

Python Lambda

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0.1 Python Lambda

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****A lambda function is a small anonymous function.**

****A lambda function can take any number of arguments, but can only have one expression.**

Syntax:

lambda arguments : expression

The expression is executed and the result is returned:

Example:

```
[1]: x = lambda a : a + 10  
     print(x(5))
```

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Lambda functions can take any number of arguments:

Example:

Multiply argument a with argument b and return the result:

```
[2]: x = lambda a, b, c : a + b + c  
     print(x(5, 6, 2))
```

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0.2 Why Use Lambda Functions?

The power of lambda is better shown when you use them as an anonymous function inside another function.

Say you have a function definition that takes one argument, and that argument will be multiplied with an unknown number:

```
[9]: def myfunc(n):  
     return lambda a : a * n
```

****Or, use the same function definition to make a function that always triples the number you send in:**

Example:

```
[10]: def myfunc(n):  
      return lambda a : a * n  
  
      mytripler = myfunc(3)  
  
      print(mytripler(11))
```

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**Or, use the same function definition to make both functions, in the same program:

```
[11]: def myfunc(n):  
      return lambda a : a * n  
  
      mydoubler = myfunc(2)  
      mytripler = myfunc(3)  
  
      print(mydoubler(11))  
      print(mytripler(11))
```

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**Use lambda functions when an anonymous function is required for a short period of time.