

Experiment 04 - Exercise 07: Fruit Sets (Intersection, Difference, Union)

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Objective

Create two sets of fruits and find:

- fruits in both sets,
- fruits only in the first set,
- count of all unique fruits from both sets.

Input

Number of fruits n and fruit names for sets $s1$ and $s2$.

Output

Intersection, difference, union, and the union size.

Approach

Use set operations:

- Intersection: $s1 \ & \ s2$
- Difference: $s1 \ - \ s2$
- Union: $s1 \ | \ s2$
- Count of all unique fruits: `len(s1 | s2)`

Time Complexity

$\Theta(n)$ average-case for building sets and computing operations.