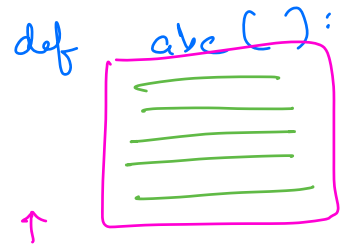
Tuples & Sets



Agenda

- Tuples basics
- Tuple methods
- Sets basics
- Set methods

Tuples

Immutable data structure

No modifications whatsoever

→ Cannot append / insert
→ Cannot remove
→ Cannot update

---

t = (1, 2, [5, 6, 10])

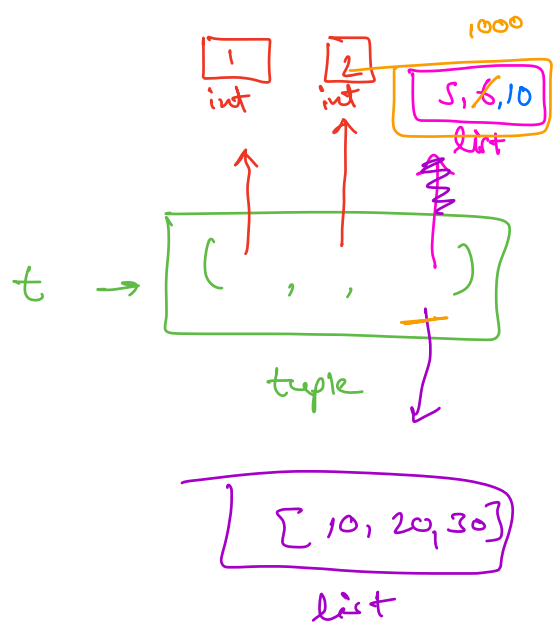
t[2]

✓ t[2].append(10) ✓

t[2][1] = 1000

t[2] = [10, 20, 30] ✗

Not work



Quiz

$t = (3, 4, 6, 7, 3)$

indices: 0 1 2 3 4

$t[::2]$

- start → default
  end → default
  step = 2

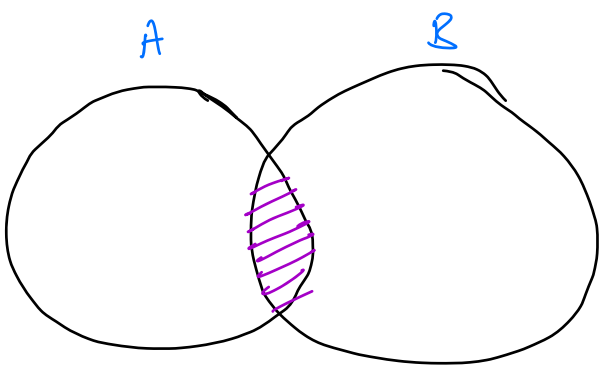
$(3, 6, 3)$

Sets

Exactly like mathematical sets

Set Theory

Intersection



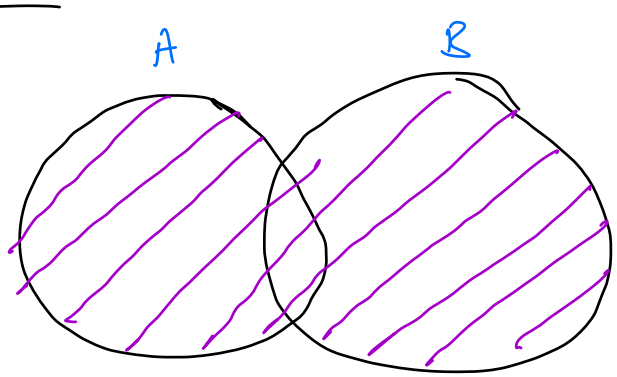
$A \cap B$

A & B

A.intersection(B)

B.intersection(A)

Union



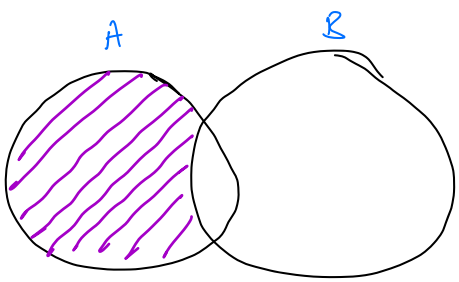
$A \cup B$

A | B

A.union(B)

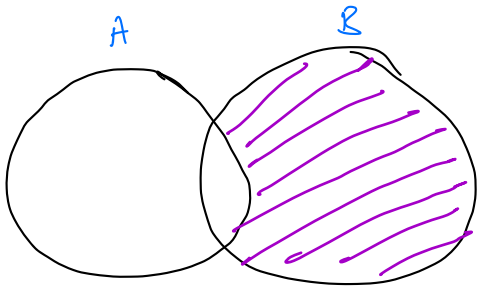
B.union(A)

Difference



A - B

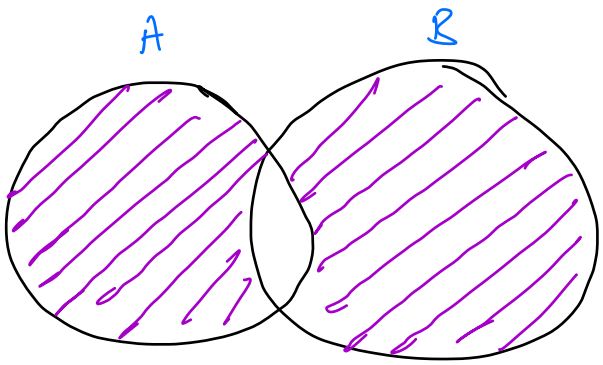
A - B



B - A

B - A

Symmetric Difference



Union	-	Intersection
A ∪ B	-	A ∩ B
A | B	-	A & B

A ^ B

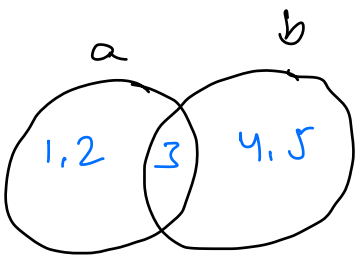
Quiz 7

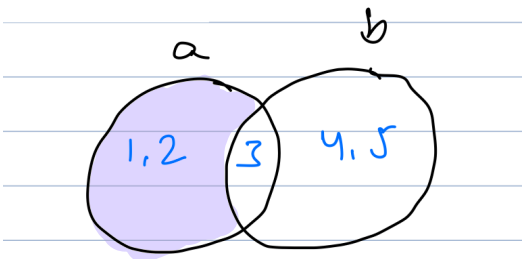
What is the output of the following?

Option B

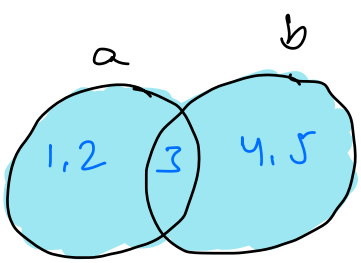
```
a = {1,2,3}
b = {3,4,5}
print(a-b)
print(a.union(b))
print(a.intersection(b))
```

- {1,2}
- {1,2,3,4,5}
- {3}

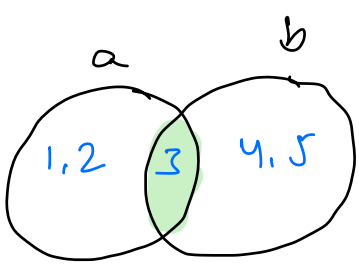




a - b = {1,2}



a.union(b) = {1,2,3,4,5}



a.intersection(b) - {3}

Quiz 8

What is the value of x in the code snippet below?

```
set1 = {1, 2, 3, 4, 5, 6}
set2 = {2, 4, 5, 6, 7}
x = set1 | set2
```

Union

{1, 2, 3, 4, 5, 6, 7}

Doubts

Intermediate — Time & Space Complexity

Arrays - Algorithm

Searching & Sorting Algorithms

Hashing

Strings

Maths

and more

Good Night

Thank You

Wednesday