Lambdas

In this lesson, we will learn about lambdas and why they are important.

WE'LL COVER THE FOLLOWING

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- Syntax
- Calling functions with lambdas as arguments

There is a special class of functions for which we do not need to specify function names. These are called lambdas.

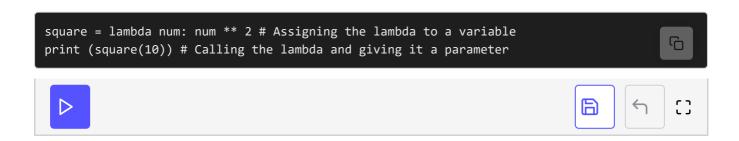
A **lambda** is an anonymous function that returns some form of data. Lambdas are defined using the lambda keyword. Since they return data, it is good practice to assign them to a variable.

Syntax

lambda parameters: expression

In the above syntax, parameters are optional.

Below, we can find a lambda that squares the value of the parameter and returns this new value:



Here's a simple lambda that concatenates the first characters of three strings together:

```
print (concat_strings("Quantum", "Information", "Science"))
```

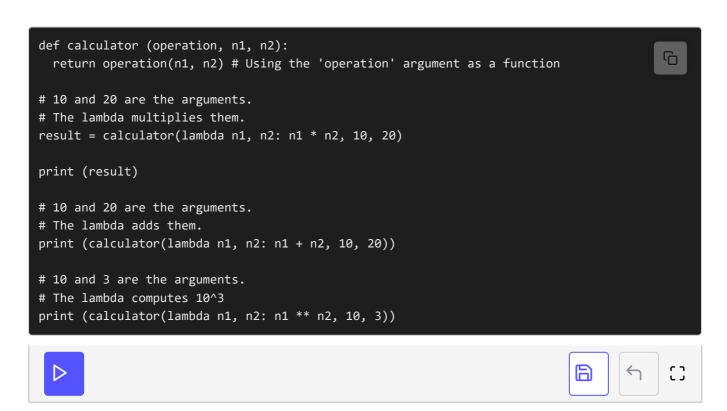
As we can see, lambdas are simpler and more readable than normal functions. But this simplicity comes with a limitation; **a lambda cannot have a multi-line expression**. This means that our expression needs to be something that can be written in a single line.

e lambdas are really useful when a function requires another function as its argument.

Calling functions with lambdas as arguments

In Python, one function can become an argument for another function.

Using lambda functions, let's make a calculator function that has custom functionality along with two numbers as arguments.



The code looks much cleaner with a lambda function. We can define the operation on the go whenever we want.

In the next lesson, we'll learn about some important data structures in Python.