ASSIGNMENT 18-07-25

a = [25 , 10.8 , 'Hyd' , True , 3 + 4j , None , 'Hyd' , 25]

🡪[25, 10.8, 'Hyd', True, (3+4j), None, 'Hyd', 25]

print(a)

🡪[25, 10.8, 'Hyd', True, (3+4j), None, 'Hyd', 25]

print(\*a)

only elements are printed 🡪25 10.8 Hyd True (3+4j) None Hyd 25

print(type(a))

🡪<class 'list'>

print(id(a))

* Id of a is : 140304613267456

print(len(a))

🡪 length is 8

a[2] = 'Sec'

print(a)

Before changing 🡪[25, 10.8, 'Hyd', True, (3+4j), None, 'Hyd', 25]

After changing 🡪[25, 10.8, sec, True, (3+4j), None, 'Hyd', 25]

* Change element at 2nd index

print(a[2 : 5])

🡪sec , True , (3+4j) // output from 2 to 5

a = [ ]

print(a)

🡪[ ]

a . append(25)

🡪[25]

a . append(10.8)

🡪 [25 , 10.8]

a . append('Hyd')

🡪 [25 , 10.8 , ‘HYD’]

a . append(True)

🡪 [25 , 10.8, ‘HYD’, True]

print(a)

🡪[25 , 10.8, ‘HYD’, True]

a . remove('Hyd')

🡺[ 25 , 10.8, True]

print(a)

a = [25 , 10.8 , True]

a . remove('25')

print(a)

🡪ERROR // 25 is a not a string in above list

print(a)

🡪 a = [25 , 10.8 , True]

print(id(a))

* Id is 140553662739136

print(a \* 3) : [25 , 10.8 , True, 25 , 10.8 , True , 25 , 10.8 , True]

print(a \* 2) : [ 25 , 10.8 , True , 25 , 10.8 , True ]

print(a \* 1) : [ 25 , 10.8 , True]

print(a \* 0) : EMPTY list [ ]

print(a \* -1) : empty list [ ]

print(a \* 4.0) : // error , not allowed as float m

a = a \* 3

print(a)

* [25 , 10.8 , True, 25 , 10.8 , True , 25 , 10.8 , True]

print(id(a)) : 140384293475328

a = [25]

print(a \* a): not possible to multiply a list by list

a = [ ] // all are empty list related

print(type(a)) : <class 'list'>

print(a) : [ ]

print(len(a)) : ‘ 0 ‘ because no elements are founded

b = list() : [ ]

print(b) : 0 & print(len(b)) : 0

# Slice demo program (Home work)

# 0 1 2 3 4 5 6 7

list = [25 , 10.8 , 3 + 4j , 'Hyd' , True , None , 10.8 , 'Hyd']

# -8 -7 -6 -5 -4 -3 -2 -1

print(list[2 : 7])

🡪[3 + 4j , 'Hyd' , True , None , 10.8 ]

print(list[ : : ])

* list = [25 , 10.8 , 3 + 4j , 'Hyd' , True , None , 10.8 , 'Hyd']

# list[0 : 8 : 1] ---> List from indexes 0 to 7 in steps of 1 i.e. [25 , 10.8 , 3 + 4j , 'Hyd' , True , None , 10.8 , 'Hyd']

print(list[ : : -1])

* ['Hyd', 10.8, None, True, 'Hyd', (3+4j), 10.8, 25]

print(list[ : : 2])

🡪 [25, (3+4j), True, 10.8]

print(list[1 : : 2])

* [10.8, 'Hyd', None, 'Hyd']

print(list[ : : -2]) # list[-1 : -9 : -2] ---> List from indexes -1 to -8 in steps of -2 i.e. ['Hyd' , None , 'Hyd' , 10.8]

print(list[-2 : : -2])

* [10.8, True, (3+4j)]

print(list[1 : 4])

* [10.8, (3+4j), 'Hyd']

print(list[-4 : -1])

* [True, None, 10.8]

print(list[3 : -3])

* ['Hyd', True]

print(list[2 : -5])

* Empty lit

print(list[-1:-5])

* Empty list

# Find outputs (Home work)

# 0 1 2 3 4

a = [10 , 20 , 30 , 40 , 50]

print(a , id(a))

* [10, 20, 30, 40, 50] id :

a[1 : 4] = [60 , 70]

print(a , id(a))

* [10, 60, 70, 50] // replacing in that place

a[2: 4] = [100 , 200 , 300]

print(a , id(a))

* [10, 60, 100, 200, 300] , id :

# Find outputs (Home work)

# 0 1 2 3 4 5 6 7

list = [25 , 10.8 , 3+4j , 'Hyd' , True , None , 10.8 , 'Hyd']

x , y = list[3 : 5]

print('x : ' , x) 🡪 x: Hyd

print('y : ' , y) 🡪 y: True

for x in list[2:7]:

print(x)

* [3+4j, 'Hyd', True, None, 10.8]

🡪 (3+4j)

* Hyd
* True
* None
* 10.8

# Find outputs (Home work)

a = [25]

print(a[1])🡪 no value

print(a[1:]) 🡪 no value

# Find outputs (Home work)

a = (25)

print(type(a)) : <class 'int'>

b = 25,

print(type(b)) : <class ‘tuple ‘>

c = 25

print(type(c)) <class 'int'>

print(type(d)) : <class ‘tuple ‘>

print(a \* 4) 🡪 25\*4 =100

print(b \* 4) 🡪 (25,)\*4=(25 , 25 ,25 ,25 )

print(c \* 4) 🡪 25\*4=100

print(d \* 4) 🡪 (25,)\*4 =(25 , 25 , 25 , 25)

# Find outputs (Home work)

a = () print(type(a))

🡪<class 'tuple'>

print(a)

* () empty tuple

print(len(a)) : 0 // no elements

b = tuple()

print(b) : () // empty tuple

print(len(b)) : 0 no elements

# Tricky program

# Find outputs (Home work)

a = (10 , 20 , 30)

print(a)

* (10 , 20 , 30 )

print(id(a)) : 140548171502720

a = a \* 2

* ( 10 , 20 , 30 , 10 , 20 , 30 )

print(a)

* ( 10 , 20 , 30 , 10 , 20 , 30 )

print(id(a)): 140548171502992

# set object demo program (Home work)

a = {25 , 10.8 , 'Hyd' , True , 3+4j , None , 25 , 'Hyd'}

print(a)

* {25 , 10.8 , 'Hyd' , True , 3+4j , None , 25 , 'Hyd'}

print(type(a))

🡪 < class ‘set’ >

print(len(a)) : 8

print(a[2]) : error

print(a[1 : 4])

* {25 , 10.8, ‘Hyd’ , True }

a[2] = 'Sec'

* Error , because 2nd index having float type

print(a \* 2) & print(a \* a)

* Set is Not support for set multiplication

# Tricky program

# Find outputs (Home work)

a = {1 , 'Hyd' , False , True , 0.0 , '' , 1.0 , 0}

print(a)

* {1 , 'Hyd' , False , True , 0.0 , '' , 1.0 , 0}

print(len(a)) : 4

print(type(a)) : < class ‘set’>

# Find outputs (Home work)

a = [ ]

b = ( )

c = {}

d = set()

print(type(a))

* < class ‘list’>

print(type(b))

* <class ‘tuple’>

print(type(c))

* <class ‘dict>

print(type(d))

* < class ‘set’>

print(a) : empt list [ ]

print(b) : empty tuple ( )

print(c) : empty dict { }

print(d) : empty set { }

// because all of above are empty so no values are in above

# Tricky program

# add() and remove() methods (Home work)

a = set()

a . add(25)

a . add(10.8)

a . add('Hyd')

a . add(True)

a . add(None)

a . add('Hyd')

a . add(1)

print(a)

* a={ 25 , 10.8 , ‘Hyd , True , None }

print(len(a)) : 5

a . remove(25)

print(a)

* { 10.8 , ‘Hyd’ , True , None , 1}

a . append(100)

* Error

a . add(set())

* Error

a . add(())

* Tuple can added into set like { ( ) }

a . add([])

print(a)

🡪 Error // no list is added to set

a . add({}) 🡪 no dictionary is alse added

# How to print set in two differnet ways (Home work)

a = {25 , True , 'Hyd' , 10.8}

print('set with print function')

* print(a)

print(How to print set)

print('Iterate thru set with for loop')

* for item in a:

print(item)

How to iterate thru set  with  for  loop

* True
* 10.8
* Hyd
* 25