

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**MIT SCHOOL OF COMPUTING, MIT ADT UNIVERSITY**

**RAJBAUG, LONI KALBHOR, PUNE**

**Python Lab Assignment**

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**SY IT DA**

1. **Print “Hello world”**

**Code :-**

         print("Hello, World!")

**Output :-**

          Hello, World!

**2)Create a variable**

**Code :-**

           x = 5

           y = "John"

           print(x)

           print(y)

**Output :-**

            5

            John

**3)Verify the type of an object**

**Code :-**

     x = 1

    y = 2.8

    z = 1j

   print(type(x))

   print(type(y))

   print(type(z))

**Output :-**

  <class 'int'>

  <class 'float'>

  <class 'complex'>

**4)  Getting the Data Type(str)**

**Code :-**

  x = str("Hello World")

  print(x)

 print(type(x))

**Output :-**

  Hello World

<class 'str'>

**5) Getting the Data Type(List)**

**Code :-**

List = [1, 2, 4, 4, 3, 3, 3, 6, 5]

   print("Original list ", List)

   List[3] = 77

   print("Example to show mutability ", List)

**Output :-**

     Original list  [1, 2, 4, 4, 3, 3, 3, 6, 5]

     Example to show mutability  [1, 2, 4, 77, 3, 3, 3, 6, 5]

**6)Getting the Data Type(Tuple)**

**Code :-**

 tuple1=("a","b","c","d","e","f")

      print(tuple1)

     for i in tuple1:

     print(i)

     print(tuple1[2:4])

     print(type(tuple1))

**Output :-**

('a', 'b', 'c', 'd', 'e', 'f')

a

b

c

d

e

f

('c', 'd')

<class 'tuple'>

**7) List operation**

**Code :-**

list1=["a","b","c","d","e","f"]

print(list1)

list1.append("g")

print(list1)

#append add at last

list1.insert(1,"Mahima")

print(list1)

#insert add in b'/w list

list2=["Z","A","B","C","D"]

print(list2)

list1.extend(list2)

#extends list1 with list2 ask to append with

print(list1)

print(list2)

list1.remove("Mahima")

print(list1)

#removes mahima word

list2.sort()

print(list2)

#ascending

list2.sort(reverse=True)

print(list2)

**Output :-**

['a', 'b', 'c', 'd', 'e', 'f']

['a', 'b', 'c', 'd', 'e', 'f', 'g']

['a', 'Mahima', 'b', 'c', 'd', 'e', 'f', 'g']

['Z', 'A', 'B', 'C', 'D']

['a', 'Mahima', 'b', 'c', 'd', 'e', 'f', 'g', 'Z', 'A', 'B', 'C', 'D']

['Z', 'A', 'B', 'C', 'D']

['a', 'b', 'c', 'd', 'e', 'f', 'g', 'Z', 'A', 'B', 'C', 'D']

['A', 'B', 'C', 'D', 'Z']

['Z', 'D', 'C', 'B', 'A']

**8) Tuple operation perform with the help of  list**

**Code :-**

  #TUPLE OPERATIONS

tuple1=("z","a","b","c","d","e","f")

print(tuple1)

#THIS WILL NOT WORK LIKE LIST OPERATIONS

tuple1.append("g")

print(tuple1)

#append add at last

tuple1.insert(1,"Mahima")

print(tuple1)

#insert add in b'/w list

tuple2=["Z","A","B","C","D"]

print(tuple2)

tuple1.extend(tuple2)

#extends tuple1 with tuple2 ask to append with

tuple1.remove("Mahima")

print(tuple1)

#removes Mahima word

#ascending

tuple1.sort()

print(tuple1)

#descending

tuple1.sort(reverse=True)

print(tuple1)

**Output :-**

('z', 'a', 'b', 'c', 'd', 'e', 'f')

Traceback (most recent call last):

ERROR!

File "<string>", line 6, in <module>

AttributeError: 'tuple' object has no attribute 'append'

**9) Tuple operation**

**Code :-**

#FORCED CONVERSION TUPLE TO LISTS AND VICE VERSA

tuple1=("a","b","c","d","e","f")

list1=list(tuple1)

list2=(1,2,3,4,5)

list1.extend(list2)

print(list1)

tuple1=tuple(list1)

print(tuple1)

13.

#SETS

x={"a","b","c","d"}

print(x)

for i in x:

            print(i)

**Output :-**

['a', 'b', 'c', 'd', 'e', 'f', 1, 2, 3, 4, 5]

('a', 'b', 'c', 'd', 'e', 'f', 1, 2, 3, 4, 5)

{'a', 'b', 'd', 'c'}

a

b

d

c

**10)HERE DUPLICATES ARE NOT ALLOWED**

**code:-**

y={"m","n","o","p","q","r","r"}

print(y)

for i in y:

print(i)

**output :**

ERROR!

File "<string>", line 4

print(i)

IndentationError: expected an indented block after 'for' statement on line 3

**<class 'int'>**

**<class 'float'>**

**<class 'complex'>**

**<class 'int'>**

**<class 'float'>**

**<class 'complex'>**