

➤ A list is a sequence of values of any type. The values in list are called elements or items. They are mutable and accessed using indexes with '0' being the first index. It may contain duplicate values.

List Traversing

It is a process of walking through every element of a list.

```
eg: listeg = [1, 2, 3]
     for i in listeg:
         print(i)
```

>>> 123

List Slicing

It builds new lists out of an existing lists. The slice function returns a slice object. It can be specified by range (start, stop, step)

'stop' specifies the endpoint

'start' starting point

'step' is set 1 by default

eg: print (listeg[~~1~~⁴:])

>> [23]

2) Pop():

Pop() is used when we know the index of the element we want to delete

eg: t = ['a', 'b', 'c']

t.pop(1)

print(t)

>> ['a', 'c']

remove
~~delete~~():

remove
~~delete~~() is used when we do not know the index of the element we want to delete.

Multiple elements can be deleted

eg: t = ['a', 'b', 'c', 'b']

t.remove('b')

print(t)

>> ['a', 'c']

3) List operations:

i) Concatenation

+ operator returns a new list with the elements of the operands merged to the end

eg: mylist [10, 20, 30]

mylist 2 [40, 50, 60]

~~new~~ new = mylist + mylist 2

print(new)

>> [10, 20, 30, 40, 50, 60]

ii) Repetition

* operator repeats specified number of times and returns a new list

eg: mylist = [10, 20]

my = mylist * 2

print(my)

>> [10, 20, 10, 20]

List methods :

i) append ()

It adds an element at the end of the list

synthon

`mylist.append (elem)`

eg

`mylist = [10, 20]`

`mylist.append (30)`

`print (mylist)`

`>> [10, 20, 30]`

ii) insert ()

Adds an element at the specified position

synthon

`list.insert (pos, elem)`

eg `mylist = [10, 20, 30]`

`mylist.insert (2, 15)`

`print (mylist);`

`>> [10, 20, 15, 30]`

4)

~~file1 = open("text.txt", "r")~~

~~file2 = open("out~~

4)

file1 = open("FROM.txt", "r")

file2 = open("VOWELTEXT.txt", "w")

vowels = ('a', 'e', 'i', 'o', 'u', 'A', 'E', 'I', 'O', 'U')

lines = file1.readlines()

for line in lines:

if line.startswith(vowels):

file2.write(line)