

# Advanced Sets in Python

## What are Sets?

- A **collection of unique elements** (no duplicates).
- Unordered → no indexing.
- Mutable → can add/remove items.

## Set Operations:

### 1. Union ( | or union()):

- Combines all unique elements from both sets.

### 2. Intersection ( & or intersection()):

- Elements common in both sets.

### 3. Difference ( - or difference()):

- Elements in one set but not in the other.

### 4. Symmetric Difference ( ^ or symmetric\_difference()):

- Elements present in either set, but not in both.

### 5. Subset & Superset:

### 6. Disjoint Sets

## Key Points:

- Sets are best for **unique values**.
- Union → merge all unique items.
- Intersection → common items.
- Difference → remaining items.
- Symmetric Difference → uncommon items.
- Subset/Superset check relationships.
- Disjoint → confirm no common elements.