**Exercise no:** 6

**Date**: 23/11/2020

**Aim:** To predict the output for the given python program.

**Program:**

PREDICT THE OUTPUT:

# Create a tuple, also called tuple packing.

Numbers = 1, 2

Print(numbers)

(1, 2)

# Create tuple with paranthesis.

Numbers = (1, 2, 3)

Print(numbers)

(1, 2, 3)

# Create an empty tuple.

Numbers = ()

Print(numbers)

()

# Create a tuple with one item. Note that the trailing comma is

Necessary

Numbers = 1,

Print(numbers)

1

# Create a tuple with heterogenous items.

Random\_tuple = “Hey”, (1, 2), 1, [“you”]

Print(random\_tuple)

(‘Hey’, (1, 2), 1, [‘you’])

# Create tuple with tuple() constructor.

Numbers = tuple()

Print(numbers)

()

Numbers = tuple([1, 2]) # Takes any sequence as input

Print(numbers)

(1,2)

#### Methods on tuples #####

# Get length of list by using len() method.

Numbers = 5, 8, 8

Print(len(numbers))

3

# Get index of an element using the index() method.

Numbers = 5, 8, 8

Print(numbers.index(8))

1

# Count occurences of an item in a tuple.

ByNumbers = 5, 8, 8

Print(numbers.count(8))

2

Eggs = (‘hello’, 42, 0.5)

Eggs[0]

‘hello’

Hello

Eggs[1:3]

(42, 0.5)

Len(eggs)

3

# Access elements of a tuple by indexing.

Str\_tuple = “hey”, “there!”, “how”, “are”, “you?”

Print(str\_tuple[0])

Hey

Print(str\_tuple[len(str\_tuple) – 1])

You?

Print(str\_tuple[-1])

You?

# Slicing a tuple.

Str\_tuple = “hey”, “there!”, “how”, “are”, “you?”

Print(str\_tuple[2:])

(‘how’, ‘are’, ‘you?’)

Print(str\_tuple[:2])

(‘hey’, ‘there!’)

Print(str\_tuple[-3:])

(‘how’, ‘are’, ‘you?’)

Print(str\_tuple[:-3])

(‘hey’, ‘there!’)

Print(str\_tuple[1:4])

(‘there!’, ‘how’, ‘are’)

# Get a copy of the tuple by slicing.

Print(str\_tuple[:])

(‘hey’, ‘there!’, ‘how’, ‘are’, ‘you?’)

# Concatenate tuples.

Numbers = (1, 2)

Strings = (“Hey”, “there”)

Print(numbers + strings)

(5, 8, 8, ‘Hey’, ‘there’)

(1, 2, “Hey”, “there”)

# Looping through tuple using ‘in’.

Numbers = 1, 2

For number in numbers:

Print(number)

1,2

1 2

# Check if element is present in tuple.

Numbers = 1, 2

Print(1 in numbers)

True

Print(5 in numbers)

False

# Tuple packing.

# We are packing two items 1 and 2 into the tuple.

Numbers = 1, 2

# Tuple sequence unpacking.

# Number of variables used has to be same as the number of

Items in the tuple.

# Unpacking the tuple and assigning its items to x and y.

X, y = numbers

# Note that this is also packing the args as a tuple which gets

Unpacked as the print method’s arguments.

Print(x, y)

1 2

**Result:** The output of the given program is obtained