Set Category Data Types

1.Add():

In [ ]:
```
#This function is used for value to the set
```

In [2]:
```
s1={10,20,"Mahaboob",42.06,"MRIIRS"}
print(s1,type(s1),id(s1))
```

```
{42.06, 20, 'MRIIRS', 10, 'Mahaboob'} <class 'set'> 2549699982976
```

In [4]:
```
s1.add(100)
print(s1,type(s1),id(s1))
```

```
{42.06, 20, 100, 'MRIIRS', 10, 'Mahaboob'} <class 'set'> 2549699982976
```

In [8]:
```
s1.add("CDOE")
print(s1,type(s1),id(s1))
```

```
{42.06, 20, 100, 'MRIIRS', 10, 'CDOE', 'Mahaboob'} <class 'set'> 2549699982976
```

In [15]:
```
s2=set()
print(s2,type(s2),id(s2))
```

```
set() <class 'set'> 2549699983872
```

In [17]:
```
len(s2)
```

Out[17]:
```
0
```

In [25]:
```
s2.add("Mahaboob")
s2.add("MRIIRS")
s2.add(2+3j)
s2.add(30)
s2.add("CDOE")
s2.add(True)
print(s2,type(s2),id(s2))
```

```
{True, (2+3j), 'Mahaboob', 'MRIIRS', 'CDOE', 30} <class 'set'> 2549699983872
```

2.clear():

In [ ]:
```
#This function used for removing all the elements of the set object
#syntax:setobj.clear()
```

In [31]:
```
s2.clear()
print(s2,type(s2),type(id))
```

```
set() <class 'set'> <class 'builtin_function_or_method'>
```

In [33]:
```
len(s2)
```

Out[33]:
```
0
```

In [35]:
```
s1.clear()
print(s1,type(s1),id(s1))
```

```
set() <class 'set'> <class 'builtin_function_or_method'>
```

In [37]:
```
len(s1)
```

Out[37]: 0

3. Remove():

In [ ]:
```
#This function is used for removing specified value from the set object
#if the specified value does not exit than we get key error
```

In [41]:
```
s1={True, (2+3j), 'Mahaboob', 'MRIIRS', 'CDOE', 30}
print(s1,type(s1),id(s1))
```

```
{True, 30, 'MRIIRS', 'CDOE', (2+3j), 'Mahaboob'} <class 'set'> 2549717246560
```

In [43]:
```
s1.remove(True)
print(s1,type(s1),id(s1))
```

```
{30, 'MRIIRS', 'CDOE', (2+3j), 'Mahaboob'} <class 'set'> 2549717246560
```

In [47]:
```
set().remove(100)
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[47], line 1
----> 1 set().remove(100)

KeyError: 100
```

4. Discard()

In [50]:
```
#
```

In [52]:
```
s1={True, (2+3j), 'Mahaboob', 'MRIIRS', 'CDOE', 30}
print(s1,type(s1),id(s1))
```

```
{True, 30, 'MRIIRS', 'CDOE', (2+3j), 'Mahaboob'} <class 'set'> 2549717247680
```

In [54]:
```
s1.discard("Mahaboob")
print(s1,type(s1),id(s1))
```

```
{True, 30, 'MRIIRS', 'CDOE', (2+3j)} <class 'set'> 2549717247680
```

In [56]:
```
s1.discard("MRIIRS")
print(s1,type(s1),id(s1))
```

```
{True, 30, 'CDOE', (2+3j)} <class 'set'> 2549717247680
```

In [58]:
```
s1.discard(True)
print(s1,type(s1),id(s1))
```

```
{30, 'CDOE', (2+3j)} <class 'set'> 2549717247680
```

In [60]:
```
s1.discard("CDOE")
print(s1,type(s1),id(s1))
```

```
{30, (2+3j)} <class 'set'> 2549717247680
```

In [62]:
```
s1.discard(100) # Never get key error
print(s1,type(s1),id(s1))
```

```
{30, (2+3j)} <class 'set'> 2549717247680
```

In [64]:
```
s1.remove(100)
print(s1,type(s1),id(s1))
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[64], line 1
----> 1 s1.remove(100)
      2 print(s1,type(s1),id(s1))

KeyError: 100
```

5.pop():

In [67]:
```
#This function used for removing any arbitrary element
```

In [109…
```
s1={True, (2+3j), 'Mahaboob', 'MRIIRS', 'CDOE', 30}
```

In [77]:
```
s1.pop() #any element will be remove you can't say paticuller element will be remov
```

Out[77]:
```
'CDOE'
```

In [111…
```
s1.pop()
```

Out[111…
```
True
```

In [113…
```
s1.pop()
```

Out[113…
```
30
```

In [115…
```
s1.pop()
```

Out[115…
```
'MRIIRS'
```

In [89]:
```
s1.pop() #emty pop()set gives keyError
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[89], line 1
----> 1 s1.pop()

KeyError: 'pop from an empty set'
```

In [93]:
```
s1={True, (2+3j), 'Mahaboob', 'MRIIRS', 'CDOE', 30}
print(s1,type(s1),id(s1))
```

```
{True, 30, 'MRIIRS', 'CDOE', (2+3j), 'Mahaboob'} <class 'set'> 2549717247680
```

In [95]:
```
s1.pop() ##Order based value will be removed now
```

Out[95]:
```
True
```

In [97]:
```
s1.pop()
```

Out[97]:
```
30
```

In [99]:
```
s1.pop()
```

Out[99]:
```
'MRIIRS'
```

In [101…
```
s1.pop()
```

Out[101…
```
'CDOE'
```

In [103…
```
s1.pop()
```

Out[103…
```
(2+3j)
```

In [105…
```
s1.pop()
```

Out[105…
```
'Mahaboob'
```

In [107…
```
s1.pop()
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[107], line 1
----> 1 s1.pop()

KeyError: 'pop from an empty set'
```

6.Copy()

In [121…
```
#This function is used for copying the content of one set object to another set obj
```

In [123…
```
s1={"MRIIRS",2+3J}
print(s1,type(s1),id(s1))
```

```
{'MRIIRS', (2+3j)} <class 'set'> 2549717247456
```

In [125…
```
s2=s1.copy()
print(s2,type(s2),id(s2))
```

```
{'MRIIRS', (2+3j)} <class 'set'> 2549717251264
```

In [127…
```
s1.add("CDOE")
s2.add("Mahaboob")
```

In [129…
```
print(s1,type(s1),id(s1))
```
```
{'MRIIRS', 'CDOE', (2+3j)} <class 'set'> 2549717247456
```

In [133…
```
s1.add("CDOE")
s2.add("Mahaboob")
```

In [135…
```
print(s2,type(s2),id(s2))
```
```
{'MRIIRS', (2+3j), 'Mahaboob'} <class 'set'> 2549717251264
```

In [143…
```
s1={True, (2+3j), 'Mahaboob', 'MRIIRS', 'CDOE', 30}
print(s1,type(s1),id(s1))
```
```
{True, 30, 'MRIIRS', 'CDOE', (2+3j), 'Mahaboob'} <class 'set'> 2549717247680
```

In [145…
```
del s1[10] #index deletion not possible in set
```
```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[145], line 1
----> 1 del s1[10]

TypeError: 'set' object doesn't support item deletion
```

In [153…
```
del s1[0:4] #Item deletion also not possible in set
```
```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[153], line 1
----> 1 del s1[0:4]

TypeError: 'set' object does not support item deletion
```

7.isdisjoint()

In [174…
```
#syntax:setobj1=isdisjoint(setobj2)
#This function returns to true provided there are no common elements in setobj1 and
#This function returns to false provided there is atleast one common elements in se
```

In [176…
```
s1={10,20,30}
s2={10,40,50}
s3={60,70,80}
```

In [178…
```
print(s1,type(s1))
```
```
{10, 20, 30} <class 'set'>
```

In [180…
```
print(s2,type(s2))
```
```
{40, 10, 50} <class 'set'>
```

In [182…
```
print(s3,type(s3))
```
```
{80, 60, 70} <class 'set'>
```

In [184…
```
s1.isdisjoint(s2) #This function returns to false provided there is atleast one com
```

Out[184…
```
False
```

In [186…
```
s1.isdisjoint(s3) #This function returns to true provided there are no common eleme
```

Out[186…
```
True
```

In [188…
```
s2.isdisjoint(s3)
```

Out[188…
```
True
```

In [ ]:
```

```