

## Day 6 – Python Training

Tuples are similar to lists, but they are **immutable**, meaning once a tuple is created, it **cannot be changed**.

### ◆ Syntax of a Tuple:

Tuples are defined using round brackets ( ) and can store multiple values separated by commas.

### ◆ Operations performed:

1. **count()** – Tells how many times a specific value appears in the tuple.
2. **len()** – Tells the total number of elements in the tuple.
3. **Mapping of Tuples** – Pairing elements from two tuples using the function.

### Assignment:

- Create two tuples: one containing names of students, and another with their marks.
- Map both tuples using a suitable function to show which student got how many marks.
- Write the result as a single combined tuple showing all pairs.

### Key Points:

- Tuples use round brackets ( ).
- They are immutable.
- Useful for storing fixed sets of values.
- Commonly used functions: count(), len(), and zip() for mapping.

### Dictionaries:

- Dictionaries are **unordered** collections of key-value pairs.
- Each item has a unique key and a corresponding value.
- Dictionaries are **mutable**, so we can add, remove, or update values.

- They are useful for storing data that needs to be looked up quickly using keys.

### **Important Dictionary Operations:**

- **keys()** – Returns all keys in the dictionary.
- **values()** – Returns all values.
- **items()** – Returns all key-value pairs.
- **get()** – Returns the value for a specific key.
- **update()** – Adds or updates key-value pairs.
- **pop()** – Removes a key-value pair