PYTHON SNIPPETS

Python Set Operators

Phil Best
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Sets are a very useful collection type, allowing for blazing fast membership checks, in addition to providing a slew of handy methods for comparing collections.

Among these methods are union, intersection, and difference. They work like this:

```
set_1 = {1, 2, 3, 4, 5}
set_2 = {3, 4, 5, 6, 7}

# Combine set_1 and set_2
print(set_1.union(set_2))  # {1, 2, 3, 4, 5, 6, 7}

# Find common elements in set_1 and set_2
print(set_1.intersection(set_2))  # {3, 4, 5}

# Find elements in set_1 which are not in set_2
print(set_1.difference(set_2))  # {1, 2}
```

These methods are great, but some of them have quite long names, and they take up a lot of space. Instead of using this method syntax, we can use special set operators like so:

```
set_1 = {1, 2, 3, 4, 5}
set_2 = {3, 4, 5, 6, 7}

# Combine set_1 and set_2
print(set_1 | set_2)  # {1, 2, 3, 4, 5, 6, 7}

# Find common elements in set_1 and set_2
print(set_1 & set_2)  # {3, 4, 5}

# Find elements in set_1 which are not in set_2
print(set_1 - set_2)  # {1, 2}
```

We can also chain the operations together, for example to find the union of three sets:

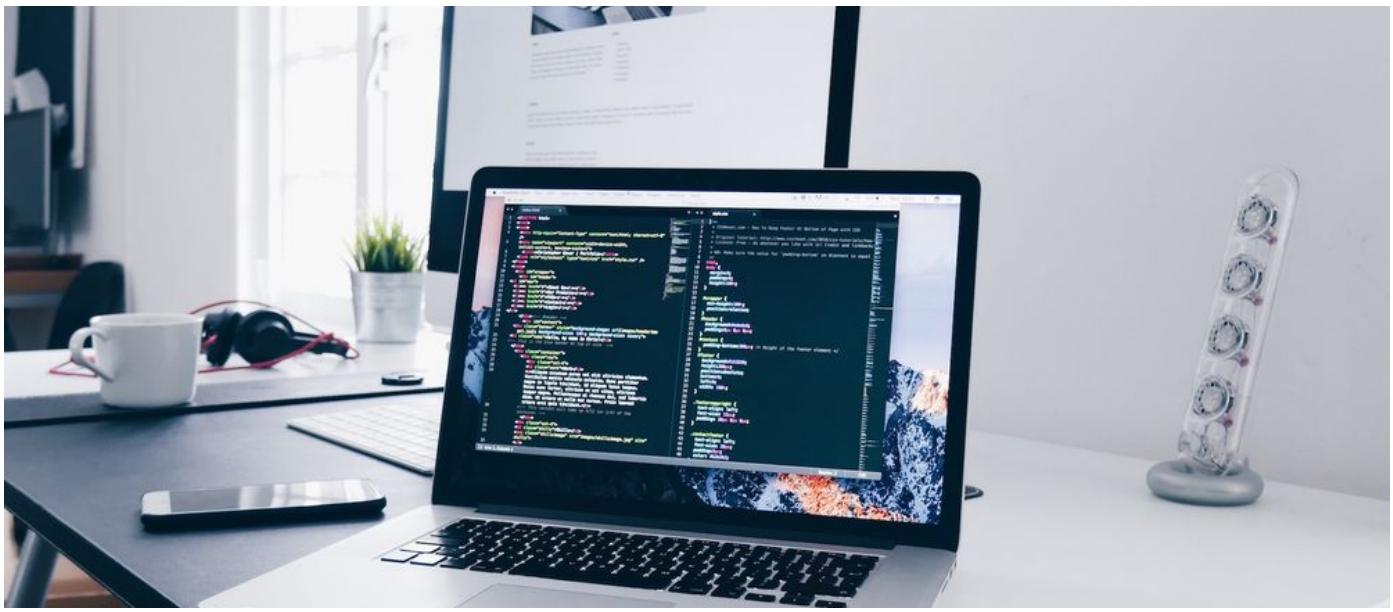
```
set_1 = {1, 2, 3, 4, 5}
set_2 = {3, 4, 5, 6, 7}
set_3 = {5, 6, 7, 8, 9}

# Combine set_1 and set_2 and set_3
print(set_1 | set_2 | set_3)  # {1, 2, 3, 4, 5, 6, 7, 8, 9}
```

One thing to note is that when using these set operators, rather than the method syntax, both operands **must** be sets. When using the method syntax, the argument can be any iterable type.

If you need a full refresher on sets, check out our earlier post on Python collections, or take a look at our eBook. Alternatively, you can try out our Complete Python Course, where we go into a lot more detail on sets and set operation. Hope to see you there!

Phil Best
I'm a freelance developer, mostly working in web development. I also create course content for Teclado!

Python Snippets



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