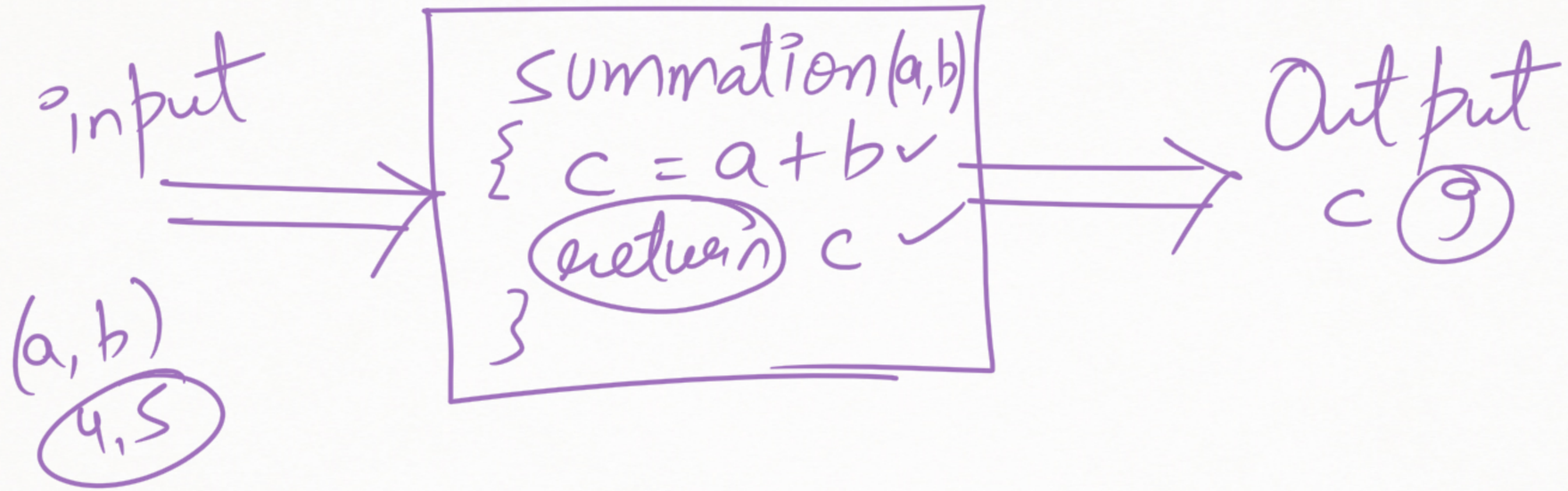
User defined functions

print() → builtin

→ Reuse it multiple times



Needs of functions

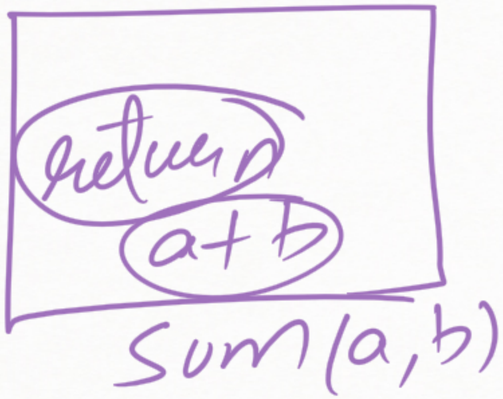
→ Reusing the same piece of code
→ Testing a piece of code
→ Modularity // Breaking the code into parts.
→ To keep a particular functionality separate from the whole code.

How does functions work?

1. We define the function

2. We call the function

1



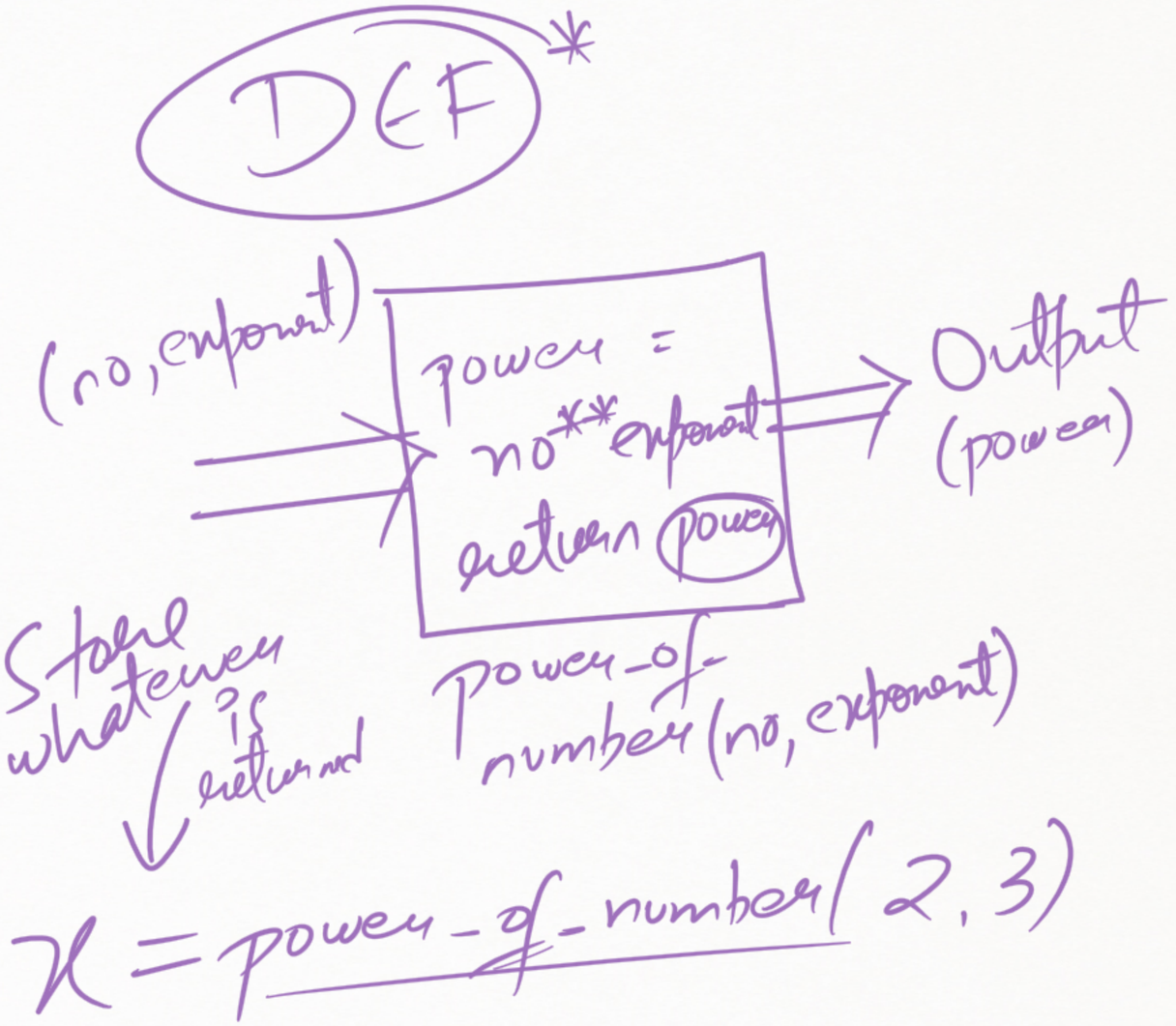
2 x=sum(3,4)

print(x)

7 ✓

```
In [2]: def power_of_number(no,exponent):
            power = no**exponent
            return power

        x = power_of_number(2,3)

        print(x)
```

```
8
```

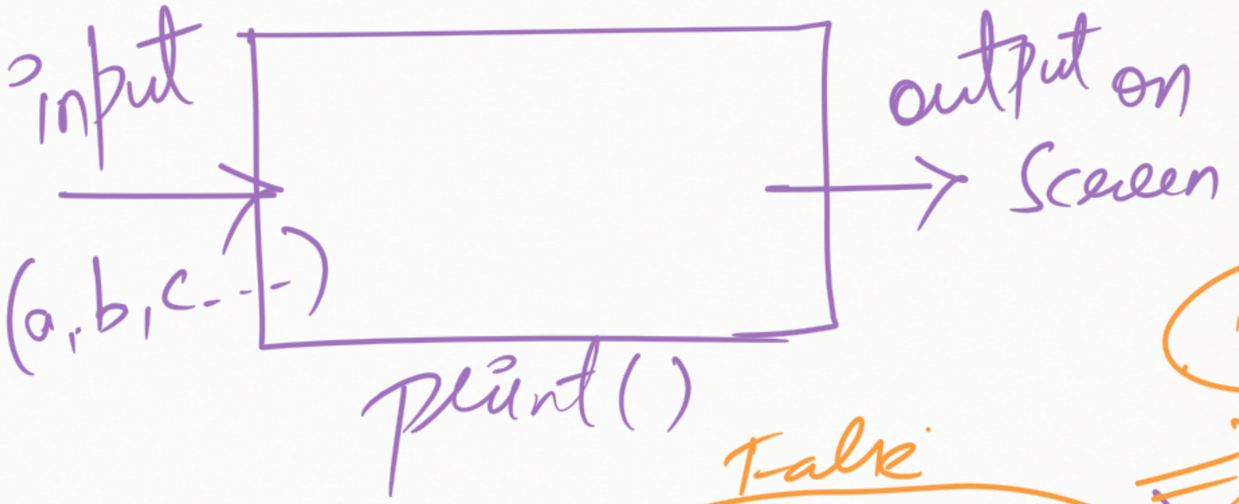


```
def is_even(number):
    if number%2 == 0:
        return True
    else:
        return False

x = is_even(46)

print(x)
```

```
True
```

```
list_of_numbers = [1,2,3,4,5,6,7,8,9,10]

for no in list_of_numbers:
    print(no,is_even(no))
```

```
1 False
2 True
3 False
4 True
5 False
6 True
7 False
8 True
9 False
10 True
```



1, False

False

print(no, is_even(no))

first calls the is_even fun
whatever is returned, will be
taken as an argument for
print functions.

Call by Reference

Write code in Python 3.6 (drag lower right corner to resize code editor)

```
1  x = 'mango'
2
3  def test_fun(list1):
4      list1[0] = 'happy'
5
6  list2 = ['sad','sorrow','moodOFF']
7  test_fun(list2)
8
9  # COLLECTIONS LIKE LIST ARE GOING TO BE PASSED
10 # IN FUNCTIONS BY REFERENCE.
11
12 ## WHEN FUNCTINS ARE CALLED AND LIST ARE PASSED
13 ## FUNCTIONS ALSO ACCESS THE SAME LIST INSTEAD OF
14 ## CREATING A SEPARATE COPY OF THEM.
15
```