Module 5.5 Week 02 Practice Day 01

1. Write a program to create a function `show_employee()` using the following conditions -
    a. It should accept the employee's name and salary and display both using a f string.
    b. If the salary is missing in the function call then assign default value 9000 to salary
    c. If the name is missing then assign a default value anonymous

2. Write a program to create function `calculation()` such that it can accept two variables and calculate addition and subtraction. Also, it must return both addition and subtraction in a single return call. Receive the returned values and print the type.
    HInts: Please google how to return multiple values from a function in python

3. Write a program to add two lists index-wise. Create a new list that contains the 0th index item from both the list, then the 1st index item, and so on till the last element. any leftover items will get added at the end of the new list

    Sample Input:
    list1 = ["M", "na", "i", "Bo"]
    list2 = ["y", "me", "s", "nd"]

    Sample Output:
    ['My', 'name', 'is', 'Bond']

4. Given a two Python list. Write a program to iterate both lists simultaneously and display items from list1 in original order and items from list2 in reverse order
    Hints: Search google about `zip()` function

    Sample Input:
    list1 = [10, 20, 30, 40]
    list2 = [100, 200, 300, 400]

Sample Output:
10 400
20 300
30 200
40 100

5. Below are the two lists. Write a Python program to convert them into a dictionary in a way that item from list1 is the key and item from list2 is the value
Hints: Search about `dict()` function

keys = ['Ten', 'Twenty', 'Thirty']
values = [10, 20, 30]

Expected Output:
{'Ten': 10, 'Twenty': 20, 'Thirty': 30}

6. Write a Python program to create a new dictionary by extracting the mentioned keys from the below dictionary
Hints: Search about Dictionary Comprehension

Given dictionary:
sample_dict = {
    "name": "Kelly",
    "age": 25,
    "salary": 8000,
    "city": "New york"}

# Keys to extract
keys = ["name", "salary"]

Expected Output:
{'name': 'Kelly', 'salary': 8000}

7. We know how to check if the key exists in a dictionary. Sometimes it is required to check if the given value is present.
Write a Python program to check if value 100 exists in the following dictionary. If it is present print "present" otherwise print "not present"

Sample Dictionary:

sample_dict = {'a': 100, 'b': 200, 'c': 300}

Expected Output:
present

8. Given is a nested tuple. Write a program to modify the first item (22) of a list inside a following tuple to 222

    Given Tuple:
    tuple1 = (11, [22, 33], 44, 55)

    Expected Output:
    (11, [222, 33], 44, 55)

9. Counts the number of occurrences of item 50 from a tuple
    Hints: Search about `count()` function

    Given Tuple:
    tuple1 = (50, 10, 60, 70, 50)

    Expected Output:
    2

10. Given two Python sets, write a Python program to update the first set with items that exist only in the first set and not in the second set

    Hints: Search about `difference_update()` function in set

    Given Sets
    set1 = {10, 20, 30}
    set2 = {20, 40, 50}

    Expected Output:
    {10, 30}