

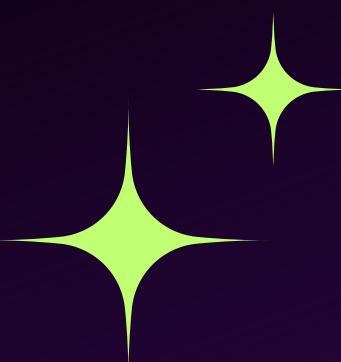
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# 7 Advanced Python short tricks that you must know!



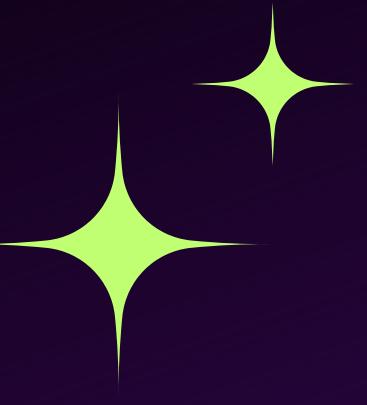
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## Trick 1 - One-Liners with Python's Lambda Function:

Python's lambda function allows you to write one-liners for simple functions. For example, instead of defining a full function to square a number, you can use a lambda function like this:

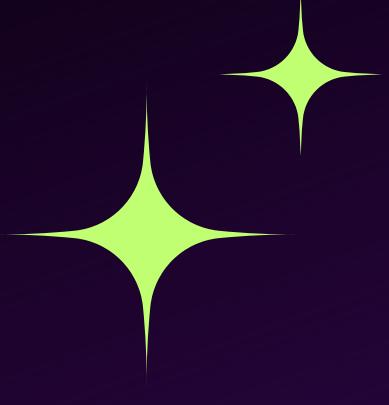
```
square = lambda x: x**2
```



## Trick 2 - Using Enumerate for Iterating Over Lists:

The enumerate function in Python allows you to loop over a list and get both the index and the value of each element. This can be especially useful when you want to modify the list in place. For example:

```
my_list = ["apple", "banana", "cherry"]
for i, val in enumerate(my_list):
    my_list[i] = val.upper()
```



## Trick 3 - Merging Dictionaries with the Update Method:

**Description:** You can easily merge two dictionaries in Python using the update method. This method adds the key-value pairs from one dictionary into another dictionary. For example:

```
dict1 = {"apple": 1, "banana": 2}  
dict2 = {"cherry": 3, "durian": 4}  
dict1.update(dict2)  
print(dict1) # Output: {"apple": 1, "banana": 2, "cherry": 3, "durian": 4}
```

## Trick 4 - Map Function:

The map function is a built-in Python function that can be used to apply a function to every element in an iterable. Here's an example of how to use the map function with a lambda function to square every element in a list in a single line:

```
numbers = [1, 2, 3, 4, 5]
squared_numbers = list(map(lambda x: x**2, numbers))
print(squared_numbers)
```

## Trick 5 - Reduce Function:

The reduce function is a built-in Python function that can be used to apply a function to the elements of an iterable in a cumulative way. Here's an example of how to use the reduce function with a lambda function to calculate the product of all the elements in a list in a single line:

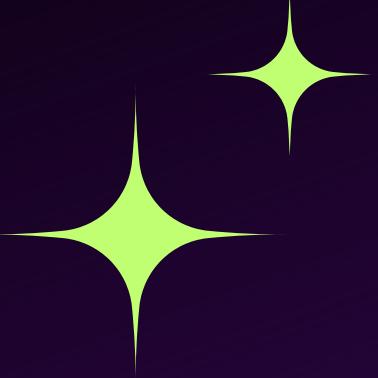
```
from functools import reduce

numbers = [1, 2, 3, 4, 5]
product = reduce(lambda x, y: x*y, numbers)
print(product)
```

## Trick 6 - Filter Function:

The filter function is a built-in Python function that can be used to filter out elements from an iterable based on a condition. Here's an example of how to use the filter function with a lambda function to filter out even numbers from a list in a single line:

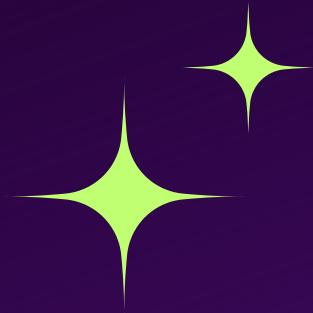
```
numbers = [1, 2, 3, 4, 5]
odd_numbers = list(filter(lambda x: x%2 != 0, numbers))
print(odd_numbers)
```



## Trick 7 - Sorting:

The sorted function is a built-in Python function that can be used to sort an iterable. Here's an example of how to use the sorted function with a lambda function to sort a list of tuples based on the second element in a single line:

```
students = [("Alice", 20), ("Bob", 18), ("Charlie", 22)]
sorted_students = sorted(students, key=lambda x: x[1])
print(sorted_students)
```



## Conclusion:

These are just a few examples of the many powerful tools available in Python. By learning and using advanced Python short tricks like these, you can write more efficient and effective code. Happy coding!

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