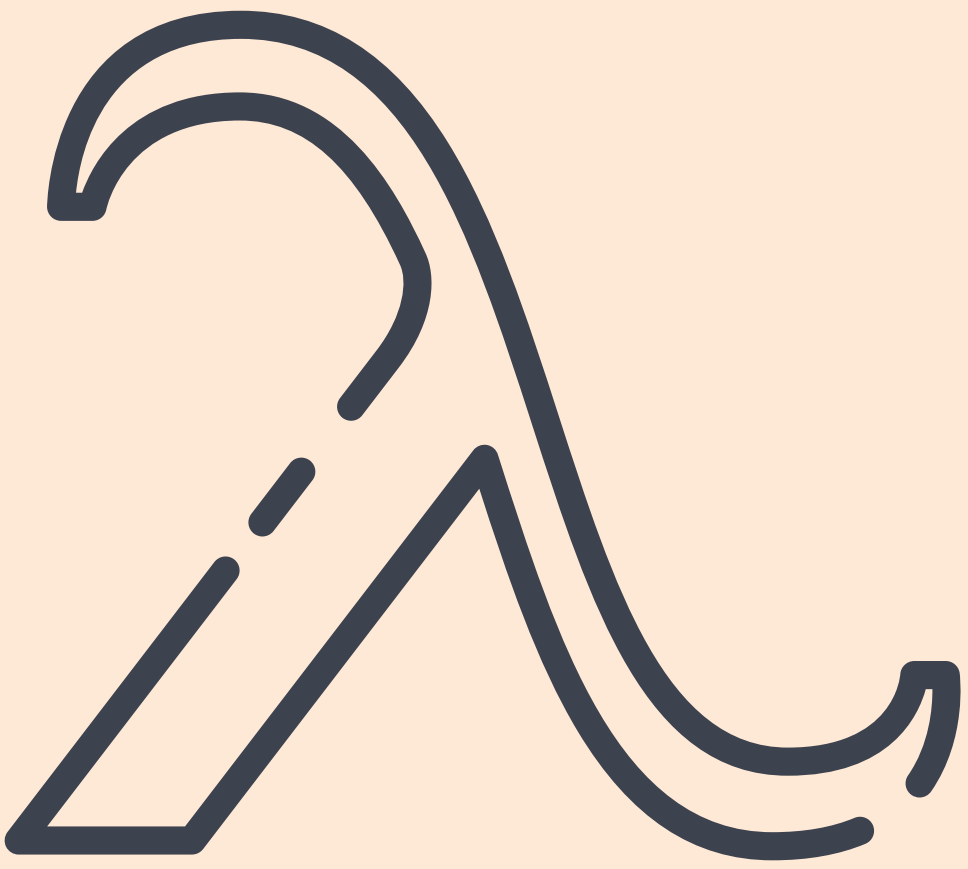
Python Lambda Function



Lambda Function

- Python Lambda Functions are anonymous function means that the function is without a name.

- As we already know that the def keyword is used to define a normal function in Python. Similarly, the lambda keyword is used to define an anonymous function in Python.

- This function can have any number of arguments but only one expression, which is evaluated and returned.

Syntax:

lambda arguments:expression

Example:-

```python
str1 = 'Python'
# lambda returns a function object
rev_upper = lambda string: string.upper()[::-1]
print(rev_upper(str1))

################################ OUTPUT ################################
NOHTYP
```

In this example we are taking a string and then converting it into Uppercase and reversing it.

```python
format_numeric = lambda num: f"{num:e}" if isinstance(num, int) else f"{num:,.2f}"

print("Int formatting:", format_numeric(1000000))
print("float formatting:", format_numeric(999999.789541235))

################################ OUTPUT ################################
Int formatting: 1.000000e+06
float formatting: 999,999.79
```

In this example we are formatting the Integer and the floatting along withe the if statment to check if the given input is an integer or a float.

```python
def cube(y):
    return y*y*y
lambda_cube = lambda y: y*y*y
# using function defined
# using def keyword
print("Using function defined with `def` keyword, cube:", cube(5))
# using the lambda function
print("Using lambda function, cube:", lambda_cube(5))

################################ OUTPUT ################################
Using function defined with `def` keyword, cube: 125
Using lambda function, cube: 125
```

In this example we are calculating the cube of a number and we are comparing it with the traditional function and the lambda function.