

## 1 Differences between Lists, Tuples, and Dictionaries

- **List** → Ordered, mutable (changeable), index-based hoti hai. Example: ["apple", "banana"]
  - **Tuple** → Ordered, **immutable** (change nahi kar sakte), index-based hoti hai. Example: ("apple", "banana")
  - **Dictionary** → Key-value pairs hota hai, unordered (Python 3.7+ mein insertion order maintain hota hai), aur keys unique hoti hain. Example: {"name": "Muaaz", "age": 20}
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## 2 Why are Tuples Immutable? When to Use Them?

- **Immutable ka reason** → Taake unki values accidentally change na ho jayein. Yeh safe hota hai fixed data ke liye.
  - **When to use?** → Jab tumhe data ko **lock** karna ho, jaise week ke days (("Mon", "Tue", "Wed", ...)) jo kabhi change nahi hote.
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## 3 How can Keys in Dictionaries Help Access Data Efficiently?

- Dictionary mein tum direct **key** se value nikaal lete ho, index search karne ki zaroorat nahi.
  - Example: student["marks"] instantly result dega, jabke list mein poora search karna padta.  
👉 Yehi wajah hai dictionary **fast** hoti hai.
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## 4 What Happens if You Try to Change a Tuple Value?

- Agar tuple ka element change karne ki koshish karoge:

numbers = (1, 2, 3)

numbers[0] = 10 # ❌ Error

- Output: TypeError: 'tuple' object does not support item assignment  
Matlab tuple **change nahi hota**.
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## 5 Real-World Examples

- **List** → Shopping cart items (["milk", "bread", "eggs"])
- **Tuple** → GPS coordinates ((33.6844, 73.0479)) → fix rehte hain
- **Dictionary** → Student record ({"name": "Ali", "roll": 101, "marks": 90})