In [2]:
```
a={1,2,4,6,7}
b=[10,20,30,40,50]
c={'apple','ball','pencil'}
set(a)
```

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

In [3]:
```
str(a)
```

Out[3]:
```
'[1, 2, 4, 6, 7]'
```

In [4]:
```
list(c)
```

Out[4]:
```
['pencil', 'apple', 'ball']
```

In [6]:
```
set(a)
```

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

In [11]:
```
print(c.add('slate'))
```

```
None
```

In [12]:
```
set(c)
```

Out[12]:
```
{'apple', 'ball', 'pencil', 'slate'}
```

In [14]:
```
print(c.add('pen'))
```

```
None
```

In [15]:
```
print(c)
```

```
{'pencil', 'apple', 'pen', 'ball', 'slate'}
```

In [16]:
```
#using Update
```

In [18]:
```
Emp_id={21,25,36,36,43,55}
name={'Radhika','ananth','sachin'}
Emp_id.update(name)
```

In [19]:
```
print(Emp_id)
```

```
{'sachin', 36, 21, 55, 25, 43, 'Radhika', 'ananth'}
```

In [20]:
```
name.update(Emp_id)
```

In [21]:
```
print(name)
```

```
{'sachin', 36, 43, 'Radhika', 21, 55, 25, 'ananth'}
```

In [22]:
```
#using remove
```

In [24]:
```
city={'Hyd','Bglr','Lucknow',25}
fruits={'apple','banana','grape','orange'}
city.discard(25)
```

In [25]:
```
print(city)
```

```
{'Hyd', 'Bglr', 'Lucknow'}
```

In [26]:
```
fruits.remove('grape','orange')
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[26], line 1
----> 1 fruits.remove('grape','orange')

TypeError: set.remove() takes exactly one argument (2 given)
```

In [29]:
```
fruits.remove('grape')
```

In [30]:
```
print(fruits)
```

```
{'apple', 'orange', 'banana'}
```

In [31]:
```
#using length
```

In [79]:
```
x={1,2,3,3,4,5}
y={2,6,7,8,9,10}

len(y)
```

Out[79]:
```
6
```

In [ ]:
```
#union - combines both the values from the two variables and returns the total values
```

In [80]:
```
a=x|y
```

In [81]:
```
print(a)
```

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

In [52]:
```
x.union(y)
```

Out[52]:
```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

In [ ]:
```
#intersection - returns the common values from all the given variables - & or .interse
```

In [96]:
```
a={1,"banana",2,2,4,5,6,"apple"}
b={1,3,4,"banana",4,6,"apple"}
c={1,"apple","banana","orange"}

a&b&c
```

Out[96]:
```
{1, 'apple', 'banana'}
```

In [91]:
```
a.intersection(b)
```

Out[91]:
```
{1, 4, 6, 'apple', 'banana'}
```

In [ ]:
```
#Difference - returns the values which are present in the first variable but not in th
```

In [92]:
```
a-b-c
```

Out[92]:
```
{2, 5}
```

In [93]:
```
b-a-c
```

Out[93]:
```
{3}
```

In [94]:
```
c-b-a
```

Out[94]:
```
{'orange'}
```

In [97]:
```
c.add(7)
```

In [98]:
```
print(c)
```

```
{1, 'apple', 7, 'banana', 'orange'}
```

In [70]:
```
a-b-c
```

Out[70]:
```
{5}
```

In [71]:
```
#symmetric - removes the common values and returns the remaining values
```

In [75]:
```
a={1,2,3,4,5,6}
b={2,4,6,8,9,10,11,12}
a^b
```

Out[75]:
```
{1, 3, 5, 8, 9, 10, 11, 12}
```

In [74]:
```
age=[18,20,25,28,30,45,50]
while age <=28:
    print(age)
    age+=1
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[74], line 2
      1 age=[18,20,25,28,30,45,50]
----> 2 while age <=28:
      3     print(age)
      4     age+=1

TypeError: '<=' not supported between instances of 'list' and 'int'
```

In [103…
```
number=16
if number<18:
    print("child")
print(number)
```

```
child
16
```

In [6]:
```
voterage=int("enter your age")
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
Cell In[6], line 1
----> 1 voterage=int("enter your age")

ValueError: invalid literal for int() with base 10: 'enter your age'
```

In [10]:
```
voter age =int("enter your age")
if voter age>18:
    print("you are eligible")
else:
    print("you are not eligible")
```

```
  Cell In[10], line 1
    voter age =int("enter your age")
          ^
SyntaxError: invalid syntax
```

In [16]:
```
voter age = int("enter your age:")
```

```
  Cell In[16], line 1
    voter age = int("enter your age:")
          ^
SyntaxError: invalid syntax
```

In [17]:
```
Voter age = 19
voter age = int("enter your age:")
```

```
  Cell In[17], line 1
    Voter age = 19
          ^
SyntaxError: invalid syntax
```

In [23]:
```
voter_age=19
if voter_age>18:
    print("you are eligible to vote")
print(voter_age)
```

```
you are eligible to vote
19
```

In [1]:
```
voter_age=int(input("enter your age:"))
if voter_age>18:
    print("you are eligible to vote")
else:
    print("you are not eligible to vote")
```

```
enter your age:16
you are not eligible to vote
```

In [3]:
```
voter_age=int(input("enter your age:"))
if voter_age>18:
    print("you are eligible to vote")
else:
    print("you are not eligible to vote")
```

```
enter your age:19
you are eligible to vote
```

In [6]:
```
voter_age=int(input("enter your age:"))
if voter_age>18:
```

```
    print("you are eligible to vote")
```

```
enter your age:19
you are eligible to vote
```

In [9]:
```
voter_age=int(input("enter your age:"))
if voter_age>18:
    print("you are eligible to vote")
elif voter_age==18:
    print("you are not eligible to vote")
else:
    print("you need to wait till you are 18yrs old")
```

```
enter your age:17
you need to wait till you are 18yrs old
```

In [10]:
```
voter_age=int(input("enter your age:"))
if voter_age>18:
    print("you are eligible to vote")
elif voter_age==18:
    print("you are not eligible to vote")
else:
    print("you need to wait till you are 18yrs old")
```

```
enter your age:18
you are not eligible to vote
```

In [12]:
```
employee_age=int(input("enter your age:"))
if employee_age<58:
    print("you are still in service")
elif employee_age==58:
    print("you will retire this year")
else:
    print("you are already retired")
```

```
enter your age:45
you are still in service
```

In [13]:
```
employee_age=int(input("enter your age:"))
if employee_age<58:
    print("you are still in service")
elif employee_age==58:
    print("you will retire this year")
else:
    print("you are already retired")
```

```
enter your age:58
you will retire this year
```

In [14]:
```
employee_age=int(input("enter your age:"))
if employee_age<58:
    print("you are still in service")
elif employee_age==58:
    print("you will retire this year")
else:
    print("you are already retired")
```

```
enter your age:59
you are already retired
```

In [ ]:

In [ ]: