis5)+' , '+str(kurtosis6))