Exercise (H3.1)

Write a function that reverses a given tuple (with and without slicing).

E.g., given the tuple (1, 2, 3, 4), the function returns the tuple (4, 3, 2, 1).

Exercise (H3.2)

Write a function that given a tuple, concatenates and returns all the strings in the tuple.

E.g., given the tuple (1, “hello”, False, “ ”, world”, 2.5, “!”), the function returns the string “hello world!”.

Exercise (H3.3)

Write a function that given a tuple of tuples formed by a string and a number, e.g., ((“a”, 13),(“b”, 22),(“c”, 30)), returns a tuple containing the average and the maximum of the numbers in the tuples, as well as the string belonging to the tuple with the maximum number.

E.g., given the tuple above, the function returns the tuple (21.666, 30, “c”).

Exercise (H3.4)

Write a function that given a tuple of tuples containing only numbers, checks if the minimum value in each tuple is the same; if it is the case, prints the minimum value.

E.g., given the tuples (1, 13, 12), (5, 1), (6, 1, 3, 2), the function returns True and prints 1.

Exercise (H3.5)

Write a function that given a tuple, prints all the tuples containing the first i elements of the given tuple for each possible value of i.

E.g., given the tuple (1, 13, “ciao”, True), the function prints the following tuples:

()

(1,)

(1, 13)

(1, 13, “ciao”)

(1, 13, “ciao”, True)

Exercise (H3.6)

Write a function that given a nested tuple (which may contain tuples containing tuples etc), prints the elements of the tuple. You need to first flatten the tuple.

E.g., given the tuple (1, 2, (3.1, 3.2), 4, 5, (6.1, (6.2.1, 6.2.2), 6.3), 7), the function prints
1 2 3.1 3.2 4 5 6.1 6.2.1 6.2.2 6.3 7