FUNCTIONS IN PYTHON

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We use functions to organize our code in blocks that can later be reused.

This offers us better readability and modularity for our code.

FUNCTIONS IN PYTHON

DRY - DON'T REPEAT YOURSELF

DOCSTRINGS

WHAT IS A DOCSTRING?

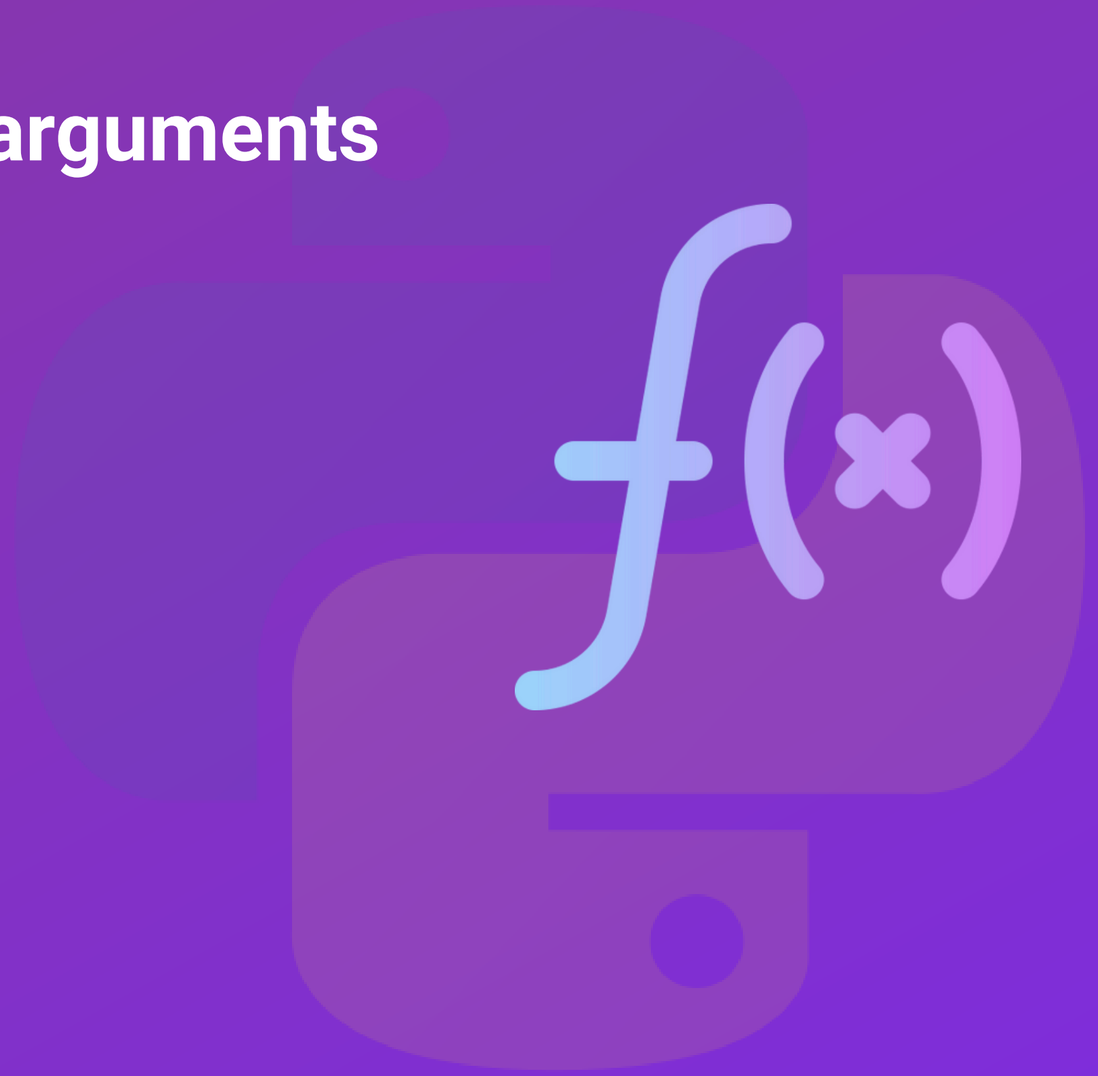
A docstring is a string literal that occurs as the first statement in a function, module, class, or method definition.

FUNCTIONS IN PYTHON

A function can take parameters that are a special kind of variable used in a function as input.

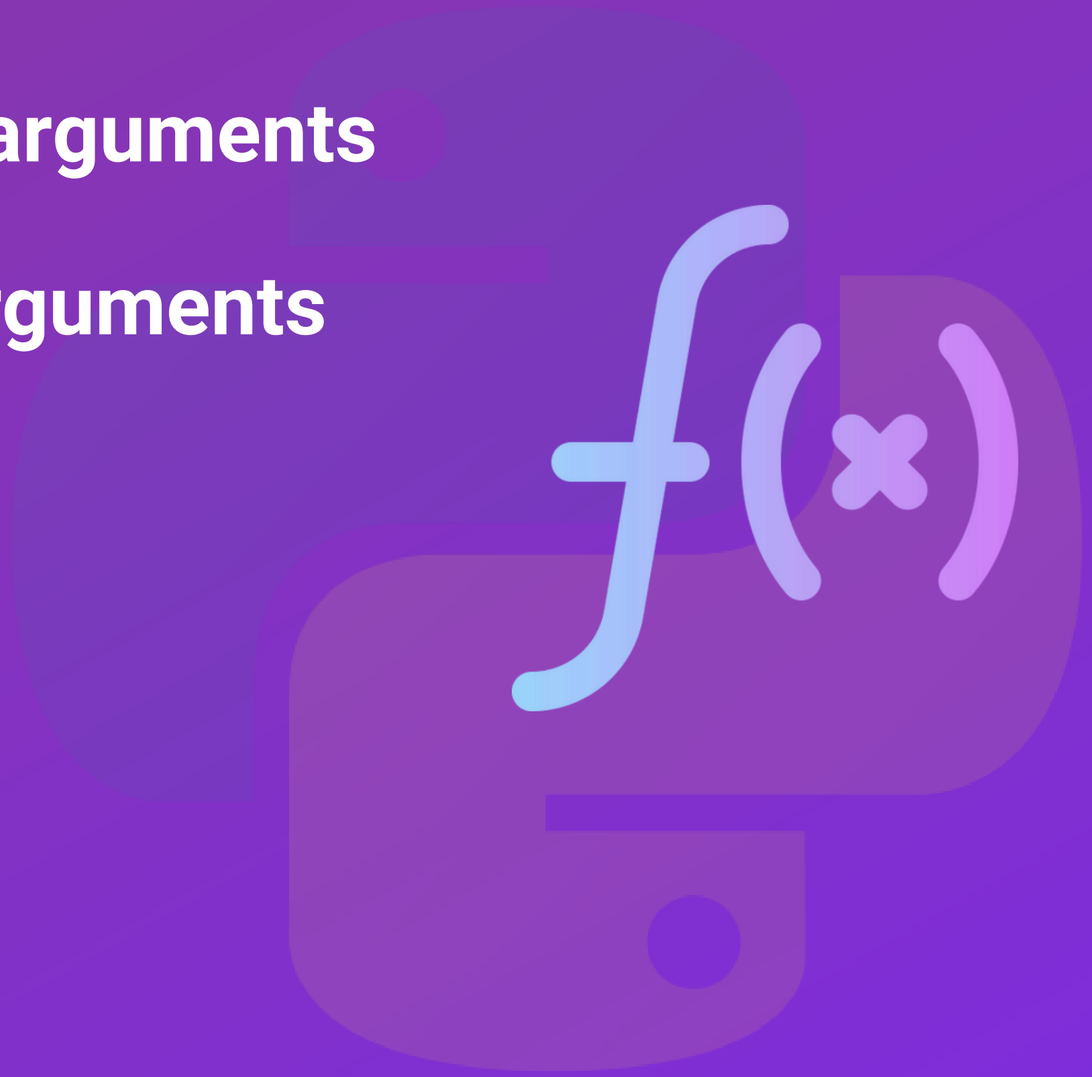
FUNCTION ARGUMENTS

1. **Positional arguments**



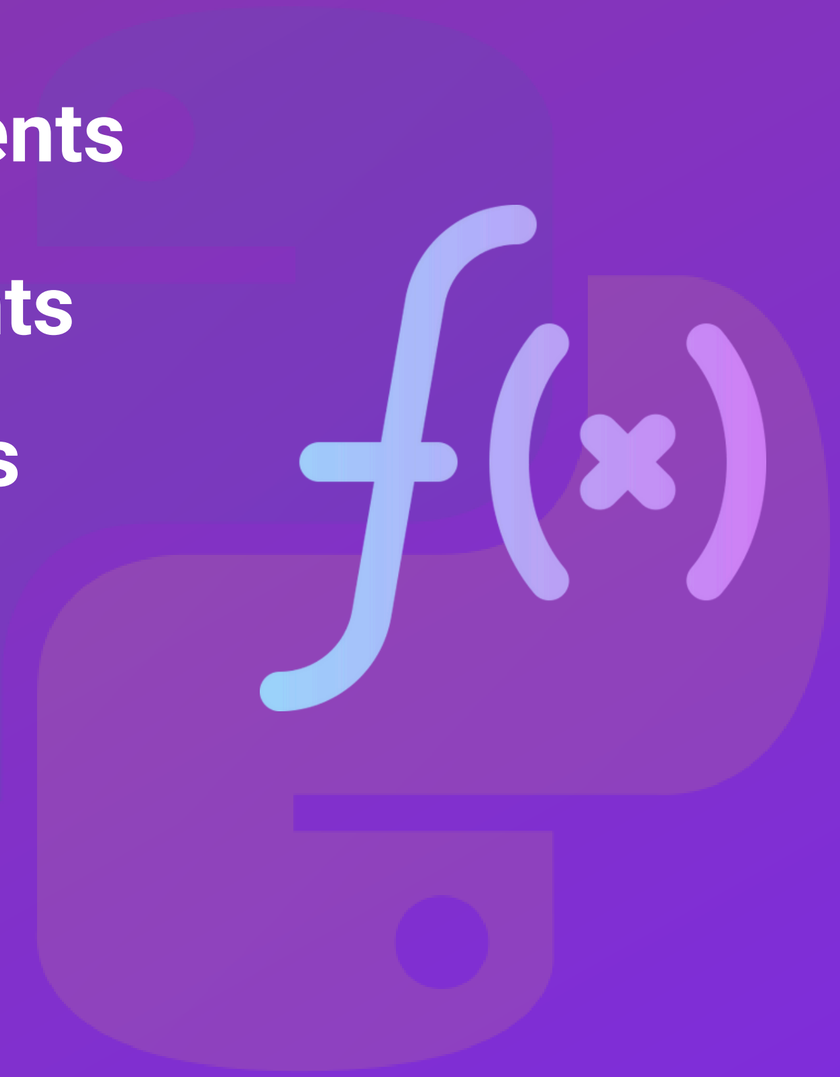
FUNCTION ARGUMENTS

1. Positional arguments
2. Keyword arguments



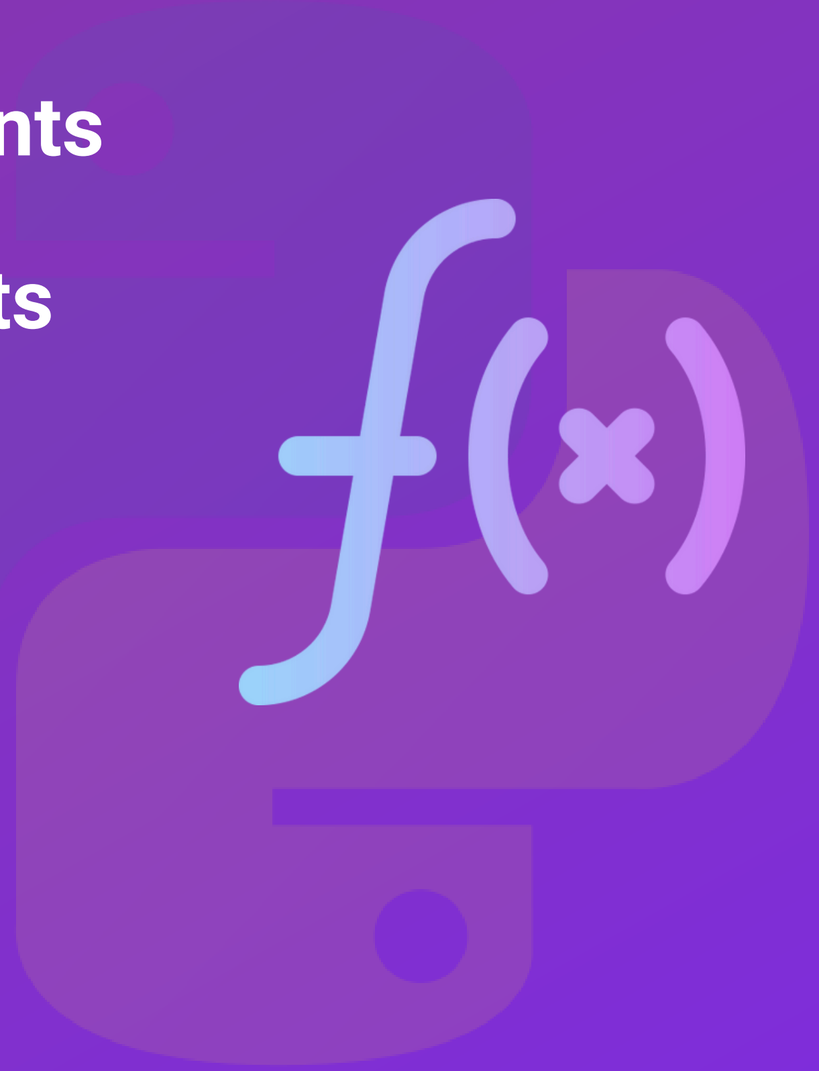
FUNCTION ARGUMENTS

1. Positional arguments
2. Keyword arguments
3. Default arguments



FUNCTION ARGUMENTS

1. Positional arguments
2. Keyword arguments
3. Default arguments
4. *args



FUNCTION ARGUMENTS

1. Positional arguments
2. Keyword arguments
3. Default arguments
4. *args
5. **kwargs

SCOPES AND NAMESPACES

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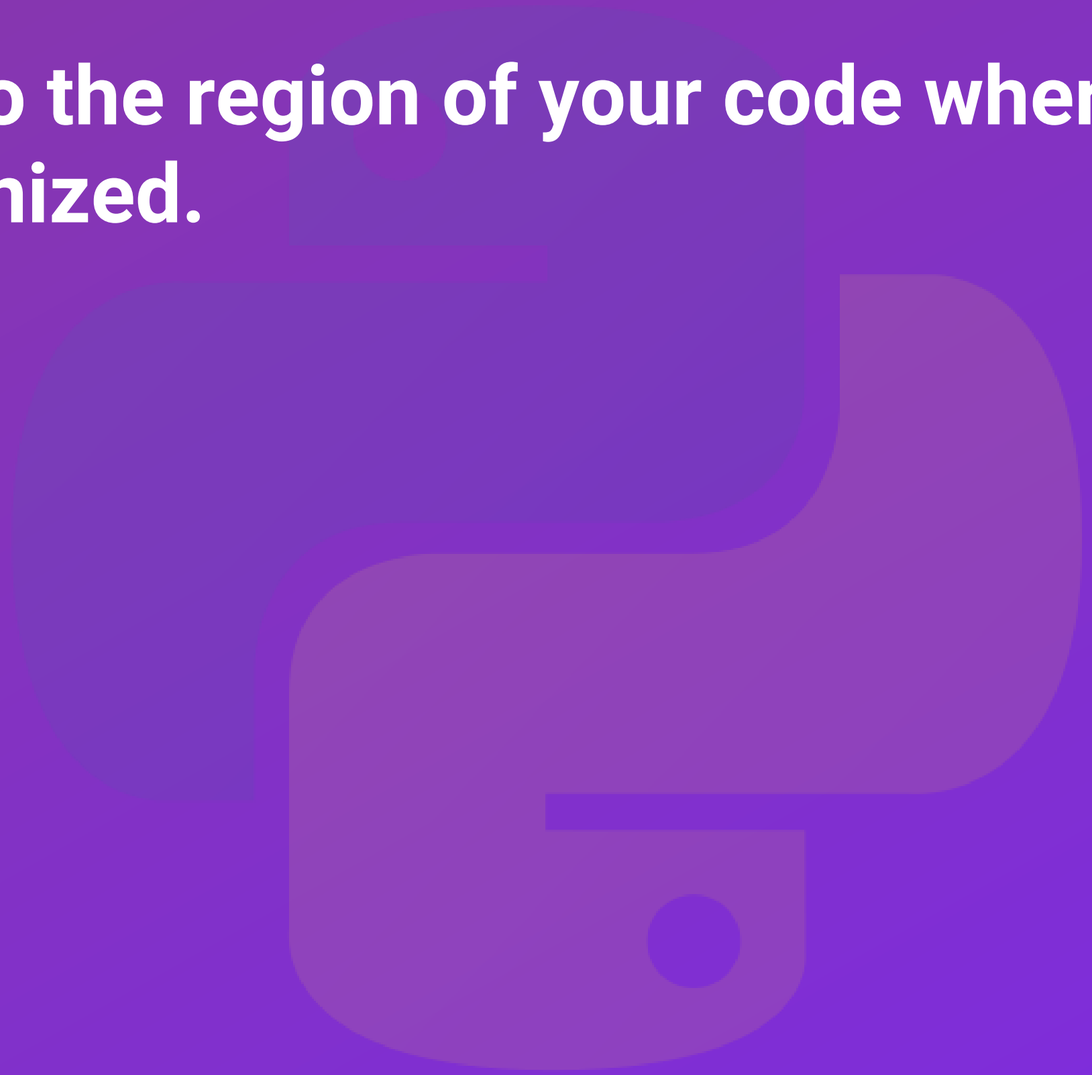
- Namespaces allow us to use the same name in different parts of our code without causing confusion.

SCOPES AND NAMESPACES

- **Scope refers to the region of your code where a particular name is recognized.**



SCOPES AND NAMESPACES

In Python there are 3 namespaces and scopes:

1. **The Built-in Namespace: Python built-in functions**
2. **The Global (Module Namespace): names defined in scripts**
3. **The Local Namespace: names defined inside functions**

The LEGB rule in Python defines the order in which variable names are resolved:

- Local (inside the current function)
- Enclosing (in enclosing functions)
- Global (at the module level)
- Built-in (in Python's built-in namespace)

LAMBDA EXPRESSIONS

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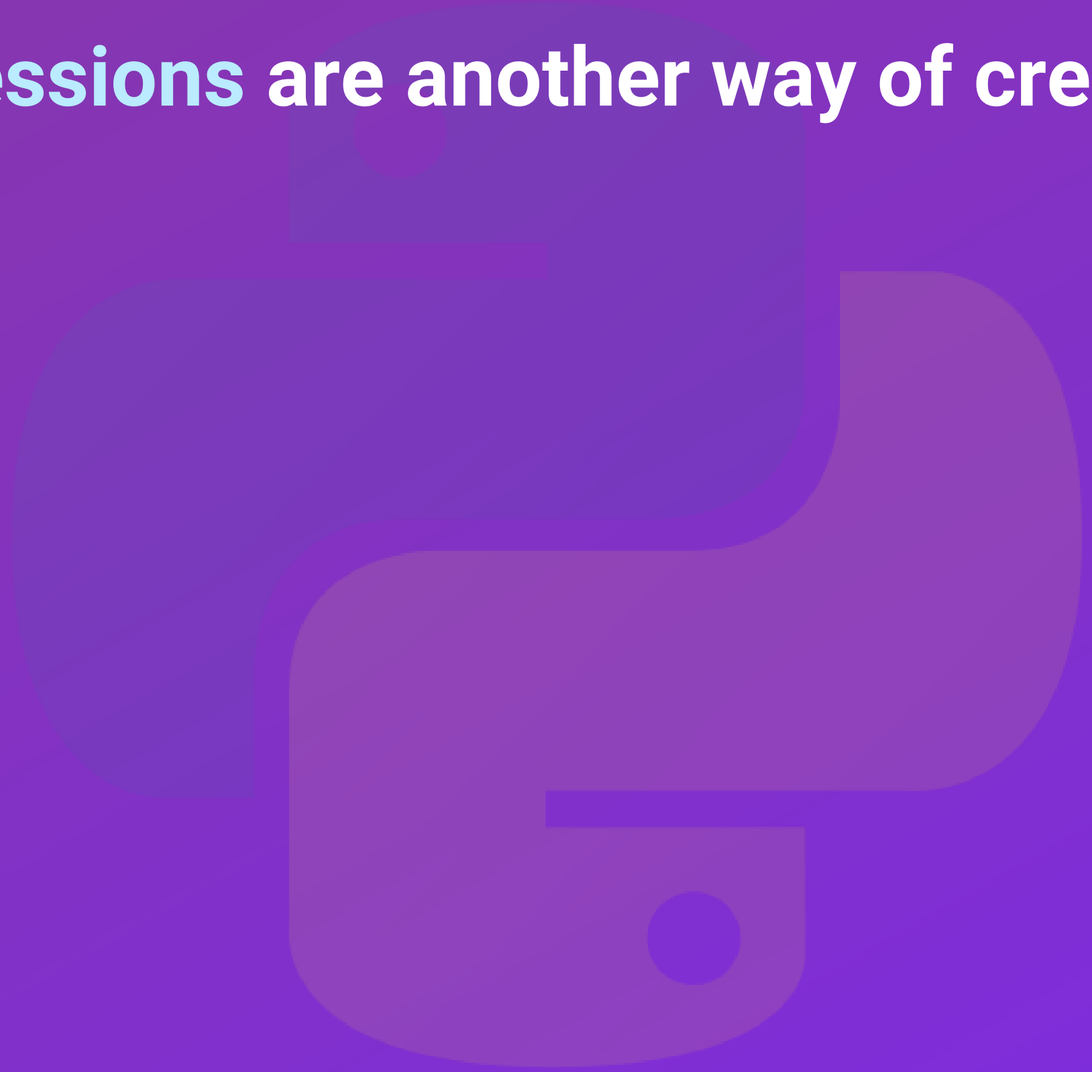
- **Lambda expressions are another way of creating functions.**



LAMBDA EXPRESSIONS

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- They are called anonymous functions because they don’t have a name (they are a single line of logical code).

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- **Lambda expressions are another way of creating functions.**
- **They are called anonymous functions because they don’t have a name (they are a single line of logical code).**
- **The terms lambda expressions, lambda functions, anonymous functions or function literals can be used interchangeably.**