Python Refresher 3
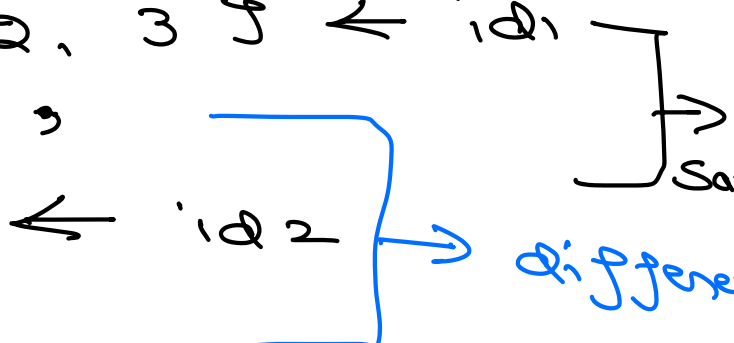
- Data Structure Revision
- Quizzes
- Comprehensions
- Packing and unpacking
- Strings
- String formatting

List

- Mutable
- Heterogeous
- Dynamic

$$L1 \Rightarrow \quad [1, 2, 3] \leftarrow id1$$

$$L1[0] = \text{'a'}$$

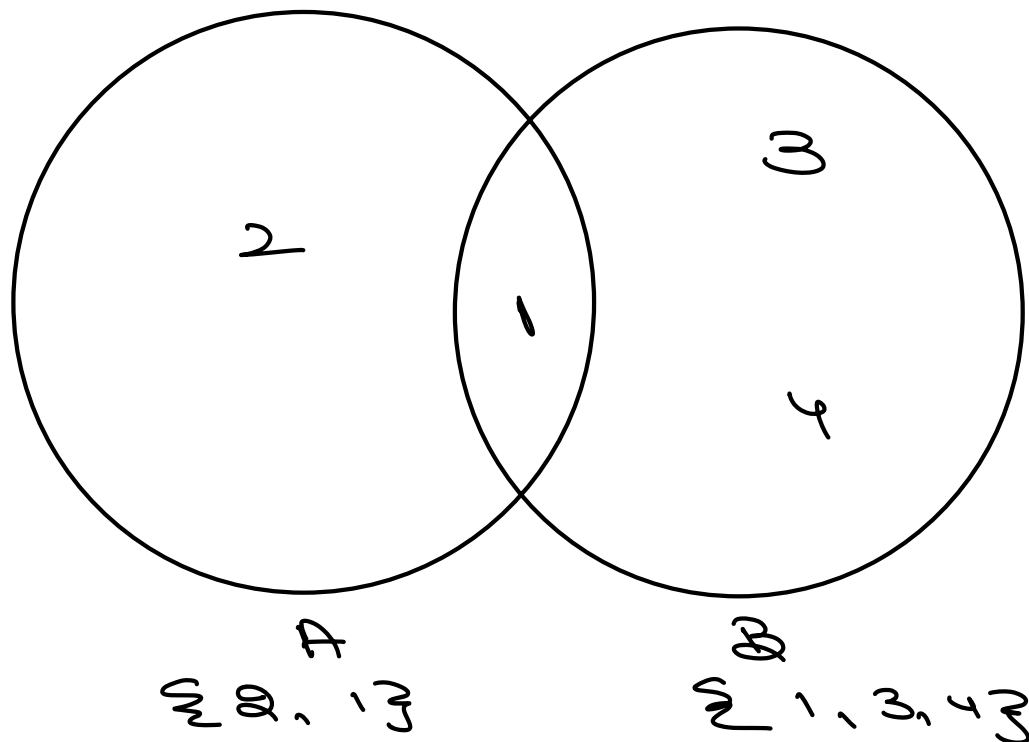$$id(L1) \leftarrow id2$$

$$id(L1[0])$$

Same

Different

Tuples

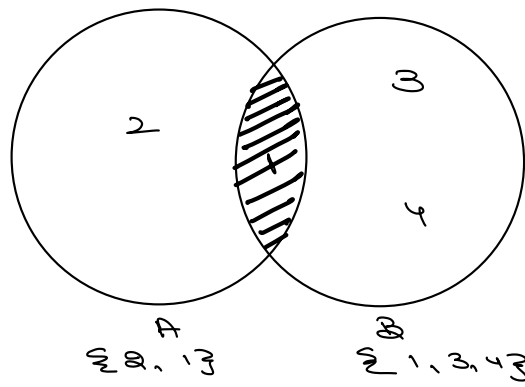- Same as list but immutable
- Memory efficient and fast

To do

→ unique collection (No dups)

→ Insertion Ordered

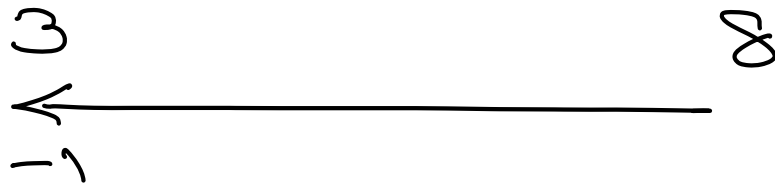→ Heterogeneous

→ Can only contain immutables

Set operations

A
{2, 1}

B
{1, 3, 4}

* Intersection → {1}

* Union → {1, 2, 3, 4}

* Difference → {2} (A-B)

* Symmetric diff → (A∪B)-(A∩B)

A
{2, 1}

B
{1, 3, 4}

Intersection

==① What does Unhashable?==

3 ←————————————— 8
-1

Dictionary

① K : V pair

① K → can only be immutables

① V → No restriction

① Insertion Order

① Dynamic and mutable

Set, dict $\Rightarrow$ O(1)

list, tuples, strings $\Rightarrow$ O(n)

Packing and unpacking

list1 = [1, 2, 3]

a = list1[0]

b = list1[1]

c = list1[2]

* Unpacking

a, b, c = list1

* Packing

a = 1

b = 2

c = 3

data = a, b, c

$\downarrow$

(1, 2, 3)

Strings

1) immutable

2) iterable

3) ordered ⇒ you can index and slice

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file1.py

a = 10 ← Global Variable

def func1( )

a = 30 ⎫ local
        ⎬ Variables
def func2( )

a = 20 ⎭

a → 20

a → 30

a → 10

Explain mutable

Explain mutable