

Lambda Functions

What is a Lambda Function?

- A **lambda function** is a small, anonymous (nameless) function in Python.
- Created using the keyword `lambda`.

Syntax:

`lambda arguments: expression`

Key Features:

- Can take any number of arguments but only **one expression**.
- Expression is evaluated and returned automatically.
- Often used when a short function is needed for a short time.

Example 1: Simple Lambda

```
square = lambda x: x * x
print(square(5))           # Output: 25
```

Example 2: With Two Arguments

```
add = lambda a, b: a + b
print(add(3, 7))           # Output: 10
```

Importance:

- Makes code **short and clean**.
- Used in built-in functions like `map()`, `filter()`, `reduce()`.
- Best for quick tasks without defining a full `def` function.