Exercise 2: (suggested time 3 hours)

1. Write a Python script to calculate length of a given string

2. Write a Python script to count the number of occurances of a given character in the string.
   Accept the character with -c command line argument and the input string with -i command line argument
   Eg:
      Command: myscript.py -i "My string is this" -c "s"
      Output: The occurance of [s] in the given string is [3] times

3. Write a Python script to swap two words in the give string
   Eg:
      Input String: "Hello World"
      Output String: "World Hello"

4. Write a Python program to count occurrences of a substring in a string
   Eg:
      Input String: "This is a sample text. Use this text for testing your sample script"
      Count the occurences of words: sample, text and string.

Exercise 2 (Continued): (suggested time 3 hours)

1. Write a program to iterate through a list and print every item in the list.

2. Write a Python program to find the index of an item in a specified list.
   Eg: mylist = ['red', 'green', 'blue', 'yellow', 'black']
   Output should return the index for item 'blue'

3. Write a Python program to check a list is empty or not.
   Eg: If mylist = []
   the it should be true, else it should be false

4. Write a Python program to remove duplicates from a list.

5. Write a program to replace the last item of the list with another list
   Eg: Input is mylist1 = [1,2,3,4,5], mylist2 = [5,6,7,8,9]
   The output should be [1,2,3,4,5,6,7,8,9]

Exercise 2 (Continued): (suggested time 3 hours)

1. Write a Python script to add new key,value pairs to an empty dictionary.
   Eg: Start with myDict = {}
   Then add key, value pairs like (1,red), (2, green), (3, blue)

2. Write a Python script to concatenate following dictionaries to create a new one.
   Eg: myDict1 = {1:red, 2:green, 3:blue}
   myDict2 = {4:yello, 5: green}
   Expected output = {1:red, 2:green, 3:blue, 4:yello, 5: green}

3. Write a program to add multiple values to a key.
   Eg: a = {}
   key = "somekey"
   a.setdefault(key, [])
   a[key].append(1)

4. Write a Python program to convert a list to a tuple