In [1]:
```
s ={}
type(s)
```

Out[1]:
```
dict
```

In [2]:
```
s = set()
type(s)
```

Out[2]:
```
set
```

In [4]:
```
s2 = {20,100,3,45}
s2
```

Out[4]:
```
{3, 20, 45, 100}
```

In [5]:
```
s3 ={ 'z','l','c','e','f'}
S3
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[5], line 2
      1 s3 ={ 'z','l','c','e','f'}
----> 2 S3

NameError: name 'S3' is not defined
```

In [6]:
```
s3
```

Out[6]:
```
{'c', 'e', 'f', 'l', 'z'}
```

In [7]:
```
s4 ={'8','z','1'}
s4
```

Out[7]:
```
{'1', '8', 'z'}
```

In [9]:
```
s4 = {1,2,3,'nit',1+2j,[1,2,3],(4,5,6),True}
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[9], line 1
----> 1 s4 = {1,2,3,'nit',1+2j,[1,2,3],(4,5,6),True}

TypeError: unhashable type: 'list'
```

In [10]:
```
s5 = {2, 3.4, 'nit', 1+2j, False}
```

In [11]:
```
s5
```

Out[11]:
```
{(1+2j), 2, 3.4, False, 'nit'}
```

In [13]:
```
s
```

Out[13]:
```
set()
```

In [15]:
```
s2
```

Out[15]:
```
{3, 20, 45, 100}
```

In [16]:
```
s2.add(66)
s2
```

Out[16]:
```
{3, 20, 45, 66, 100}
```

In [ ]:
```
s2[1:5]
```

In [19]:
```
s2
```

Out[19]:
```
{3, 20, 45, 66, 100}
```

In [20]:
```
s5
```

Out[20]:
```
{(1+2j), 2, 3.4, False, 'nit'}
```

In [22]:
```
s4 = s5.copy
s4
```

Out[22]:
```
<function set.copy>
```

In [23]:
```
s4
```

Out[23]:
```
<function set.copy>
```

In [24]:
```
s4.add(2)
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[24], line 1
----> 1 s4.add(2)

AttributeError: 'builtin_function_or_method' object has no attribute 'add'
```

In [25]:
```
s4
```

Out[25]:
```
<function set.copy>
```

In [26]:
```
s5
```

Out[26]:
```
{(1+2j), 2, 3.4, False, 'nit'}
```

In [27]:
```
s10 = s5.copy
s10
```

Out[27]:
```
<function set.copy>
```

In [28]:
```
s5
```

Out[28]:
```
{(1+2j), 2, 3.4, False, 'nit'}
```

In [29]:
```
s5.remove(2)
```

In [30]:
```
s5
```

Out[30]:
```
{(1+2j), 3.4, False, 'nit'}
```

In [31]:
```
s3
```

Out[31]:
```
{'c', 'e', 'f', 'l', 'z'}
```

In [32]:
```
s3.discard(m)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[32], line 1
----> 1 s3.discard(m)

NameError: name 'm' is not defined
```

In [33]:
```
s3.remove(m)
s3
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[33], line 1
----> 1 s3.remove(m)
      2 s3

NameError: name 'm' is not defined
```

In [34]:
```
for i in s3:
    print(i)
```

```
e
c
z
l
f
```

In [36]:
```
for i in s5:
    print(i)
```

```
False
3.4
(1+2j)
nit
```

In [37]:
```
s1
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[37], line 1
----> 1 s1

NameError: name 's1' is not defined
```

In [38]:
```
s2
```

Out[38]: {3, 20, 45, 66, 100}

In [39]:
```
45 in s2
```

Out[39]: True

In [40]:
```
3 in s2
```

Out[40]: True

In [41]:
```
45 in s2
```

Out[41]: True

In [42]:
```
444 in s2
```

Out[42]: False

In [43]:
```
s2
```

Out[43]: {3, 20, 45, 66, 100}

In [44]:
```
s3
```

Out[44]: {'c', 'e', 'f', 'l', 'z'}

In [45]:
```
s2.update(s3)
```

In [46]:
```
s2
```

Out[46]: {100, 20, 3, 45, 66, 'c', 'e', 'f', 'l', 'z'}

In [47]:
```
s3
```

Out[47]: {'c', 'e', 'f', 'l', 'z'}

SET OPERATION

In [48]:
```
s6 ={1,2,3,4,5}
s7={4,5,6,7,8}
s8={8,9,10}
s6
```

```
s7
s8
```

Out[48]: {8, 9, 10}

In [49]:
```
s6
```

Out[49]: {1, 2, 3, 4, 5}

In [50]:
```
s7
```

Out[50]: {4, 5, 6, 7, 8}

In [51]:
```
s8
```

Out[51]: {8, 9, 10}

In [52]:
```
s6.
```

```
  Cell In[52], line 1
    s6.
       ^
SyntaxError: invalid syntax
```

In [53]:
```
s6.union(s7)
```

Out[53]: {1, 2, 3, 4, 5, 6, 7, 8}

In [54]:
```
s6 | s7
```

Out[54]: {1, 2, 3, 4, 5, 6, 7, 8}

In [55]:
```
s19 = s6 | s7
s19
```

Out[55]: {1, 2, 3, 4, 5, 6, 7, 8}

In [56]:
```
s6.intersection(s7)
```

Out[56]: {4, 5}

In [57]:
```
s6
```

Out[57]: {1, 2, 3, 4, 5}

In [58]:
```
s7
```

Out[58]: {4, 5, 6, 7, 8}

In [59]:
```
s7.intersection(s8)
```

Out[59]: {8}

In [60]:
```
s6 & s7
```

Out[60]:
```
{4, 5}
```

In [61]:
```
s6.difference(s7)
```

Out[61]:
```
{1, 2, 3}
```

In [62]:
```
s6.symmetric_difference(s7)
```

Out[62]:
```
{1, 2, 3, 6, 7, 8}
```

In [ ]:
```

```