

PROGRAM 4

Aim: Write a program to implement various types of data structures available in python and their operations.

Code:

```
list = [1, "ananya", 1+1]
print(list)
list[1]
list.append("MODY UNIVERSITY")
print(list)
list.pop()
print(list)

dictionary = { 1:'a', 2:'b'}
print(dictionary)
print(dictionary.keys())
print(dictionary.values())
for index, value in enumerate(dictionary):
    print (index, value , dictionary[value])
for i in dictionary:
    print ("%d %s" %(i, dictionary[i]))
print(1 in dictionary)
del dictionary[1]
print(dictionary)
print(1 in dictionary)

tuple = (1,"ananya", 1+2)
print(tuple)
print(tuple[1])
tuple[2]

set = set()
for i in range(1,10):
    set.add(i)
print(set)
print("set =",set)
```

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Output:

```
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[Icons] [Run] [Code]

In [3]: list = [1, "ananya", 1+1]

In [4]: print(list)
[1, 'ananya', 2]

In [5]: list[1]
Out[5]: 'ananya'

In [6]: list.append("MODY UNIVERSITY")

In [7]: print(list)
[1, 'ananya', 2, 'MODY UNIVERSITY']

In [8]: list.pop()
Out[8]: 'MODY UNIVERSITY'

In [9]: print(list)
[1, 'ananya', 2]
```

```
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In [18]: dictionary = { 1:'a', 2:'b'}

In [19]: print(dictionary)
{1: 'a', 2: 'b'}

In [21]: print(dictionary.keys())
dict_keys([1, 2])

In [22]: print(dictionary.values())
dict_values(['a', 'b'])

In [40]: for index, value in enumerate(dictionary):
        print (index, value , dictionary[value])
0 1 a
1 2 b

In [46]: for i in dictionary:
        print ("%d %s" %(i, dictionary[i]))
1 a
2 b

In [47]: print(1 in dictionary)
True

In [48]: del dictionary[1]

In [49]: print(dictionary)
{2: 'b'}
```

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```
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In [50]: print(1 in dictionary)
False

In [51]: tuple = (1,"ananya", 1+2)

In [52]: print(tuple)
(1, 'ananya', 3)

In [53]: print(tuple[1])
ananya

In [56]: tuple[2]
Out[56]: 3
```

```
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ananya

In [56]: tuple[2]
Out[56]: 3

In [57]: set = set()

In [59]: for i in range(1,10):
          set.add(i)

In [60]: print(set)
{1, 2, 3, 4, 5, 6, 7, 8, 9}

In [62]: print("set =",set)
set = {1, 2, 3, 4, 5, 6, 7, 8, 9}
```