PDF TASK_23-10-2025

LIST

LIST Creation

```
In [1]: list1 = []
```

```
In [2]: print(type(list1))

        <class 'list'>
```

```
In [3]: list2 = [10,30,60]
```

```
In [4]: list3 = [10.77,30.66,60.89]
```

```
In [5]: list4 = ['one','two',"three"]
```

```
In [6]: list5 = ['Asif',25,[50, 100],[150, 90]]
```

```
In [7]: list6 = [100, 'ASif', 17.765]
```

```
In [8]: list7 = ['Asif', 25 ,[50, 100],[150, 90] , {'John' , 'David'}]
```

```
In [9]: len(list6)
```

```
Out[9]: 3
```

List Indexing

```
In [10]: list2[0]
```

```
Out[10]: 10
```

```
In [11]: list4[0]
```

```
Out[11]: 'one'
```

```
In [12]: list4[0][0]
```

```
Out[12]: 'o'
```

```
In [13]: list4[-1]
```

```
Out[13]: 'three'
```

```
In [14]: list5[-1]
```

Out[14]: [150, 90]

List Slicing

In [15]:
```python
mylist = ['one' , 'two' , 'three' , 'four' , 'five' , 'six' , 'seven' , 'eight']
```

In [16]:
```python
mylist[0:3]
```

Out[16]: ['one', 'two', 'three']

In [17]:
```python
mylist[2:5]
```

Out[17]: ['three', 'four', 'five']

In [18]:
```python
mylist[:3]
```

Out[18]: ['one', 'two', 'three']

In [19]:
```python
mylist[:2]
```

Out[19]: ['one', 'two']

In [20]:
```python
mylist[-3:]
```

Out[20]: ['six', 'seven', 'eight']

In [23]:
```python
mylist[-2:]
```

Out[23]: ['seven', 'eight']

In [24]:
```python
mylist[-1]
```

Out[24]: 'eight'

In [25]:
```python
mylist[:]
```

Out[25]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']

Add, Remove & Change Items

In [26]:
```python
mylist
```

Out[26]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']

In [27]:
```python
mylist.append('nine')
mylist
```

Out[27]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine']

In [28]:
```python
mylist.insert(9, 'ten')
mylist
```

```
Out[28]:  ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten']
```

```
In [29]:  mylist.insert(1,'ONE')
          mylist
```

```
Out[29]:  ['one',
           'ONE',
           'two',
           'three',
           'four',
           'five',
           'six',
           'seven',
           'eight',
           'nine',
           'ten']
```

```
In [30]:  mylist.remove('ONE')
          mylist
```

```
Out[30]:  ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten']
```

```
In [31]:  mylist.pop()
          mylist
```

```
Out[31]:  ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine']
```

```
In [32]:  mylist.pop(8)
          mylist
```

```
Out[32]:  ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']
```

```
In [33]:  del mylist[7]
          mylist
```

```
Out[33]:  ['one', 'two', 'three', 'four', 'five', 'six', 'seven']
```

```
In [34]:  mylist[0] = 1
          mylist[1] = 2
          mylist[2] = 3
          mylist
```

```
Out[34]:  [1, 2, 3, 'four', 'five', 'six', 'seven']
```

```
In [35]:  mylist.clear()
          mylist
```

```
Out[35]:  []
```

```
In [36]:  del mylist
          mylist
```

```
        ---------------------------------------------------------------------
        NameError                                 Traceback (most recent call last)
        Cell In[36], line 2
              1 del mylist
        ----> 2 mylist

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

Copy List

In [38]: `mylist = ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine']`

In [39]: `mylist1 = mylist`

In [40]: `id(mylist) , id(mylist1)`

Out[40]: `(2145317413760, 2145317413760)`

In [41]: `mylist2 = mylist.copy()`

In [42]: `id(mylist2)`

Out[42]: `2145317383872`

In [43]: `mylist[0] = 1`

In [44]: `mylist`

Out[44]: `[1, 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine']`

In [45]: `mylist1`

Out[45]: `[1, 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine']`

In [46]: `mylist2`

Out[46]: `['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine']`

Join Lists

In [47]:
```
list1 = ['one', 'two', 'three', 'four']
list2 = ['five', 'six', 'seven', 'eight']
```

In [48]:
```
list3 = list1 + list2
list3
```

Out[48]: `['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']`

In [49]:
```
list1.extend(list2)
list1
```

Out[49]: `['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']`

List Membership

```
In [50]: list1
```

```
Out[50]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']
```

```
In [51]: 'one' in list1
```

```
Out[51]: True
```

```
In [52]: 'ten' in list1
```

```
Out[52]: False
```

Reverse & Sort List

```
In [53]: list1
```

```
Out[53]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']
```

```
In [54]: list1.reverse()
         list1
```

```
Out[54]: ['eight', 'seven', 'six', 'five', 'four', 'three', 'two', 'one']
```

```
In [55]: list1 = list1[::-1]
         list1
```

```
Out[55]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']
```

```
In [56]: mylist3 = [9,5,2,99,12,88,34]
         mylist3.sort()
         mylist3
```

```
Out[56]: [2, 5, 9, 12, 34, 88, 99]
```

```
In [57]: mylist3 = [9,5,2,99,12,88,34]
         mylist3.sort(reverse=True)
         mylist3
```

```
Out[57]: [99, 88, 34, 12, 9, 5, 2]
```

```
In [58]: mylist4 = [88,65,33,21,11,98]
         sorted(mylist4)
```

```
Out[58]: [11, 21, 33, 65, 88, 98]
```

```
In [59]: mylist4
```

```
Out[59]: [88, 65, 33, 21, 11, 98]
```

Loop through a list

```
In [60]: list1
```

```
Out[60]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']
```

```
In [61]: for i in list1:
             print(i)
```

```
one
two
three
four
five
six
seven
eight
```

```
In [62]: for i in enumerate(list1):
             print(i)
```

```
(0, 'one')
(1, 'two')
(2, 'three')
(3, 'four')
(4, 'five')
(5, 'six')
(6, 'seven')
(7, 'eight')
```

COUNT

```
In [63]: list10=['one', 'two', 'three', 'four', 'one', 'one', 'two', 'three']
```

```
In [64]: list10.count('one')
```

```
Out[64]: 3
```

```
In [65]: list10.count('two')
```

```
Out[65]: 2
```

```
In [66]: list10.count('four')
```

```
Out[66]: 1
```

All / Any

```
In [67]: L1 = [1,2,3,4,0]
```

```
In [68]: all(L1)
```

```
Out[68]: False
```

```
In [69]: any(L1)
```

```
Out[69]:  True
```

```
In [70]: L2 = [1,2,3,4,True,False]
```

```
In [71]: all(L2)
```

```
Out[71]:  False
```

```
In [72]: any(L2)
```

```
Out[72]:  True
```

```
In [73]: L3 = [1,2,3,True]
```

```
In [74]: all(L3)
```

```
Out[74]:  True
```

```
In [ ]:
```