Help Center

Quick Reference:

Sets

```
empty_set = set() # Create an empty set.
north_colleges = set(["Jones", "Brown", "Martel", "Duncan", "McMurtry"]) # Create a se
t with initial elements.
north_colleges.add("Nakhleh") # Add to a set.
north_colleges.remove("Nakhleh") # Remove from a set.
>>> "Baker" in north_colleges # Test for membership in a set.
False
```

Exercise 1

What would you expect the value of this expression to be?

```
>>> set([0,1,2]) == set([2,0,1,1])
```

What would you expect the result of this Python code to be?

```
>>> some_set = set([0,1,2])
>>> some_set.add(2)
>>> some_set
```

Exercise 2 - Union

Write a function

```
def union(set1, set2):
    """
    Returns the union of two sets.

Arguments:
    set1 -- The first set of the union.
    set2 -- The second set of the union.

Returns:
    A new set containing all the elements of set1 and set2.
    """
    ...
```

that takes two sets as arguments and returns their union. (A union of two sets A and B is a new set that contains all the elements of both A and B. For example, the union of {1,2,3} and {2,3,4} is

```
\{1,2,3,4\}.)
```

Assert your function produces the following output:

```
>>> union(set([1,2,3]), set([4,5,6]))
set([1, 2, 3, 4, 5, 6])

>>> union(set([1,2,3]), set([2,3,4]))
set([1, 2, 3, 4])

>>> union(set(), set([3]))
set([3])
```

```
>>> union(set(), set())
set([])
```

This method already exists in the set class by the name of union (along with many others, type help(set) for details). In the future, feel free to use this method instead of implementing union on your own. But do implement it yourself for this exercise.

Exercise 3 - Intersection

Write a function

```
def intersection(set1, set2):
    """
    Returns the intersection of two sets.

Arguments:
    set1 -- The first set of the intersection.
    set2 -- The second set of the intersection.

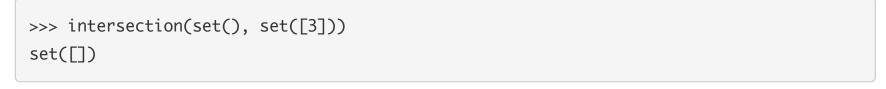
Returns:
    A new set containing only the elements common to set1 and set2.
    """
    ...
```

that takes two sets as arguments and returns their intersection. (An intersection of two sets A and B is a new set that contains only the elements common to both A and B. For example, the intersection of {1,2,3} and {2,3,4} is {2,3}.)

Assert your function produces the following output:

```
>>> intersection(set([1,2,3]), set([2,3,4]))
set([2, 3])
```

```
>>> intersection(set([1,2]), set([3,4]))
set([])
```



More Information

Consult the Python documentation for more details about sets.

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