**Exercise No:6**

**Date:14-10-2020**

**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 parenthesis.**

**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 occurrences of an item in a tuple.**

**numbers = 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)**

**(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**

**Link:**

[**http://103.53.53.18/mod/hvp/view.php?id=238**](http://103.53.53.18/mod/hvp/view.php?id=238)

**Result:**

**The output for the given program is obtained.**