In [3]:
```python
#list indexing

fruit_list = ["apple","banana","mango","cherry","grapes"]

print(fruit_list[0])
```

apple

In [4]:
```python
fruit_list = ["apple","banana","mango","cherry","grapes"]

print(fruit_list[-1])
```

grapes

In [6]:
```python
fruit_list = ["apple","banana","mango","cherry","grapes"]

print(fruit_list[0:2])

print(fruit_list[-2:])
```

['apple', 'banana']
['cherry', 'grapes']

In [7]:
```python
l1 = [12,87,546,83,22,64,5]

print(sum(l1))
print(len(l1))
print(max(l1))
print(min(l1))
```

819
7
546
5

In [8]:
```python
number_list = [54,82,63,52,58,94,55]

even_list = []
odd_list = []

for num in number_list:
    if num%2 == 0:
        even_list.append(num)

    else:
        odd_list.append(num)

print("Even list = ",even_list)
print("Odd list = ",odd_list)
```

Even list = [54, 82, 52, 58, 94]
Odd list = [63, 55]

In [14]:
```python
#task: filter vowels

l1 = ["a","v","r","s","e","d","t","o","u"]

vowel_list = []
consonant_list = []
for i in l1:
    if i == 'a' or i == 'e' or i == 'i' or i == 'o' or i == 'u':
        vowel_list.append(i)

    else:
        consonant_list.append(i)

print("vowel list = ",vowel_list)
print("consonant list = ",consonant_list)
```

```
vowel list =  ['a', 'e', 'o', 'u']
consonant list =  ['v', 'r', 's', 'd', 't']
```

In [15]:
```python
#task: filter passing md failing numbers

l1 = [45,30,27,5,78,98,56,72,54,87]

pass_list = []
fail_list = []
for i in l1:
    if i >= 35:
        pass_list.append(i)

    else:
        fail_list.append(i)

print("pass list = ",pass_list)
print("fail list = ",fail_list)
```

```
pass list =  [45, 78, 98, 56, 72, 54, 87]
fail list =  [30, 27, 5]
```

In [16]:
```python
#filter positive and negative numbers

l1 = [45,89,-336,67,-1,-53,89,-100]

positive_list = []
negative_list = []
for i in l1:
    if i > 0:
        positive_list.append(i)

    else:
        negative_list.append(i)

print("positive list = ",positive_list)
print("negative list = ",negative_list)
```

```
positive list =  [45, 89, 67, 89]
negative list =  [-336, -1, -53, -100]
```

In [19]:
```python
# remove duplicate numbers from list

l1 = [12,35,74,28,12,35,47]

print(l1)
unique_list = []

for i in l1:
    if i not in unique_list:
        unique_list.append(i)

print(unique_list)
```

```
[12, 35, 74, 28, 12, 35, 47]
[12, 35, 74, 28, 47]
```

In [ ]:
```python
#if you want to add elements in list

--> append()
--> extend()
--> insert()
```

In [20]:
```python
#append()

l1 = []

l1.append(3254)

print(l1)
```

```
[3254]
```

In [21]:
```python
#extend()
l1 = []
l1.extend([32,54])
print(l1)
```

```
[32, 54]
```

In [23]:
```python
#insert()
l1 = [12,34,57,92]
l1.insert(2,56)
print(l1)
```

```
[12, 34, 56, 57, 92]
```

In [ ]:
```python
#if you want to remove elements in list
--> remove()
--> pop()
--> del()
--> clear()
```

In [24]:
```python
#remove()
l1 = [43,72,84,45,93,20]
l1.remove(84)
print(l1)
```

```
[43, 72, 45, 93, 20]
```

In [25]:
```python
#pop()
l1 = [43,72,84,45,93,20]
l1.pop()
print(l1)
```

```
[43, 72, 84, 45, 93]
```

In [26]:
```python
#pop(index)

l1 = [43,72,84,45,93,20]

l1.pop(3)

print(l1)
```

[43, 72, 84, 93, 20]

In [28]:
```python
#del()

l1 = [43,72,84,45,93,20]

print(l1)
del(l1)

print(l1)
```

[43, 72, 84, 45, 93, 20]

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-28-abb78a4ba2a1> in <module>
      6 del(l1)
      7
----> 8 print(l1)

NameError: name 'l1' is not defined
```

In [29]:
```python
#clear()

l1 = [43,72,84,45,93,20]

print(l1)
l1.clear()

print(l1)
```

[43, 72, 84, 45, 93, 20]
[]

nested list

In [37]:
```python
l1 = [12,3,[45,1001,2200,[3001,3002,[10001,20001,[401,302]]],[456,890]],717,[901,

print(l1[0])
print(l1[2])
print(l1[2][3])
print(l1[2][3][1])

print(l1[4][0])
print(l1[2][2])

print(l1[-1][2][1])

print(l1[-3][1])

print(l1[2][3][2][2][1])

print(l1[-3][3][1])

print(l1[-3])
```

```
12
[45, 1001, 2200, [3001, 3002, [10001, 20001, [401, 302]]], [456, 890]]
[3001, 3002, [10001, 20001, [401, 302]]]
3002
901
2200
39
1321
302
84
[354, 1321, 873, [4737, 84]]
```

In [49]:
```python
import random

l1 = [50,6,4,"better luck next time",100,"better luck next time","20% off on zoma

print(random.choice(l1))
```

```
better luck next time
```

In [ ]:

In [ ]: