

AAE 875: Fundamentals of OOP and Data Analytics

Week 4, part 2: More on Lists and Dictionaries

Exercise 1 [Varied amounts of input data]

Statistics are often calculated with varying amounts of input data. Write a program that takes any number of integers as input, and outputs the average and max.

Ex: If the input is 15 20 0 5 the output is 10 20

Exercise 2 [Filter and sort a list]

Write a program that gets a list of integers from input, and outputs non-negative integers in ascending order (lowest to highest).

Ex: If the input is 10 -7 4 39 -6 12 2 the output is 2 4 10 12 39.

For coding simplicity, follow every output value by a space. Do not end with newline.

Exercise 3 [Word frequencies]

Write a program that reads a list of words. Then, the program outputs those words and their frequencies.

Ex: If the input is: hey hi Mark hi mark

the output is:

hey 1

hi 2

Mark 1

hi 2

mark 1

Exercise 4 [Elements in a range]

Write a program that first gets a list of integers from input. That list is followed by two more integers representing lower and upper bounds of a range. Your program should output all integers from the list that are within that range (inclusive of the bounds).

Ex: If the input is 25 51 0 200 33 0 50 the output is 25 0 33.

The bounds are 0-50, so 51 and 200 are out of range and thus not output.

For coding simplicity, follow each output integer by a space, even the last one. Do not end with newline.