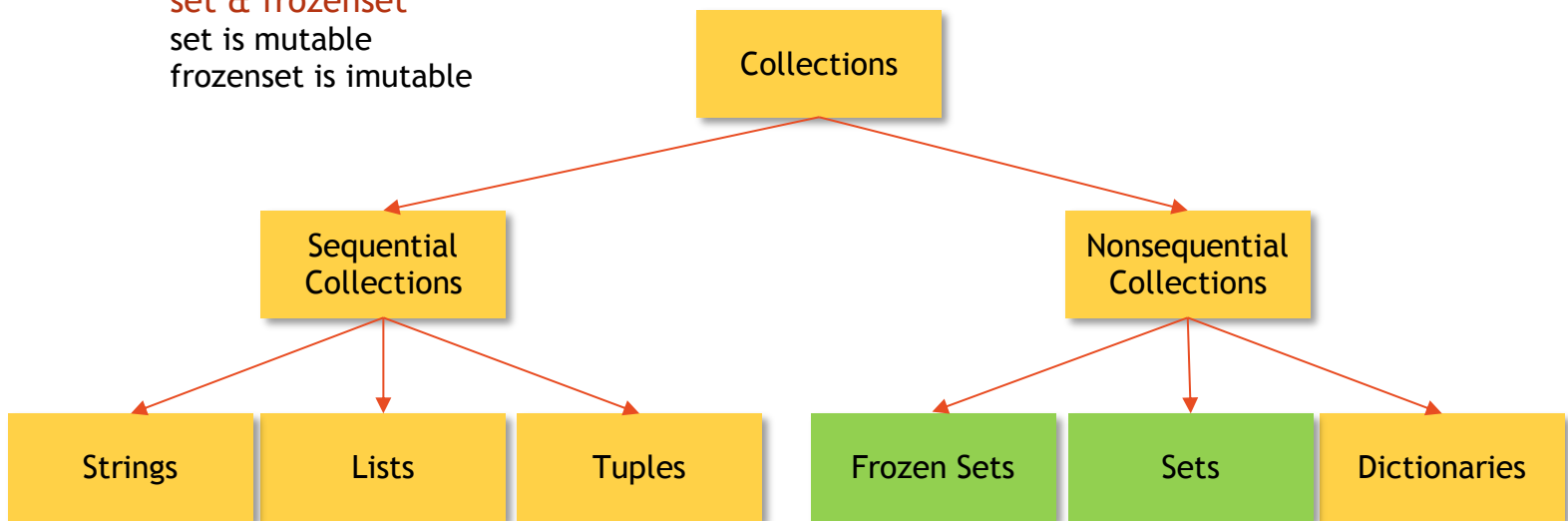


set & frozenset

set is mutable

frozenset is imutable

**Creating a Set**

- $S = \{1, 2, 3, 4\}$
- $S = \{x \text{ for } x \text{ in range}(1, 5)\}$ → $\{1, 2, 3, 4\}$
- No literal for the empty set → $\{\}$ is a dictionary
- $S = \text{set}()$ → An empty set

Adding elements to a Set

- $S.add(\text{item})$

Removing elements to a Set

- $S.remove(\text{item})$ → error of $\text{item} \notin S$
- $S.discard(\text{item})$ → no error when $\text{item} \notin S$
- $S.pop()$ → removes and returns arbitrary element. Error if $S = \{\}$

Set operations

- Union |
- Intersection &
- Difference -
- Symmetric Difference ^

Predicates on Sets

- Is equal / not equal == and !=
- Is subset <=
- Is superset >=
- Is disjoint .isdisjoint

See 05-09-sets.py

Frozen Sets

An immutable set

See [05-10-frozensets.py](#)