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# Assignment-4

AIM: (a) WAP to demonstrate list
(b) WAP to demonstrate tupple
(c) WAP using for loop over a sequence
(d) WAP while loop that ask for number and prints a countdown from that number to 0.

Program :-

(a) # Creating a List
List = []
print("empty list: ")
print(List)

Output :-
empty List:
[]

b # Creating List with string
List = ['Hello']
print (List)

Output :-
['Hello']

# List with multiple values
List = ['Hello', 'world']
print (List[0])
print (List[1])

Output :-
Hello
world

# List with multi dimensional
# Nested list inside list
List [['Go', 'Edu'], ['hub']]
print (List)

Output :-
[['Go', 'Edu'], ['hub']]

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# List with numbers →

```
List = [1, 2, 3, 4, 5, 6, 7, 8, 9]
print(List)
```

→ [1, 2, 3, 4, 5, 6, 7, 8, 9]

# Slicing start to pre defined point →

```
sList = List[:-1]
print (sList)
```

→ [1]

# pre-defined to end →

```
sList = List[3:]
print (sList)
```

→ [4, 5, 6, 7, 9]

# start to end →

```
sList = List[:]
print(sList)
```

→ [1, 2, 3, 4, 5, 6, 7, 8, 9]

# pop function : →

```
List.pop()
print (List)
```

→ [1, 2, 3, 4, 5, 6, 7, 8]

# Mix value →

```
List = [1, 2, 'a', 'b']
print (List)
```

→ [1, 2, 'a', 'b']

# Slicing in reverse →

```
sList = List[::-1]
print (sList)
```

→ ['b', 'a', 2, 1]

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# Remove() method:

```
List = [1,2,3,4,5]
print(List)
List.remove(0)
print(List)
List.remove(3)
print(List)
```

→ [1,2,3,4,5]
[2,3,4,5]
[2,4,5]

# Remove using iterator

```
List = [1,2,3,4,5]
for i in List:
    print List.remove[i]
    print (List)
```

→ ~~[1,2,3,~~
[2,3,4,5]
[2,4,5]
[2,4]

# Loop to iterate

```
List=[1,2,3,4,5]
for i in List:
    print(List)
```

→ 1
2
3
4
5

(b) Program :-

```
# empty tuple
t = ()
print(t)
t = 'python', 'tuple'
print(t)
```

Output :-

```
()
('python', 'tuple')
```

```
# concatenation
t1 = (0,1,2)
t2 = ('a','b')
print(t1 + t2)
```

→ (0, 1, 2, 'a', 'b')

```
# Nested tuple
t1 = (0,1,2)
t2 = ('a','b')
t3 = (t1, t2)
print(t3)
```

→ ((0, 1, 2), ('a', 'b'))

```
# tupple is immuteble
t1 = (0,1,2)
t1[0] = 4
print(t1)
```

→ Type Error:
'tuple' object does not support item assignment

# repitation → ('a', 'a', 'a')

```
t1 = ('a',) * 3
print (t1)
```

# slicing → (1, 2, 3)
(3, 2, 1, 0)
(2, 3)

```
t1 = (0, 1, 2, 3)
print (t1 [1:1])
print (t1 [3:-1])
print (t1 [2:4])
```

# deleting a tuple → NameError: name 'tuple3' is not defined

```
t3 = (0, 1)
del t3
print (t3)
```

# length of tuple → 2

```
t2 = (1, 2)
print (len (t2))
```

# Converting list and str to tuple → (0, 2, 1)
('p', 'y', 't', 'h', 'o', 'n')

```
List1 = [0, 2, 1]
print (tuple (List1))
print (tuple ('python'))
```

(c)

# tuple in loop → h
e
y

```
tup = ('h', 'e', 'y')
for i in tup:
    print (i)
```

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AIM :- .....

(d)

```
num = int(input("Enter your number"))
while (num >= 0):
    print(num)
    num = num - 1
```

Output:-

Enter your number 10

10
9
8
7
6
5
4
3
2
1
0