ssignment

Title Assignment 9

Due 16-May-2014 17:00

Grade Scale Points (max 100.0)

Instructions

This tutorial is about files.

Question 1

Write a Python program to analyse student marks read in from a file and determine which students need to see a student advisor. The students who (hypothetically!) need to see a student advisor are those with marks less than one standard deviation below the mean.

The marks file is composed of lines of text, where each line contains a student number and mark separated by a comma.

Remember that the formula for standard deviation is:

standard dev = sqrt (((X1 -µ)2+(X2 -µ)2 +(X3 -µ)2 +…+(XN -1 -µ)2) / N)

where µ is the mean or average and each Xi is a mark.

Before the list of student names, print out the average and standard deviation with 2 decimal points of precision.

Sample File (test1.txt)

Alan,35

Siobhan,23

Mmberengeni,38

Sample I/O

Enter the marks filename:

test1.txt

The average is: 32.00

The std deviation is: 6.48

List of students who need to see an advisor:

Siobhan

Save your program as question1.py. Submit all source files only.

Question 2

Write a program to reformat a text file so that all lines are at most a given length. Do not break up words. Write the formatted text to a new text file.

Treat each set of consecutive non-empty lines as a paragraph - join such lines together with a single space if necessary.

Sample File (input.txt):

Your program should store a single row of the triangle and calculate each subsequent row by adding a value to the values

immediately above it and to its left. The values on each line must be space-separated.

Sample File (output.txt):

Your program should store a single row

of the triangle and calculate each

subsequent row by adding a value to the

values immediately above it and to its

left. The values on each line must be

space-separated.

Sample console I/O: