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# MAIN FLOW SERVICES & TECHNOLOGIES

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Data Science with Python Internship: Task 1



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## *Notes from task 1:*

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

Feature	List	Dictionary	Set
Definition	Ordered, mutable sequence	Unordered collection of key-value pairs	Unordered collection of unique elements
Syntax	<code>my_list = [1, 2, 3]</code>	<code>my_dict = {'a': 1, 'b': 2}</code>	<code>my_set = {1, 2, 3}</code>
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	<code>my_list.append(4)</code>	<code>my_dict['c'] = 3</code>	<code>my_set.add(4)</code>