30-09-2025 Tuesday

```
t=('task','pen','papers','bench','table')
for i in t:
    print(i)
    for j in enumerate(i):
        print(f"pos={j[0]}, val={j[1]}")
```

o/p
```
task
pos=0, val=t
pos=1, val=a
.....
```

⇒ Add values by converting it to list OR Update values

```
t3=(28,'priya',78.9,False,'karan')
temp=list(t3)
temp[3]=True
t3=tuple(temp)
t3
```

o/p (28, 'priya', 78.9, True, 'karan

```
t4=('Rose',[1,2,3,4],78.4,[[[10,20,30]]])
t4[2]=78.4
t4[1][1]=2
t4[3][0][0][2]=30
```

To access element

[[[10,20,30]]] = 1 el
[[10,20,30]] = 1 el
[10,20,30] = 3 el

⇒ tup1 = (10, 20)
tup2 = (50, 70)
print("Before swap:", tup1, tup2)
tup1, tup2 = tup2, tup1
print("After swap:", tup1, tup2)

o/p
Before swap : (10,20) (50,70)
After swap : (50, 70) (10, 20)

⇒ Sort a tuple of tuples by 2nd item

tuple1 = (('a', 23), ('b', 37), ('c', 11), ('d', 29))
list1 = sorted(list(tuple1), key = lambda x: x[1])
~~tuple1 = list(~~
tuple1 = tuple(list1)
tuple1
o/p (('c', 11), ('a', 23), ('d', 29), ('b', 37))

3. Set : A set is a unordered, mutable collection of unique elements

- Define using set() or {}
- It automatically delete duplicates.
- Heterogenous in nature.

s = {28, 'priya', 78.9, False, 'Karan', 'priya', 78.9, False}
s
o/p {28, 78.9, False, 'Karan', 'priya'}

It don't print duplicates and print from integer values.....

* append doesn't work in set but add()

⇒ s.add(5555)
o/p {28, 5555, 78.9 . . . . }

⇒ To delete

(i) s.pop() o/p False It will delete
(ii) s.remove(56) -> # by value.
(iii) s.discard(11) # It will remove element with or without present in set but it will not throw any error. => main reason

- No update operation in set and only add & delete

Union and Intersection :

s1 = {1, 8, 6, 3, 2}
s2 = {9, 2, 7, 1, 5}
print("Union :", set(s1).union(set(s2))
print("Intersection :", sets1.intersection(set(s2))

o/p Union: {7, 1, 8, 5, 2, 9, 6, 3}
Intersection: {1, 2}

```
# print(s1.union(s2))
  print(s1.intersection(s2))
  print(s1.difference(s2))          # Unique values of set 1
  print(s2.difference(s1))          # ------------------ 2
  print(s1.symmetric-difference(s2))    # Non repeated elements of sets
```

⇒ Remove all duplicates of list

```
l=[1,2,2,3,3,3,6,6,5]      o/p [1,2,3,5,6]
l = list(set(l))
l
```