In [2]:
```
s={}
s
```

Out[2]: {}

In [3]:
```
type(s)
```

Out[3]: dict

In [4]:
```
s1=set()
type(s1)
```

Out[4]: set

In [5]:
```
s1={100,20,3,15,47}
s1
```

Out[5]: {3, 15, 20, 47, 100}

In [7]:
```
s2={2.3,4.3,1.3}
s2
```

Out[7]: {1.3, 2.3, 4.3}

In [8]:
```
s3={'a','d','i','g'}
s3
```

Out[8]: {'a', 'd', 'g', 'i'}

In [9]:
```
s4={10,2.3,5.8,'ui'}
s4
```

Out[9]: {10, 2.3, 5.8, 'ui'}

In [10]:
```
print(s1)
print(s2)
print(s3)
print(s4)
```

```
{3, 100, 20, 47, 15}
{1.3, 2.3, 4.3}
{'a', 'i', 'd', 'g'}
{'ui', 10, 2.3, 5.8}
```

In [13]:
```
s4.add(10)
s4.add(0)
s4.add(4.5)
s4
```

Out[13]:
```
{0, 10, 2.3, 4.5, 5.8, 'ui'}
```

In [14]:
```
s1
```

Out[14]:
```
{3, 15, 20, 47, 100}
```

In [18]:
```
s1.add(4)
s1
```

Out[18]:
```
{3, 4, 15, 20, 47, 100}
```

In [19]:
```
len(s4)
```

Out[19]:
```
6
```

In [21]:
```
s4.clear()
s4
```

Out[21]:
```
set()
```

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

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[23], line 1
----> 1 del s4
      2 s4

NameError: name 's4' is not defined
```

In [24]:
```
s4=s1.copy()
s4
```

Out[24]: {3, 4, 15, 20, 47, 100}

In [25]:
```
s1==s4
```

Out[25]: True

In [26]:
```
s1.remove(100)
s1
```

Out[26]: {3, 4, 15, 20, 47}

In [ ]:
```
#slicing and indexing not allowed
```

In [27]:
```
s1.pop()
```

Out[27]: 3

In [28]:
```
s2
```

Out[28]: {1.3, 2.3, 4.3}

In [29]:
```
s2.pop()
```

Out[29]: 1.3

In [30]:
```
s3
```

Out[30]: {'a', 'd', 'g', 'i'}

In [31]:
```
s3.pop()
```

Out[31]: 'a'

In [33]:
```
a={1,2,3,4,5}
b={4,5,6,7,8}
c={8,9,10}
```

In [17]:
```
a
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[17], line 1
----> 1 a

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

In [37]:
```
b
```

Out[37]: {4, 5, 6, 7, 8}

In [38]:
```
c
```

Out[38]: {8, 9, 10}

In [39]:
```
a.union(b)
```

Out[39]: {1, 2, 3, 4, 5, 6, 7, 8}

In [40]:
```
print(a)
print(b)
print(c)
```

```
{1, 2, 3, 4, 5}
{4, 5, 6, 7, 8}
{8, 9, 10}
```

In [41]:
```
d_union=a.union(b)
d_union
```

Out[41]: {1, 2, 3, 4, 5, 6, 7, 8}

In [42]:
```
print(a)
print(b)
print(c)
print(d_union)
```

```
{1, 2, 3, 4, 5}
{4, 5, 6, 7, 8}
{8, 9, 10}
{1, 2, 3, 4, 5, 6, 7, 8}
```

In [43]:
```
b.union(a,c)
```

Out[43]: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

In [44]:
```
a|b|c
```

Out[44]: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

In [47]:
```
a.update(b)
```

In [48]:
```
print(a)
print(b)
print(c)
print(d_union)
```

```
{1, 2, 3, 4, 5, 6, 7, 8}
{4, 5, 6, 7, 8}
{8, 9, 10}
{1, 2, 3, 4, 5, 6, 7, 8}
```

In [50]:
```
c.update(b)
c
```

Out[50]: {4, 5, 6, 7, 8, 9, 10}

In [53]:
```
a1={1,2,3,4,5}
b1={4,5,6,7,8}
c1={8,9,10}
```

In [54]:
```
a1.intersection(b1)
```

Out[54]: {4, 5}

In [55]:
```
b1&c1
```

Out[55]: {8}

In [56]:
```
a2={1,2,3,4,5}
b2={4,5,6,7,8}
c2={8,9,10}
```

In [57]:
```
a2-b2
```

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

In [58]:
```
b2-a2
```

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

In [59]:
```
a2-c2
```

Out[59]: {1, 2, 3, 4, 5}

In [60]:
```
c2-a2
```

Out[60]: {8, 9, 10}

In [61]:
```
b2-c2
```

Out[61]: {4, 5, 6, 7}

In [62]:
```
b2.difference(c2)
```

Out[62]: {4, 5, 6, 7}

In [63]:
```
b2.symmetric_difference(c2)
```

Out[63]: {4, 5, 6, 7, 9, 10}

In [1]:
```
a5={1,2,3,4,5}
b5={4,5,6,7,8}
c5={8,9,10}
```

In [2]:
```
a5.issuperset(a5)
```

Out[2]: True

In [3]:
```
a5.issuperset(b5)
```

Out[3]: False

In [4]:
```
a5.isdisjoint(c5)
```

Out[4]: True

In [5]:
```
a5.issubset(b5)
```

Out[5]: False

In [6]:
```
b5.issubset(a5)
```

Out[6]: False

In [10]:
```
a5={1,2,3,4,5,6,7,8}
b5={3,4,5,6,7,8}
c5={10,20,30,40}
```

In [13]:
```
b5.issubset(a5)
```

Out[13]: True

In [14]:
```
a6={1,2,3,4}
b6={5,6,7,8}
c6={10,20,30,40}
```

In [15]:
```
a6.issubset(b6)
```

Out[15]: False

In [19]:
```
a={2,3,4,5}
```

In [20]:
```
sum(a)
```

Out[20]: 14

In [22]:
```
lenght(a)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[22], line 1
----> 1 lenght(a)

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

In [ ]: