**EXERCISE:6**

**DATE:10/11/2020**

**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.**

*numbers = 5, 8, 8*

*print(numbers.count(8))*

*2*

*eggs = ('hello', 42, 0.5)*

*eggs[0]*

*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)*

*(1, 2, ‘Hey’, ‘there’)*

**# Looping through tuple using 'in'.**

*numbers = 1, 2*

*for number in numbers:*

*print(number)*

*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 prediction is done.*