

Main Flow Services & Technologies

Data Science with Python Internship: Task 1



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***Notes from task 1:***

| **Feature** | **List** | **Dictionary** | **Set** |
| --- | --- | --- | --- |
| **Definition** | Ordered, mutable sequence | Unordered collection of key-value pairs | Unordered collection of unique elements |
| **Syntax** | **my\_list = [1, 2, 3]** | **my\_dict = {'a': 1, 'b': 2}** | **my\_set = {1, 2, 3}** |
| **Access** | By index | By key | Directly (no indexing) |
| **Mutability** | Mutable | Mutable | Mutable (but elements must be immutable) |
| **Duplicates** | Allows duplicates | Keys must be unique; values can duplicate | Does not allow duplicates |
| **Ordering** | Maintains insertion order (from Python 3.7+) | Does not maintain order | Does not maintain order |
| **Use Case** | Sequence of items | Associative array, lookups | Membership testing, unique elements |
| **Operations** | Append, insert, remove, pop | Add, remove, modify key-value pairs | Add, remove, union, intersection |
| **Examples** | **my\_list.append(4)** | **my\_dict['c'] = 3** | **my\_set.add(4)** |

Here’s a comparison of lists, dictionaries, and sets in Python