In [1]:
```python
a=[]
print(type(a))
```

<class 'list'>

In [2]:
```python
print(len(a))
```

0

In [3]:
```python
a.append('ak')
a.append(2)
a.append(True)
print(a)
```

['ak', 2, True]

In [4]:
```python
print(len(a))
```

3

In [5]:
```python
print(a[2])
```

True

In [6]:
```python
print(len(a[0]))
```

2

In [7]:
```python
b=[1,2,'as']
print(b)
```

[1, 2, 'as']

In [8]:
```python
c=a+b
print(c)
```

['ak', 2, True, 1, 2, 'as']

In [9]:
```python
for i in c:
    print(i)
```

ak
2
True
1
2
as

In [10]:
```python
c.insert('hello')
print(c)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_5344\2522467195.py in <module>
----> 1 c.insert('hello')
      2 print(c)

TypeError: insert expected 2 arguments, got 1
```

In [12]:
```python
c.insert(1,'hello')
print(c)
```

['ak', 'hello', 2, True, 1, 2, 'as']

In [13]:
```python
c.pop()
print(c)
```

['ak', 'hello', 2, True, 1, 2]

In [14]:
```python
c.pop(2)
print(c)
```

['ak', 'hello', True, 1, 2]

In [15]:
```python
c.extend(a)
print(c)
```

['ak', 'hello', True, 1, 2, 'ak', 2, True]

In [17]:
```python
for i in range(5):
    print(i)
```

0
1
2
3
4

In [18]:
```python
for i in range(5):
    print(i*i)
```

0
1
4
9
16

In [19]:
```python
for i in a:
    print(i)
```

ak
2
True

In [24]:
```python
for i in a:
    print(i,a.index(i))
```

ak 0
2 1
True 2

In [25]:
```python
list=['ak','kl','ad']
list.sort()
print(list)
```

['ad', 'ak', 'kl']

In [26]:
```python
list=['ak','kl','ad']
list.reverse()
print(list)
```

['ad', 'kl', 'ak']

In [28]:
```python
i=0
while i<len(a):
    print(a[i])
    i=i+1
print(a)
```

```
ak
2
True
['ak', 2, True]
```

In [29]:
```python
s1={'sh','ak','kf'}
print(s1)
```

```
{'sh', 'ak', 'kf'}
```

In [31]:
```python
s2={'eu','jd','wh'}
print(s2)
```

```
{'jd', 'eu', 'wh'}
```

In [32]:
```python
print(s1.union(s2))
```

```
{'jd', 'eu', 'wh', 'sh', 'ak', 'kf'}
```

In [33]:
```python
print(s1.intersection(s2))
```

```
set()
```

In [34]:
```python
s3={'as','ak'}
print(s3)
```

```
{'ak', 'as'}
```

In [35]:
```python
print(s1.intersection(s3))
```

```
{'ak'}
```

In [36]:
```python
print(s1.difference(s3))
```

```
{'sh', 'kf'}
```

In [37]:
```python
print(s3.difference(s1))
```

```
{'as'}
```

In [38]:
```python
t1=('ak','dhj','dh')
print(t1)
print(type(t1))
```

```
('ak', 'dhj', 'dh')
<class 'tuple'>
```

In [39]:
```python
print(t1[0])
```

```
ak
```

In [40]:
```python
t2=(10)
print(type(t2))
```

```
<class 'int'>
```

In [41]:
```python
t3=(10,)
print(type(t3))
```

```
<class 'tuple'>
```

In [42]:
```python
t4=(('dh','dh'))
print(t4)
print(len(t4))
```

```
('dh', 'dh')
2
```

In [ ]: