Tuple

Definition: In Python, a **tuple** is an ordered, immutable collection of elements.

- Ordered → Elements maintain their insertion order.
- Immutable → Once created, elements cannot be changed, added, or removed.
- Can contain duplicates.
- Can hold different data types (int, string, float, etc.).

Ex: my_tuple = (1, 2, 3, "apple", 3.14)

1. fruits = ("apple", "banana", "cherry")

print(fruits[0])

print(fruits[-1])

output:

apple

cherry

2.Find length of a numbers

numbers = (10, 20, 30, 40, 50)

print(len(numbers))

output: 5

3. colors = ("red", "green", "blue")

 print("green" in colors)

 print("yellow" in colors)

output:

True

False

4.Concate the two tuples

 t1 = (1, 2, 3)

t2 = (4, 5, 6)

result = t1 + t2

print(result)

output: (1, 2, 3, 4, 5, 6)

5.convert list to tuple

```
my_list = [1, 2, 3, 4]
my_tuple = tuple(my_list)
print(my_tuple)
```

output: (1, 2, 3, 4)

6.count a specific character and indices of a character

```
letters = ("a", "b", "c", "a", "a", "b")
print(letters.count("a"))
print(letters.index("c"))
```

output:

3

2

7. Write a program to **reverse a tuple** without using slicing.

```
s=(10,20,40,60,100)
for i in range(len(s)-1,-1,-1):
    print(s[i])
```

output:

100

60

40

20

10

8. Given a tuple of numbers, find the **sum of all elements**.
```
s=(10,20,40,60,20)
sum=0
for i in s:
    sum+=i
print("sum:",sum)
```

output:sum:150