

# python\_core\_language\_part3

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## 1 Python core language part 3

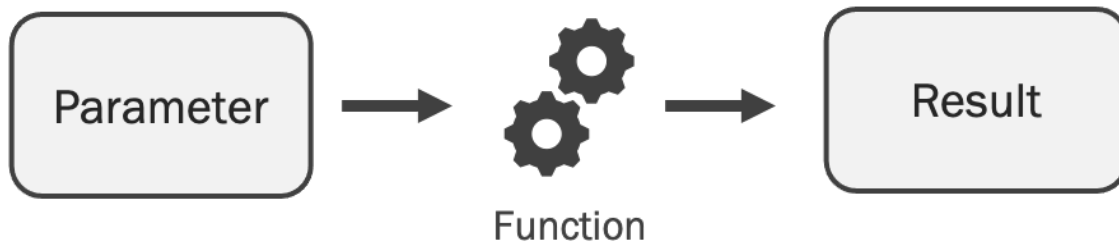
### Content

You will learn: - functions - classes

### 1.1 Functions

A **function** is a block of code, which only runs when it is called.

It allows to divide your code into useful blocks.



Syntax:

```
def function_name(input_parameter):  
    statement  
    [...]  
    return output_parameter
```

```
[1]: def foo():  
      pass
```

```
[2]: # Example  
def plus(a, b):  
    return a + b
```

```
[3]: plus(3,4)
```

```
[3]: 7
```

#### 1.1.1 Exercise

1. Implement the Gauss formula as a function.

2. Compare the results with the for loop for different cases.

$$1 + 2 + 3 + 4 + \dots + n = \frac{n(n+1)}{2}$$