

Tuple

→ ()

Immutable Data Structure

↳ (Not Change)

| <u>List</u> | <u>Tuple</u> |
|----------------|---|
| <u>Mutable</u> | <u>Immutable</u> |
| <u>[]</u> | <u>()</u> |
| <u>Slower</u> | <u>faster</u> → <u>better performance</u> |
| | <u>(Real world use case)</u> |

Sets → Collection of unique elements

Properties

- ① unordered → do not maintain the order of elements as they are added.
- ② mutable
- ③ unindexed
- ④ Duplicates are not allowed

| <u>Aspect</u> | <u>Lists</u> | <u>Tuples</u> | <u>Sets</u> |
|-------------------|----------------|----------------|------------------|
| <u>Mutability</u> | changeable | unchangeable | changeable |
| <u>Indexing</u> | Yes | Yes | No |
| <u>Duplicate</u> | Allowed | Allowed | Not allowed |
| <u>Order</u> | <u>ordered</u> | <u>ordered</u> | <u>Unordered</u> |
| <u>Syntax</u> | <u>[]</u> | <u>()</u> | <u>{ }</u> |

Dictionary → customized index
of key: value p
(Hashing DS)
unique item

List, Tuple

↳ Default index (0, 1, ..., n-1)

List[0] = 1

dict[key] = value

Keys in the dictionary → immutable

Add new "key-value pair"

↓
feasible /
add it