Class 12

Week 6

LISTS

List is a collection which is:

1) Ordered
2) Changeable.

Allows duplicate members.

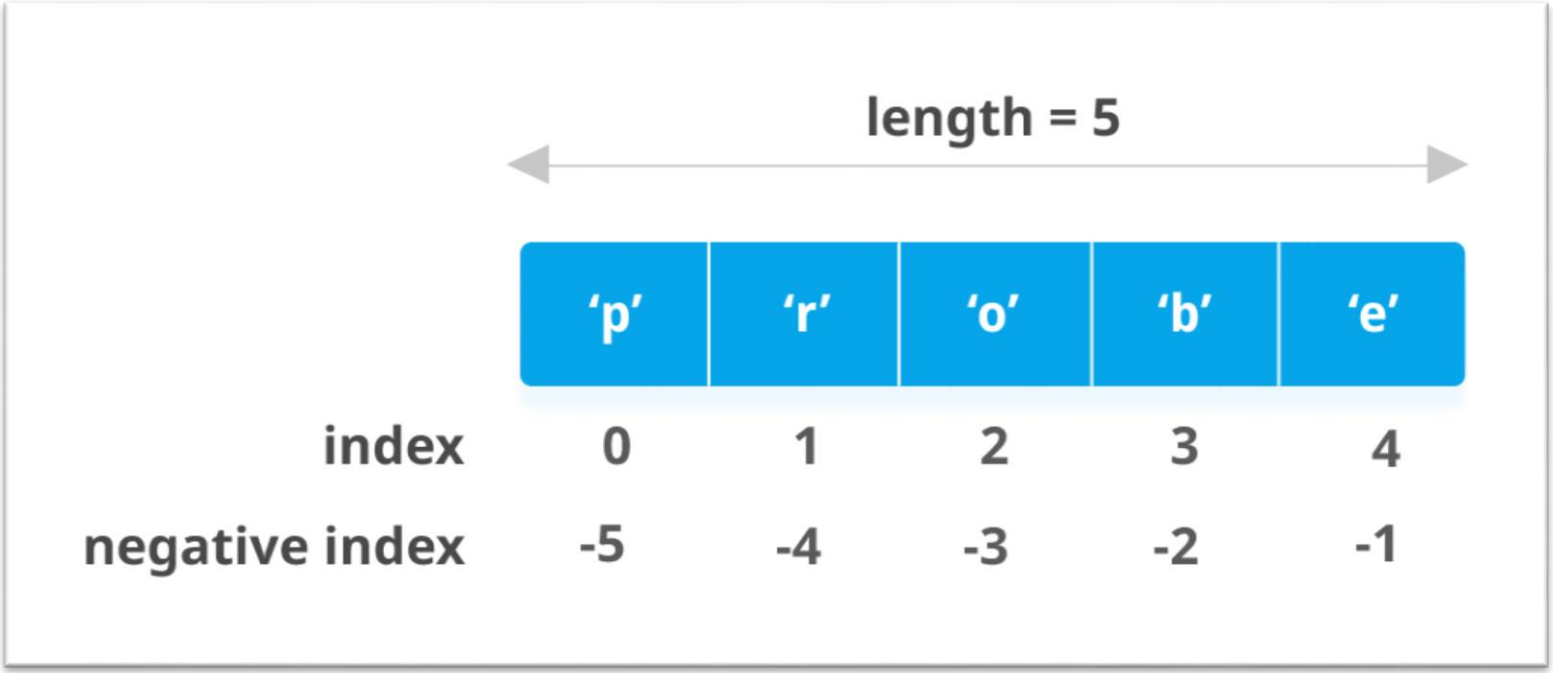
LISTS

```
fruits = ['apple','orange','mango'] #a list
```

---

a list is created by placing all the items inside a square bracket [ ], separated by commas. It can have any number of items and they may be of different types (integer, float, string etc.). Also, a list can even have another list as an item.

LISTS



INDEXING WITH LISTS

```
fruits = ['apple','orange','mango'] #a list
print(fruits[0])
print(fruits[-1])
```

SLICING IN LISTS

```
>> fruits = [1,2,3,4,5,6]

>> fruits[0:2]
     [1,2]

>> fruits[0:-1]
     [1,2,3,4,5]
```

FOR LOOP WITH LISTS

```
fruits = ['apple','orange','mango'] #a list
for i in fruits:
 print(i)
```

Change Item Value

```
fruits = ['apple','orange','mango'] #a list
fruits[1] = “banana"
print(fruits)
```

'IN' Keyword in Python

```
thislist = ["apple","banana","cherry"]
if"apple"in thislist:
 print("Yes, 'apple' is in the fruits list")
```

List Length

```
thislist = ["apple","banana","cherry"]
print(len(thislist))
```

Add items (append)

```
thislist = ["apple","banana","cherry"]
thislist.append("orange")
print(thislist)
```

Insert Item

```
thislist = ["apple","banana","cherry"]
thislist.insert(1,"orange")
print(thislist)
```

Remove Item

```
thislist = ["apple","banana","cherry"]
thislist.remove("banana")
print(thislist)
```

Pop Item

```
# The pop() method removes the specified index, (or the last item if index is not specified):


thislist = ["apple","banana","cherry"]
thislist.pop()
print(thislist)
```

Pop Item

```
# The pop() method removes the specified index, (or the last item if index is not specified):


thislist = ["apple","banana","cherry"]
thislist.pop(2)
print(thislist)
```

DEL

```
# The del keyword removes the specified index
thislist = ["apple","banana","cherry"]
del  thislist[0]
print(thislist)
The del keyword can also delete the list completely
thislist = ["apple","banana","cherry"]
del thislist
```

Clear

```
# The clear() method empties the list:


thislist = ["apple","banana","cherry"]
thislist.clear()
print(thislist)
```

Join Two Lists

```
list1 = ["a","b","c"]
list2 = [1,2,3]

list3 = list1 + list2
print(list3)
```

Join Two Lists

```
list1 = ["a","b","c"]
list2 = [1,2,3]

for x in list2: #another way
  list1.append(x)

print(list1)
```

Extend

```
# Use the extend() method to add list2 at the end of
list1
list1 = ["a","b","c"]
list2 = [1,2,3]

list1.extend(list2)
print(list1)
```

SORT

```
nums = [1, 3, 2]
nums.sort() #in ascending order

cars = ['Ford', 'BMW', 'Volvo'] #B F V
cars.sort()

nums = [1, 3, 2]
nums.sort(reverse=True) #in descending order
```

ASCII Table

Dec	Hex	Oct	Char	Dec	Hex	Oct	Char	Dec	Hex	Oct	Char	Dec	Hex	Oct	Char
0	0	0		32	20	40	[space]	64	40	100	@	96	60	140	`
1	1	1		33	21	41	!	65	41	101	A	97	61	141	a
2	2	2		34	22	42	"	66	42	102	B	98	62	142	b
3	3	3		35	23	43	#	67	43	103	C	99	63	143	c
4	4	4		36	24	44	$	68	44	104	D	100	64	144	d
5	5	5		37	25	45	%	69	45	105	E	101	65	145	e
6	6	6		38	26	46	&	70	46	106	F	102	66	146	f
7	7	7		39	27	47	'	71	47	107	G	103	67	147	g
8	8	10		40	28	50	(	72	48	110	H	104	68	150	h
9	9	11		41	29	51	)	73	49	111	I	105	69	151	i
10	A	12		42	2A	52	*	74	4A	112	J	106	6A	152	j
11	B	13		43	2B	53	+	75	4B	113	K	107	6B	153	k
12	C	14		44	2C	54	,	76	4C	114	L	108	6C	154	l
13	D	15		45	2D	55	-	77	4D	115	M	109	6D	155	m
14	E	16		46	2E	56	.	78	4E	116	N	110	6E	156	n
15	F	17		47	2F	57	/	79	4F	117	O	111	6F	157	o
16	10	20		48	30	60	0	80	50	120	P	112	70	160	p
17	11	21		49	31	61	1	81	51	121	Q	113	71	161	q
18	12	22		50	32	62	2	82	52	122	R	114	72	162	r
19	13	23		51	33	63	3	83	53	123	S	115	73	163	s
20	14	24		52	34	64	4	84	54	124	T	116	74	164	t
21	15	25		53	35	65	5	85	55	125	U	117	75	165	u
22	16	26		54	36	66	6	86	56	126	V	118	76	166	v
23	17	27		55	37	67	7	87	57	127	W	119	77	167	w
24	18	30		56	38	70	8	88	58	130	X	120	78	170	x
25	19	31		57	39	71	9	89	59	131	Y	121	79	171	y
26	1A	32		58	3A	72	:	90	5A	132	Z	122	7A	172	z
27	1B	33		59	3B	73	;	91	5B	133	[	123	7B	173	{
28	1C	34		60	3C	74	<	92	5C	134	\	124	7C	174	|
29	1D	35		61	3D	75	=	93	5D	135	]	125	7D	175	}
30	1E	36		62	3E	76	>	94	5E	136	^	126	7E	176	~
31	1F	37		63	3F	77	?	95	5F	137	_	127	7F	177	

Reverse

```
# Reverse the order of the fruit list:

fruits = ['apple','banana','cherry']

fruits.reverse()
```

Make a List of 8 Planets:

1) Append PLUTO

2) Append JUMBO

3) POP JUMBO

4) REVERVE LIST

5) SORT LIST

5) CLEAR LIST

6) DEL LIST