

Date : 27/8/25

Task 4.1

Use Various data types, list, tuples, Dictionary in Python.

AIM : To use various data types , lists , tuples and dictionary in python programming.

ALGORITHM :-

1. Start
2. For adding elements to a list first create a list with name "list" and assign the values within [] brackets , in order to add a new value use the function append () .
3. For removing a specific element use "pop (index value)" or "remove (itemname)".
4. For sorting the elements use "sorted (list)" function.
5. For finding minimum value use "min (list)" and for maximum use "max (list)".
6. Print the output .
7. End .

PROGRAM :-

```
list = [10, 20]
```

```
a = 30
```

```
list.append(a)
```

```
print(list)
```

```
list.pop(1)
```

```
print(list)
```

```
list.remove(10)
```

```
print(list)
```

```
I = [5, 8, 9, 15, 30, 89]
```

```
print(sorted(I))
```

```
print("The minimum value is: ", min(I)).
```

OUTPUT

[10, 20, 30]

[10, 30]

[30]

[5, 8, 9, 15, 30, 89]

The maximum value is : 89

The minimum value is : 5

The average is : 26.0

The sum is : 156.0

$$[0.8, 0.1] = 0.731$$

$$0.8 \approx 0$$

(0.1) hundred - thousand

(0.1) thousand - ten

(0.1) thousand - one

(0.1) thousand - two

(0.1) thousand - three

Print ("The maximum value is: ", max(l)).

Print ("The Sum is: ", sum(l)).

Print ("The average is: ", (sum(l) / len(l))).

Output

41.0

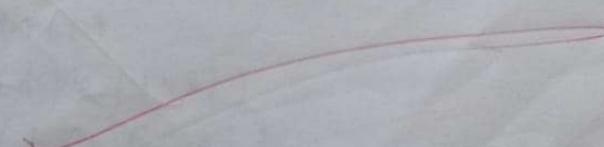
100.0

(41.0, 100.0)

(41.0, 100.0)

Define a tuple with elements of different types.

For example, (1, "Hello", 3.14, [1, 2, 3]).



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Task-4.2

AIM :- To write a python program that demonstrate various operation on tuples, highlighting their immutability and usage.

ALGORITHM :-

1. Start
2. To create a tuple use "tuple-name = (values)".
3. To access the elements of a tuple either use the index values or the tuple slicing.
4. To concatenate tuples elements by arranging the values directly like,
5. Print the output.
6. Stop

PROGRAM :-

Define a tuple with elements of different data types
(10, 'Hello', 3.14, 'World').

tuple = (10, 'Hello', 3.14, 'World').

Print (tuple).

for i in tuple:

 Print(i)

 Print (tuple [1:3])

 Print (tuple [-1])

 t2 = (5, 0.5)

 t3 = tuple + t2.

 Print (t3)

 tuple (3) = "PQ"

OUTPUT :-

(10, 'Hello', 3.14, ('World'))

10

Hello

3.14

world

('Hello', 3.14)

(10, 'Hello', 3.14)

code 82718125

Task - 4.3

AIM :- To Write a python program that demonstrates various operations on dictionaries as key-value pair collection.

ALGORITHM :-

1. Start the program.
2. Define a dictionary with key-values pairs of different data types.
3. Retrieve values from the dictionary using their corresponding keys.
4. Modify Dictionary.
5. Iterate over dictionary
6. Stop.

PROGRAM :-

```
dictionary = {'name': 'Alice', 'age': 30, 'city':  
             'New York'}
```

```
Print (dictionary)
```

```
Print [dictionary ['name']]
```

```
Print [dictionary ['age']]
```

```
dictionary ['name'] = "James"
```

```
Print (dictionary)
```

```
dictionary . pop ('city')
```

```
Print (dictionary)
```

```
For k in dictionary
```

```
    Print ("Key : ", k)
```

```
Print (dictionary . items ())
```

VEL TECH - CSE	
EX NO.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (3)	
VIVA VOCE (3)	
RECORD (4)	
TOTAL (15)	
SIGN WITH DATE	

RESULT :- Thus, the various data types in python program was used and verified successfully.

S.P. - 2007

28/3/17

OUTPUT :-

{'name': 'Alice', 'age': 30, 'city': 'New York'}

Alice
30
'New York'

{'name': 'James', 'age': 30, 'city': 'New York'}

{'name': 'James', 'age': 30}

KEY : name
KEY : age

- 2 MARKS

(brown, blue, yellow, red)

(brown, blue, yellow, red) = 160

- 1 MARK

: older of 7

(7) mark

(14) mark

(14) mark

(20, 21) = 41

it + older = 28