set

July 9, 2024

[1]:
```
#set are collection of unique and unordered elements,{}
#don't allow duplicate element.
#not mantain any order and it will not be indexed.
```

[7]:
```
s={1}
```

[8]:
```
type(s)
```

[8]:
```
set
```

[4]:
```
a={1,2}
```

[5]:
```
a
```

[5]:
```
{1, 2}
```

[6]:
```
type(a)
```

[6]:
```
set
```

[16]:
```
v={1,2,3,4,5,4,5,4,4,86,4,1,45,1,}
```

[17]:
```
v
```

[17]:
```
{1, 2, 3, 4, 5, 45, 86}
```

[29]:
```
m={"c","d","e","f","e"}
```

[30]:
```
m
```

[30]:
```
{'c', 'd', 'e', 'f'}
```

[31]:
```
m={"c","d","e","f","e",[1,5]}
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[31], line 1
----> 1 m={"c","d","e","f","e",[1,5]}
```

```
TypeError: unhashable type: 'list'
```

```
[33]: m={"c","d","e","f","e",(1,5)}
```

m

```
[36]: for i in m"
```

```
  Cell In[36], line 1
    for i in m
              ^
SyntaxError: expected ':'
```

```
[37]: print(i)
```

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

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

```
[38]: a1={"reading","hicking","running","writing"}
      a2={"waching","running","playing","reading"}
```

```
[39]: a1
```

```
[39]: {'hicking', 'reading', 'running', 'writing'}
```

```
[40]: a2
```

```
[40]: {'playing', 'reading', 'running', 'waching'}
```

```
[44]: #insersection operaction
      a1&a2
```

```
[44]: {'reading', 'running'}
```

```
[45]: #differance operation
      a1-a2
```

```
[45]: {'hicking', 'writing'}
```

[47]:
```
#differance operation
a2-a1
```

[47]:
```
{'playing', 'waching'}
```

[48]:
```
#symmentic operation
a1^a2
```

[48]:
```
{'hicking', 'playing', 'waching', 'writing'}
```

[55]:
```
#union operation
a1 | a2
```

[55]:
```
{'hicking', 'playing', 'reading', 'running', 'waching', 'writing'}
```

[60]:
```
b1={"wathching","playing","sheting","singing"}
b2={"running","reading","typing","shoping","sheting"}
```

[52]:
```
b1
```

[52]:
```
{'playing', 'sheting', 'singing', 'wathching'}
```

[61]:
```
b2
```

[61]:
```
{'reading', 'running', 'sheting', 'shoping', 'typing'}
```

[62]:
```
#union operation
b1 | b2
```

[62]:
```
{'playing',
 'reading',
 'running',
 'sheting',
 'shoping',
 'singing',
 'typing',
 'wathching'}
```

[63]:
```
#differance operation
b1 - b2
```

[63]:
```
{'playing', 'singing', 'wathching'}
```

[64]:
```
b2 - b1
```

[64]:
```
{'reading', 'running', 'shoping', 'typing'}
```

[65]:
```
#intersection operation
b1 & b2
```

[65]:
```
{'sheting'}
```

[66]:
```
#symmentic operation
b1 ^ b2
```

[66]:
```
{'playing', 'reading', 'running', 'shoping', 'singing', 'typing', 'wathching'}
```

[67]:
```
b2 ^ b1
```

[67]:
```
{'playing', 'reading', 'running', 'shoping', 'singing', 'typing', 'wathching'}
```

[68]:
```
my_frozenset=frozenset([1,2,3])
```

[69]:
```
my_frozenset
```

[69]:
```
frozenset({1, 2, 3})
```

[73]:
```
forzenset=([1,2,3,4,5])
```

[74]:
```
frozenset
```

[74]:
```
frozenset
```

[79]:
```
mylist = ['apple', 'banana', 'cherry']
```

[80]:
```
x = frozenset(mylist)
```

[81]:
```
x
```

[81]:
```
frozenset({'apple', 'banana', 'cherry'})
```

[84]:
```
x.add("aaaaa")
print(x)
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[84], line 1
----> 1 x.add("aaaaa")

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

[86]:
```
x
```

[86]:
```
frozenset({'apple', 'banana', 'cherry'})
```

[92]:
```
j=["babana","ravi","jjjjlk"]
x=frozenset(j)
print(x)
```

```
frozenset({'jjjjlk', 'babana', 'ravi'})
```

[93]:
```
x[1]=("raviraj")
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[93], line 1
----> 1 x[1]=("raviraj")

TypeError: 'frozenset' object does not support item assignment
```

[89]:
```
x
```

[89]:
```
['babana', 'raviraj', 'jjjjlk']
```

[ ]:

[ ]:

[ ]:

[ ]:

[94]:
```
#Dictionary:= Dictionary is a data sequence that stores data as key value pair.
#unordered , key are unique and immutable.
```

[96]:
```
d={"name":"ravi","contact": "1234567856", "address": "parbhani"}
```

[97]:
```
type(d)
```

[97]:
```
dict
```

[99]:
```
d.keys()
```

[99]:
```
dict_keys(['name', 'contact', 'address'])
```

[100]:
```
d.values()
```

[100]:
```
dict_values(['ravi', '1234567856', 'parbhani'])
```

```
[104]: d['name']
```

```
[104]: 'ravi'
```

```
[105]: d['address']
```

```
[105]: 'parbhani'
```

```
[106]: d["address"]="pune"
```

```
[107]: d['address']
```

```
[107]: 'pune'
```

```
[108]: d['ravi']="abhi"
```

```
[109]: d['ravi']
```

```
[109]: 'abhi'
```

```
[110]: d.values()
```

```
[110]: dict_values(['ravi', '1234567856', 'pune', 'abhi'])
```

```
[111]: d.keys()
```

```
[111]: dict_keys(['name', 'contact', 'address', 'ravi'])
```

```
[112]: d["name"]="names"
```

```
[116]: d['names']
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[116], line 1
----> 1 d['names']

KeyError: 'names'
```

```
[117]: d.keys()
```

```
[117]: dict_keys(['name', 'contact', 'address', 'ravi'])
```

```
[120]: d.items()
```

```
[120]: dict_items([('name', 'names'), ('contact', '1234567856'), ('address', 'pune'),
       ('ravi', 'abhi')])
```

```
[121]: d.fromkeys((1,2,3),('a','b','c'))
```

```
[121]: {1: ('a', 'b', 'c'), 2: ('a', 'b', 'c'), 3: ('a', 'b', 'c')}
```

```
[133]: d.fromkeys((1,2,3),('a','v','d'))
```

```
[133]: {1: ('a', 'v', 'd'), 2: ('a', 'v', 'd'), 3: ('a', 'v', 'd')}
```

```
[137]: #dictionary comprehorision
       student = ["ravi","abhi","raju"]
       marks = [150,200,520]
       student_marks={}
       for student_marks in zip(student, marks):
           student_marks[student]=marks
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[137], line 6
      4 student_marks={}
      5 for student_marks in zip(student, marks):
----> 6     student_marks[student]=marks

TypeError: 'tuple' object does not support item assignment
```

```
[141]: student_marks
```

```
[141]: ('ravi', 150)
```

```
[142]: student_marks
```

```
[142]: ('ravi', 150)
```

```
[144]: user_id=[1,2,3]
       user_name=["a21","a22","a33"]
       {u_id:u_name for u_id ,u_name in zip(user_id,user_name)}
```

```
[144]: {1: 'a21', 2: 'a22', 3: 'a33'}
```

```
[148]: class_name=["mca","bca","mba"]
       student_id=[1,2,3]
       {class_name:student_id for class_name, student_id in zip(class_name,student_id)}
```

```
[148]: {'mca': 1, 'bca': 2, 'mba': 3}
```

[ ]:

```
```