

365 DataScience Sets and operations with sets in Python

Step 1 Define two lists containing repeating items

*# Sets are used whenever we don't care about the number of times a certain item occurs.
Instead, all we are interested in are the types of items that are present.*

```
A = [1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9]
B = [6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14]
```

Step 2 Convert the two lists into sets

*# You can convert a list into a set by applying the set() built-in function.
Notice that the type of brackets surrounding the numbers has changed.
Notice that the duplicates have disappeared.*

```
A = set(A)
A
```

```
B = set(B)
B
```

Step 3 Intersect sets A and B

The intersection operation finds and displays the common items between the two sets.

```
A & B
```

Step 4 Unite sets A and B

The union operation combines the items in the two sets by removing the duplicates.

```
A | B
```

Step 5 Take the difference between the two sets

This difference tells you the items that are in A but not in B

```
A - B
```

This difference tells you the items that are in B but not in A

```
B - A
```

Step 6 Take the symmetric difference between the two sets

The symmetric difference tells you the items that are in A and the items that are in B

but they are not in both sets.

```
A ^ B
```