2. List : List is a collection of homogenous & heterogenous datatype.

- Homogenous is same kind of data.
- Heterogenous is different kind of data.
- The values of List should be enclosed in [ ]
- The value of list should be seperated by (,) -> seperation factor.
- Syntax :

```
var = [val1, val2, .... valn]
```

Example: $l_1 = [12, 9, T, 8]$

$l_2 = ['ab', [1,2], 5+8j, 179]$

- List is an ordered Data type
- List supports +ve & -ve indexing.
- List is mutable datatype.

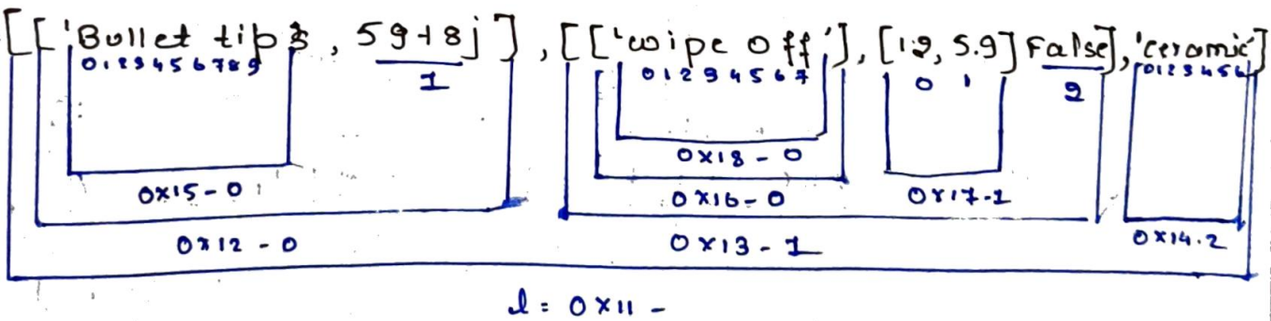
Example: l=[1,2,3]

l[0] = 10

l = [10,2,3]

- The default value for List datatype is [ ]

NOTE : Mutable Datatype : Once after value got assigned to a variable a memory block is going to creat for that variable inside that memory block, It will accept modification.



a) l = l[0][0][2]

b) 7th i = l[0][0][8]

c) 2nd p = l[1][0][0][2]

d) 2nd f = l[1][0][0][7]

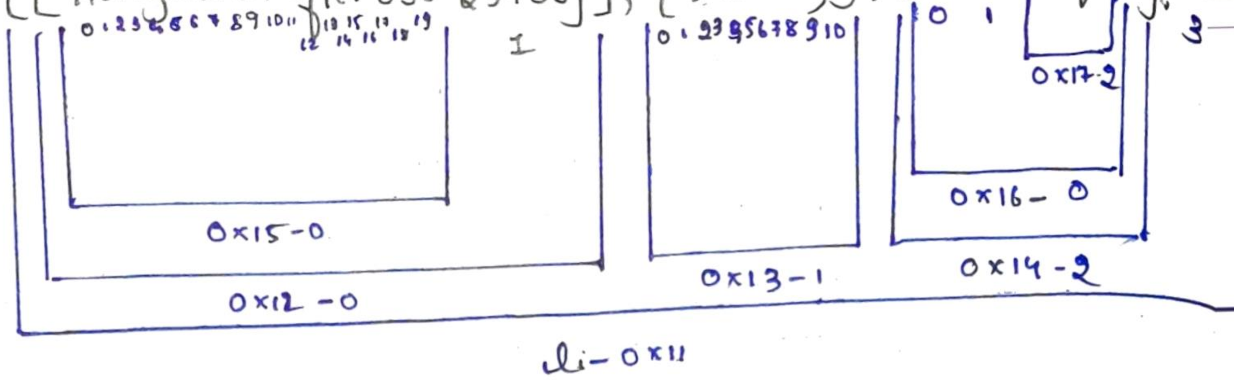
e) 5.9 = l[1][1][1]

f) False = l[1][2]

g) 'r' = l[2][2]

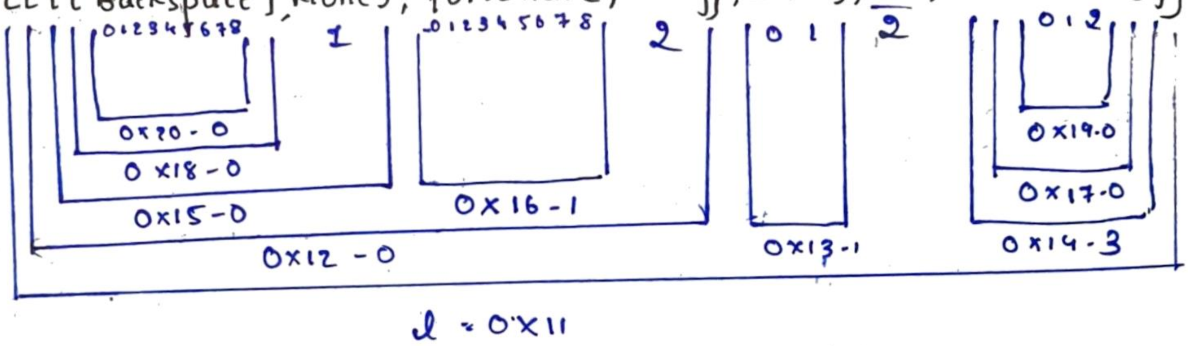
h) 2nd 'c' = l[2][6]

2. li = [[['Horigontal after use' 25+39j], [1,2,3 'xy3'], [[0, 100, 'Refill']], Tr



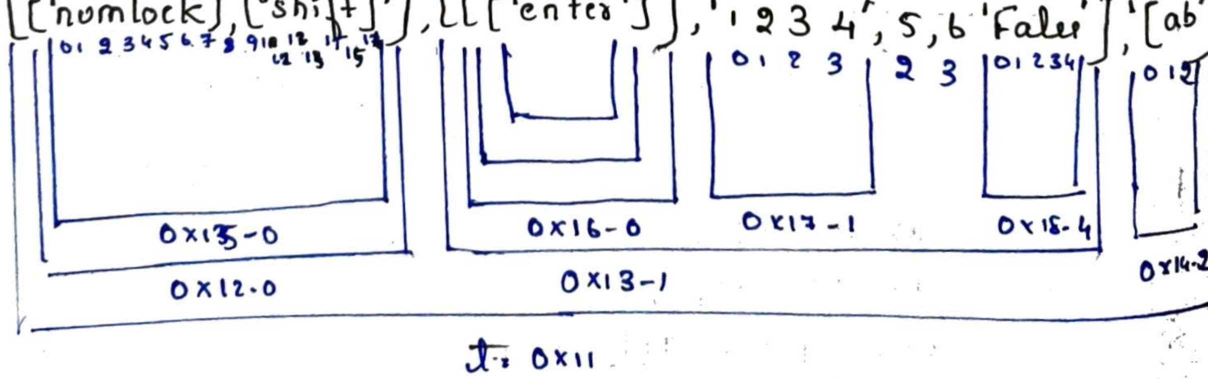
1) 'z' = li[0][0][4]
2) 1st 'o' = li[0][0][8]
3) 1st 'f' = li[0][0][12]
4) 25+39j = li[0][1]
5) 2 = li[1][2]
6) 'y' = li[1][9]
7) '100' = li[2][0][2]
8) 2nd 'l' = li[2][0][2][4]
9) True = li[3]

3. l = [[[['Backspace'], None], 'fortunate', 1+2j], [1, 2], 3.9, [['Bad']]]



1) c - l[0][0][0][4]
2) p - l[0][0][0][0][5]
3) None - l[0][0][1]
4) 'f' - l[0][1][0]
5) 2nd 't' - l[0][1][7]
6) 2nd 'e' - l[0][1][8]
7) 2 - l[1][1]
8) 'b' - l[0][0][0][0][0][0]
9) 'd' - l[3][0][0][2]
10) 3rd 'a' - l[0][1][6]

4. t = [['numlock', 'shift'], [[['enter']], '1 2 3 4', 5, 6 'False'], 'ab



1) m - t[0][0][2]
2) k - t[0][0][6]
3) h - t[0][0][12]
4) f - t[0][0][14]
5) 2nd 'e' - t[1][0][0][0][3]
6) 3 - t[1][1][2]
7) 2nd 'l' - t[1][4][2]
8) 2nd 's' - t[1][4][3]
9) 'b' - t[2][2]
10) 'r' - t[1][0][0][0][4]