Day 15

Operations on Tuples in Python:

Indexing (Access Elements): Tuples are ordered, so we can access elements using index numbers.

```
1    t = (10, 20, 30, 40)
2    print(t[0])    # 10
3    print(t[-1])   # 40
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS E:\Python\Day11-20\Day15> python main.py
10
40
```

Example: count()

```
5    t = (10, 20, 30, 40, 20, 30)
6    res = t.count(20)
7    print(res)
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS E:\Python\Day11-20\Day15> python main.py
2
```

Example: index()

```
5    t = (10, 20, 30, 40, 20, 30)
6    res = t.index(20)
7    print(res)
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

PS E:\Python\Day11-20\Day15> python main.py
1
```

Example: tuple.index(x, start, end)

```
5    t = (10, 20, 30, 40, 20, 30)
6    res = t.index(20, 1, 5)
7    print(res)
```

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PS E:\Python\Day11-20\Day15> python main.py
1

Example: to get the length of the tuple.

```
9    t = (10, 20, 30, 40, 20, 30)
10   print(len(t))
```

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PS E:\Python\Day11-20\Day15> python main.py
6

Example: concatenation in the tuples.

```
12   t1 = (10, 20, 30)
13   t2 = (40, 50, 60)
14   t3 = t1 + t2
15   print(t3)
```

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PS E:\Python\Day11-20\Day15> python main.py
(10, 20, 30, 40, 50, 60)

Example: repeating the values of tuple.

```
17    t = (1, 2)
18    print(t * 3)
```

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```
PS E:\Python\Day11-20\Day15> python main.py
(1, 2, 1, 2, 1, 2)
```

Example: tuple comparison.

```
19
20    a = (1, 2, 3)
21    b = (1, 2, 4)
22
23    print(a == b)
24    print(a < b)
```

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```
PS E:\Python\Day11-20\Day15> python main.py
False
True
```

Example: converting a tuple to the list

```
26    t = (1, 2, 3)
27
28    lst = list(t)
29    lst.append(4)
30    t = tuple(lst)
31    print(t)
```

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```
PS E:\Python\Day11-20\Day15> python main.py
(1, 2, 3, 4)
```

Summary:

- Tuples support indexing & slicing
- Tuples can be concatenated & repeated
- Support in, len(), loops
- Only two methods: count() and index()
- Tuples are immutable (cannot be changed)

--The End--