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 programing.

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 : 28.0

The sum is : 156.0

```
Print ("The maximum value is : ", max(l)).
Print ("The Sum is : ", sum(l)).
Print ("The average is : ", (sum(l) / ln(l))).
```

Date :- 27/8/25 Task-4.2

AIM :- To write a python program that demonstrate various operation or 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 assigning the values directly like,
5. Print the output.
6. Stop

PROGRAM :-

Define a tuple with elements of different datatypes (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) = "PI"
```

OUTPUT :-

[10, 'hello', 3.14, 'world']

10

hello

3.14

world

('hello', 3.14)

(10, 'hello', 3.14)

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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())
```

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

OUTPUT :-

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

Alice

30

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

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

KEY : name

KEY : age