SYMMETRIC DIFFERENCE

In [1]:
```
a={1,2,3,4,5}
b={4,5,6,7,8}
a^b
```

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

In [2]:
```
c={8,9,10}
a^c
```

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

In [3]:
```
a^b^c
```

Out[3]: {1, 2, 3, 6, 7, 9, 10}

In [4]:
```
a.symmetric_difference(b)
```

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

In [5]:
```
b.symmetric_difference(c)
```

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

In [7]:
```
 a.symmetric_difference_update(b)
```

In [8]:
```
a^b
```

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

In [9]:
```
a
```

Out[9]: {1, 2, 3, 4, 5}

In [10]:
```
a.symmetric_difference_update(b)
```

In [11]:
```
a
```

Out[11]: {1, 2, 3, 6, 7, 8}

In [ ]:
```

```

SUPERSET SUBSET AND DISJOINT

In [16]:
```
a={1,2,3,4,5,6,7,8,9}
b={3,4,5,6,7,8,9}
```

```
c={10,20,30,40,50}
```

In [17]:
```
a.issuperset(b)
```

Out[17]: True

In [18]:
```
b.issuperset(a)
```

Out[18]: False

In [14]:
```
b.isdisjoint(a)
```

Out[14]: False

In [19]:
```
a
```

Out[19]: {1, 2, 3, 4, 5, 6, 7, 8, 9}

In [20]:
```
a.issubset(b)
```

Out[20]: False

In [21]:
```
b.issubset(a)
```

Out[21]: True

In [22]:
```
c.issuperset(a)
```

Out[22]: False

In [23]:
```
c.disjoint(a,b)
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[23], line 1
----> 1 c.disjoint(a,b)

AttributeError: 'set' object has no attribute 'disjoint'
```

In [24]:
```
c.disjoint(a)
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[24], line 1
----> 1 c.disjoint(a)

AttributeError: 'set' object has no attribute 'disjoint'
```

In [25]:
```
c
```

Out[25]: {10, 20, 30, 40, 50}

In [26]:
```
a
```

Out[26]: {1, 2, 3, 4, 5, 6, 7, 8, 9}

In [27]:
```
b
```

Out[27]: {3, 4, 5, 6, 7, 8, 9}

In [29]:
```
b.isdisjoint(c)
```

Out[29]: True

In [30]:
```
a.isdisjoint(b)
```

Out[30]: False

SUM FUNCTION

In [31]:
```
sum(c)
```

Out[31]: 150

In [32]:
```
sum(b)
```

Out[32]: 42

In [33]:
```
sum(a)
```

Out[33]: 45

MAX FUNCTION

In [34]:
```
max(a)
```

Out[34]: 9

In [35]:
```
max(b)
```

Out[35]: 9

In [36]:
```
max(c)
```

Out[36]: 50

MIN FUNCTION

In [ ]:
```

```

In [37]:
```
min(a)
```

Out[37]: 1

In [38]:
```
min(b)
```

Out[38]: 3

min(c)

In [39]:
```
min(c)
```

Out[39]: 10

LENGTH

In [40]:
```
len(a)
```

Out[40]: 9

In [41]:
```
len(b)
```

Out[41]: 7

In [42]:
```
len(c)
```

Out[42]: 5

In [43]:
```
list(enumerate(a))
```

Out[43]: [(0, 1), (1, 2), (2, 3), (3, 4), (4, 5), (5, 6), (6, 7), (7, 8), (8, 9)]

In [44]:
```
list(enumerate(b))
```

Out[44]: [(0, 3), (1, 4), (2, 5), (3, 6), (4, 7), (5, 8), (6, 9)]

In [45]:
```
list(enumerate(c))
```

Out[45]: [(0, 50), (1, 20), (2, 40), (3, 10), (4, 30)]

In [46]:
```
for i in a:
    print(i)
```

```
1
2
3
4
5
6
7
8
9
```

In [48]:
```
for i in b:
    print(i)
```

```
3
4
5
6
7
8
9
```

In [49]:
```
for i in c:
    print(i)
```

```
50
20
40
10
30
```

In [50]:
```
c
```

Out[50]:
```
{10, 20, 30, 40, 50}
```

In [51]:
```
sort(a)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[51], line 1
----> 1 sort(a)

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

In [52]:
```
sorted(a)
```

Out[52]:
```
[1, 2, 3, 4, 5, 6, 7, 8, 9]
```

In [53]:
```
sorted(c)
```

Out[53]:
```
[10, 20, 30, 40, 50]
```

In [54]:
```
sorted(b)
```

Out[54]:
```
[3, 4, 5, 6, 7, 8, 9]
```

In [55]:
```
d=sorted(a,reverse=True)
```

In [56]:
```
d
```

Out[56]:
```
[9, 8, 7, 6, 5, 4, 3, 2, 1]
```

In [57]:
```
g=sorted(c,reverse=True)
```

In [58]:
```
g
```

Out[58]:
```
[50, 40, 30, 20, 10]
```

DICTIONARY

In [59]:
```
mydict()
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[59], line 1
----> 1 mydict()

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

In [60]:
```
mydict=dict()
mydict
```

Out[60]:
```
{}
```

In [62]:
```
mydict={}
mydict
```

Out[62]:
```
{}
```

DICT CREATION

In [63]:
```
mydict={1:'one',2:'two',3:'three',4:'four'}
mydict
```

Out[63]:
```
{1: 'one', 2: 'two', 3: 'three', 4: 'four'}
```

In [64]:
```
mydict1=dict({5:'five',6:'six',7:'seven'})
```

mydict1

In [65]:
```
mydict1
```

Out[65]:
```
{5: 'five', 6: 'six', 7: 'seven'}
```

DICT WITH CHARACTERS

In [69]:
```
mydict2={'a':'manasa','b':'kishore','c':'sathwik','d':'saakshar'}
mydict2
```

Out[69]:
```
{'a': 'manasa', 'b': 'kishore', 'c': 'sathwik', 'd': 'saakshar'}
```

DICT WITH MIXED KEYS

In [70]:
```
mydict3=dict({1:'manasa','a':'six',3:'manasa'})
```

In [71]:
```
mydict3
```

Out[71]:
```
{1: 'manasa', 'a': 'six', 3: 'manasa'}
```

In [72]:
```
dict.keys(mydict2)
```

Out[72]:
```
dict_keys(['a', 'b', 'c', 'd'])
```

In [73]:
```
dict.keys(mydict3)
```

Out[73]:
```
dict_keys([1, 'a', 3])
```

In [74]:
```
dict.values(mydict2)
```

Out[74]:
```
dict_values(['manasa', 'kishore', 'sathwik', 'saakshar'])
```

In [75]:
```
dict.values(mydict1)
```

Out[75]:
```
dict_values(['five', 'six', 'seven'])
```

In [76]:
```
dict.items(mydict2)
```

Out[76]:
```
dict_items([('a', 'manasa'), ('b', 'kishore'), ('c', 'sathwik'), ('d', 'saaksha
r')])
```

In [77]:
```
for i in mydict2:
    print(i)
```

```
a
b
c
d
```

In [78]:
```
for i in mydict3:
    print(i)
```

```
1
a
3
```

In [79]:
```
dict.add(mydict2)
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[79], line 1
----> 1 dict.add(mydict2)

AttributeError: type object 'dict' has no attribute 'add'
```

In [83]:
```
mydict4=dict({2:'sukanya',6:'manasa',8:'demon',9:['manasa','nistala','ginjala']})
mydict4
```

Out[83]:
```
{2: 'sukanya', 6: 'manasa', 8: 'demon', 9: ['manasa', 'nistala', 'ginjala']}
```

In [85]:
```
mydict5=dict({3:'kishore',4:'manasa','a':['jeevan','bujji','chinnu','chituku'],'b':
mydict5
```

Out[85]:
```
{3: 'kishore',
 4: 'manasa',
 'a': ['jeevan', 'bujji', 'chinnu', 'chituku'],
 'b': [1, 2, 3, 4]}
```

In [95]:
```
keys={1,2,3,4,5}
value=[20,30,50]
mydict6=dict.fromkeys(keys)
```

In [87]:
```
mydict6
```

Out[87]:
```
{1: None, 2: None, 3: None, 4: None, 5: None}
```

In [97]:
```
mydict7=dict.fromkeys(keys,value)
```

In [98]:
```
mydict7
```

Out[98]:
```
{1: [20, 30, 50],
 2: [20, 30, 50],
 3: [20, 30, 50],
 4: [20, 30, 50],
 5: [20, 30, 50]}
```

In [99]:
```
value.append(10)
```

In [100…
```
mydict7
```

Out[100…
```
{1: [20, 30, 50, 10],
 2: [20, 30, 50, 10],
 3: [20, 30, 50, 10],
 4: [20, 30, 50, 10],
 5: [20, 30, 50, 10]}
```

ACCESSING ITEMS

In [101…
```
mydict5
```

Out[101…
```
{3: 'kishore',
 4: 'manasa',
 'a': ['jeevan', 'bujji', 'chinnu', 'chituku'],
 'b': [1, 2, 3, 4]}
```

In [102…
```
mydict4
```

Out[102…
```
{2: 'sukanya', 6: 'manasa', 8: 'demon', 9: ['manasa', 'nistala', 'ginjala']}
```

In [103…
```
mydict4[0]
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[103], line 1
----> 1 mydict4[0]

KeyError: 0
```

In [105…
```
mydict4[6]
```

Out[105…
```
'manasa'
```

In [106…
```
mydict4.get(6)
```

Out[106…
```
'manasa'
```

In [107…
```
mydict4[6]='brecw'
```

In [108…
```
mydict4
```

Out[108…
```
{2: 'sukanya', 6: 'brecw', 8: 'demon', 9: ['manasa', 'nistala', 'ginjala']}
```

In [112…
```
dict4={8:'manasa'}
mydict4.update(dict4)
```

In [113…
```
mydict4
```

Out[113…
```
{2: 'sukanya', 6: 'brecw', 8: 'manasa', 9: ['manasa', 'nistala', 'ginjala']}
```

In [114…
```
mydict4[2]='kishore'
```

In [123…
```
mydict4
```

Out[123…
```
{8: 'manasa'}
```

In [117…
```
mydict4.pop(2)
```

Out[117…
```
'kishore'
```

In [118…
```
mydict4.popitem()
```

Out[118…
```
(9, ['manasa', 'nistala', 'ginjala'])
```

In [119…
```
del.mydict4()
```

```
  Cell In[119], line 1
    del.mydict4()
        ^
SyntaxError: invalid syntax
```

In [120…
```
del(mydict4())
```

```
  Cell In[120], line 1
    del(mydict4())
        ^
SyntaxError: cannot delete function call
```

In [121…
```
del[mydict4[6]]
```

In [122…
```
mydict4
```

Out[122…
```
{8: 'manasa'}
```

In [124…
```
mydict4
```

Out[124…
```
{8: 'manasa'}
```

In [125…
```
mydict4.clear()
```

In [126…
```
mydict4
```

Out[126…
```
{}
```

COPY

In [127…
```
mydict4=mydict5
```

In [128…
```
mydict4
```

Out[128…
```
{3: 'kishore',
 4: 'manasa',
 'a': ['jeevan', 'bujji', 'chinnu', 'chituku'],
 'b': [1, 2, 3, 4]}
```

In [130…
```
id(mydict4)==id(mydict5)
```

Out[130…
```
True
```

In [131…
```
mydict3=mydict4.copy()
```

In [132…
```
mydict3
```

Out[132…
```
{3: 'kishore',
 4: 'manasa',
 'a': ['jeevan', 'bujji', 'chinnu', 'chituku'],
 'b': [1, 2, 3, 4]}
```

In [133…
```
mydict2
```

Out[133…
```
{'a': 'manasa', 'b': 'kishore', 'c': 'sathwik', 'd': 'saakshar'}
```

In [136…
```
for i in mydict2:
    print(i ,':', mydict2[i])
```

```
a : manasa
b : kishore
c : sathwik
d : saakshar
```

In [137…
```
'kishore'in mydict2
```

Out[137…
```
False
```

In [138…
```
'b'in mydict2
```

Out[138…
```
True
```

In [139…
```
all(mydict2)
```

Out[139…
```
True
```

In [140…
```
any(mydict2)
```

Out[140…
```
True
```

In [ ]:
```

```