

4 Tips to Improve Your Python Code

Assign multiple items, improve your conditionals, and more!



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Oct 25 · 3 min read ★



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Python is a great programming language that makes it easy to up and running. There are many hidden gems in the language that make it even easier to use.

The tips listed below not only make your code easier to read, but also make your code safer to run. You'll encounter less crashes and fewer redundancies in your code, meaning there'll be less to maintain.

1. Assign Multiple Items Directly

One of the amazing features available in Python is the ability to assign multiple items directly. Multiple assignments is a feature that's often under-utilized by many Python programmers, but it can really speed up your workflow.

The term multiple assignments can often be used interchangeably with tuples unpacking of iterable unpacking.

Let's see how we can assignment multiple items directly:

Multiple Assignments made easy!

One of the great things about this is that this also works for unpacking iterable items, such as lists or tuples.

Let's see how we can assign parts of lists to different variables:

An important thing to note here is that the number of variables should be the same.

For example, if you wrote `a, b = [1, 2, 3]`, then this would throw a `ValueError`. The reason for this is that there is a mismatch between the two sides of the assignment.

To work around this, you can *unpack* the remaining values using the `*` operator:

Unpacking multiple variables.

2. Better Logicals with Chained Conditionals

Python also provides you with flexibility in terms of how you write your conditional expressions.

Take a look at the example below. You may want to evaluate that a number is greater than some number and less than another. In this case, you might write:

An example of longer conditionals

Instead of writing this, you could make your code a little easier to read by writing:

A more mathematical and shorter way to evaluate conditions.

3. Merge Two Dictionaries in a Single Line (Python 3.9+)

Python 3.9 makes it significantly easier to merge two dictionaries. Prior to version 3.9, you needed to combine items of dictionaries into one another in order to merge them.

Now you can simply use the union `|` operator to help merge dictionaries together:

Better dict merging in Python 3.9

4. Write if-else Statements on a Single Line

Python `if-else` statements are great resources to allow you to write conditional expressions in your code.

Often times, these statements will look like this:

The traditional if-else

We can see that this is quite clear, but it also takes up four lines.

In Python, we can actually express this entire line within a single line conditional assignment.

Let's take a look at what this looks like:

A one-liner if-else assignment in Python

Conclusion

I hope that these four tips helped make your code a little faster and easier to write (and to read!). Python is known for its flexibility and it's my hope that these four hidden gems make you a more productive programmer.

Thanks so much for reading this article! If you have any questions or comments, feel free to let me know in the comments!

Thanks to Anupam Chugh.

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