Tuples and Dictionary

PRACTICE PROBLEM

1. Write a Python program to sort a tuple by its float element.

Sample data: [('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')]
Expected Output: [('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20')]

2. Write a Python program to replace the last value of tuples in a list.

Sample list: [(10, 20, 40), (40, 50, 60), (70, 80, 90)]
Expected Output: [(10, 20, 100), (40, 50, 100), (70, 80, 100)]

3. Write a Python program to combine two dictionary by adding values for common keys.
d1 = {'a': 100, 'b': 200, 'c':300}
d2 = {'a': 300, 'b': 200, 'd':400}
Sample output: Counter({'a': 400, 'b': 400, 'd': 400, 'c': 300})

4. Write a Python program to print the employee details with Employee ID as keys.

Employees={‘Ajay’=10001, ‘Sheela’=10002, ‘Goyal’=’10003}

Insert the employees whoever joining further are to get new employee id in the sequence order.

5. Write a Python program to create and display all combinations of letters, selecting each letter from a different key in a dictionary.

Sample data : {'1':['a','b'], '2':['c','d']}
Expected Output:
ac
ad
bc
bd

6. Write a Python program to create a dictionary from a string.
Note: Track the count of the letters from the string.

Sample string : 'Welcome'
Expected output: {'W': 1, 'e': 2, 'l': 2, 'c': 2, 'o': 1, 'm': 1, 'e': 2}

7. Write a Python program to convert more than one list to a nested dictionary.
Original strings:

['S001', 'S002', 'S003', 'S004']
['Adina Park', 'Leyton Marsh', 'Duncan Boyle', 'Saim Richards']
[85, 98, 89, 92]

Nested dictionary:
[{'S001': {'Adina Park': 85}}, {'S002': {'Leyton Marsh': 98}}, {'S003': {'Duncan Boyle': 89}}, {'S004': {'Saim Richards': 92}}]

8. Write a Python program to filter the height and width of students, which are stored in a dictionary.
Original Dictionary:
{'Cierra Vega': (6.2, 70), 'Alden Cantrell': (5.9, 65), 'Kierra Gentry': (6.0, 68), 'Pierre Cox': (5.8, 66)}
Height > 6ft and Weight> 70kg:
{'Cierra Vega': (6.2, 70)}

9. Write a Python program to convert string values of a given dictionary into integer/float datatypes.
Original list:
[{'x': '10', 'y': '20', 'z': '30'}, {'p': '40', 'q': '50', 'r': '60'}]
String values of a given dictionary, into integer types:
[{'x': 10, 'y': 20, 'z': 30}, {'p': 40, 'q': 50, 'r': 60}]
Original list:
[{'x': '10.12', 'y': '20.23', 'z': '30'}, {'p': '40.00', 'q': '50.19', 'r': '60.99'}]
String values of a given dictionary, into float types:
[{'x': 10.12, 'y': 20.23, 'z': 30.0}, {'p': 40.0, 'q': 50.19, 'r': 60.99}]