

1. What is the difference between Single quoted string and double quoted string in python?
2. What is the difference between immutable and mutable objects?
3. What is the difference between list and tuple in python?
4. What are the difference between a set and list in terms of Functionality and use cases?
5. How does a dictionary differ from a list in term of data storage and retrieval?

SINGLE QUOTES	DOUBLE QUOTES
Preferred for short strings or simple words	Preferred when the string contains an apostrophe
Multiline is not possible, unless used three time	Its not possible until used trice
Issues with It's a nice day	Works: "It's a nice day"
'Hello'	“Hello”

MUTABLE OBJECTS	IMMUTABLE OBJECTS
Can be modified after creation	Cannot be modified after creation
Lists, Sets, Dictionaries	Strings, Tuples, Integers, Floats
More dynamic, allows in-place modification	New objects are created when changed
Yes, elements can be changed	No, elements cannot be changed

LIST	TUPLE
Mutable	IMMUTABLE
Slower due to mutability	Faster due to immutability
Takes more memory	Takes less memory
Used when data needs to change	Used when data should remain constant

SET	LIST
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No duplicates allowed	Duplicates allowed
Unordered	Ordered
Fast operations like union, intersection	Fast element retrieval
When uniqueness is required	When maintaining order is important

## HOW DICT DIFF FROM LIST:

Use Lists when order matters and sequential access is needed.

Use Dictionaries when you need fast lookups using unique keys.

List	Dictionary
Stores elements sequentially	Stores key-value pairs
Access by index	Access by key
Allows duplicate values	No duplicate values allowed
Slower	Faster