Python Lambda Function

A Small, anonymous function that can be defined in a single line of code

Basic Syntax

```
variable_name = lambda arguments : expression
```

- `variable_name` — variable name that act as a function after declaration
- `lambda` — lambda keyword
- `arguments` — Any number of arguments passed to the lambda function
- `expression` — A single expression to evaluate and return the resulting value

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Example # 1

```
square = lambda x : x ** 2
result = square(5)
print(result) #0utput: 25
```

Example # 2

```
add = lambda x,y : x + y
result = add(3,4)
print(result)  #0utput:7
```

Lambda function can also be used as parameters for other functions

```
my_list = [1, 2, 3, 4, 51
result = list(map(lambda x : x ** 2, my_list))
print(result)
#Output: [1, 4, 9, 16, 251
```

map() function applies given function to each element of the list

```
my_list = [1, 2, 3, 4, 5, 6, 7, 8, 9, 101
result = list(filter(lambda x : x % 2 0, my_list))
print(result)
#Output: [2, 4, 6, 8, 101tput: [1, 4, 9, 16, 251
```

filter() function creates a list of elements for which function is True

from functools import reduce

```
my_list = (1, 2, 3, 4, 5)
result - reduce(lambda : x y, my_list)
print(result)
#0utput 120
```

reduce() function applies given function to the element of an iterable in a cumulative way, and returns a single value