ICTPRG302 - Apply introductory programming techniques –

Session 9 Worksheet

Tuples and Dictionaries

Task 1. Write a Python program to add an item in a tuple. Use the following code.

# create a tuple

tuple1 = (1, 2, 3, 3, 4, 2)

print(tuple1)

# tuples are immutable, so you cannot new elements

tuple2 = (3,)

# Concatenating tuples

tuple3 = tuple1 + ? #replace ? with your code

print(tuple3)

# adding items in a specific index

tuple3 = tuple3[:4] + (3,) + tuple3[4:]

print(?) # replace ? with your code

# converting the tuple to list

my\_list = list(tuple3)

# use different ways to add items in list

my\_list.append(3)

tuple3 = tuple(?) # replace ? with your code

print(tuple3)

Output:

Text, letter

Description automatically generated

Task 2. Write a Python script to check whether a given key already exists in a dictionary. Use the following code.

# Intialize a dictionary

dict\_students = {"Joe": 17, "Jack": 18, "Jim": 20}

new\_student = "Jane"

if new\_student in dict\_students.keys():

print("Key is present.")

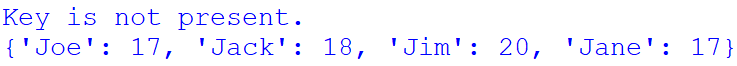
else:

print ("Key is not present.")

dict\_students[?] = 17 # replace ? with your code

print(?) # replace ? with your code

Output:



Task 3. Write a Python program to sort a given dictionary by key. Use the following code.

ascii\_dict = {'a':'97',

'A':'65',

'b':'98',

'B':'66',

'z':'122',

'K':'75',

'C':'?'} # write your code instead of ?, ASCII C = 67

for i in sorted(?): # write your code instead of ?

print("Letter:%s ASCII Code:%s" % (i, ascii\_dict[i]))

Output:

Text, letter

Description automatically generated