

## Exercise on Tuple

1. Write a Python program to calculate the average value of the numbers in a given tuple of tuples.

Original Tuple:

((10, 10, 10, 12), (30, 45, 56, 45), (81, 80, 39, 32), (1, 2, 3, 4))

Average value of the numbers of the said tuple of tuples:

[30.5, 34.25, 27.0, 23.25]

Original Tuple:

((1, 1, -5), (30, -15, 56), (81, -60, -39), (-10, 2, 3))

Average value of the numbers of the said tuple of tuples:

[25.5, -18.0, 3.75]

2. Write a Python program to convert a given tuple of positive integers into an integer.

Original tuple:

(1, 2, 3)

Convert the said tuple of positive integers into an integer:

123

Original tuple:

(10, 20, 40, 5, 70)

Convert the said tuple of positive integers into an integer:

102040570

3. Write a Python program to check if a specified element presents in a tuple of tuples.

Original list:

```
((('Red', 'White', 'Blue'), ('Green', 'Pink', 'Purple'), ('Orange', 'Yellow', 'Lime')))
```

Check if White present in said tuple of tuples!

True

Check if White present in said tuple of tuples!

True

Check if Olive present in said tuple of tuples!

False

4. Write a Python program to convert a given list of tuples to a list of lists.

Original list of tuples: [(1, 2), (2, 3), (3, 4)]

Convert the said list of tuples to a list of lists: [[1, 2], [2, 3], [3, 4]]

Original list of tuples: [(1, 2), (2, 3, 5), (3, 4), (2, 3, 4, 2)]

Convert the said list of tuples to a list of lists: [[1, 2], [2, 3, 5], [3, 4], [2, 3, 4, 2]]

4. Swap the following two tuples

t1=(1,2)

t2=(3,4)

5. Sort a tuple of tuples by 2nd item

```
tuple1 = (('a', 23),('b', 37),('c', 11), ('d',29))
```

6. Check if all items in the following tuple are the same

```
tuple1 = (45, 45, 45, 45)
```

**Expected output:**

True