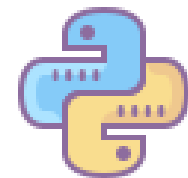




Function in Python

Overview

- Creating a Function
- Calling a Function
- Arguments
- Recursion



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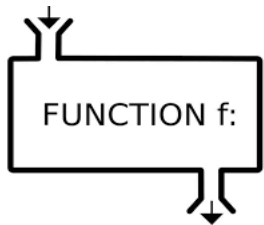
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Function

★ What is function?

In Python, a function is a group of related statements that performs a specific task. Functions help break our program into smaller and modular chunks.



A function is a block of code which only runs when it is called. You can pass data, known as parameters, into a function. A function can return data as a result.

```
def functionname( parameters ):  
    "function_docstring"  
    function_suite  
    return [expression]
```

References

<https://www.programiz.com/python-programming/function>
https://www.tutorialspoint.com/python/python_functions.htm

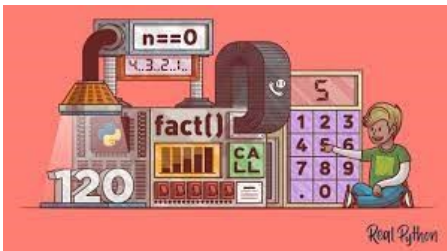


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★ Recursion

Recursion is a common math and programming concept. This means that a function calls itself. This means you can loop through the data to arrive at a conclusion.

```
>>> def countdown(n):
...     print(n)
...     if n == 0:
...         return # Terminate recursion
...     else:
...         countdown(n - 1) # Recursive call
...
>>> countdown(5)
5
4
3
2
1
0
```

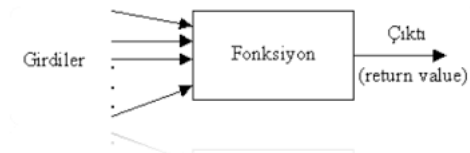


★ Creating a Function

In Python, In Python, you define a function with the def keyword, then write the function identifier (name) followed by parentheses and a colon.

```
def my_function():
    print("Hello from a function")
```

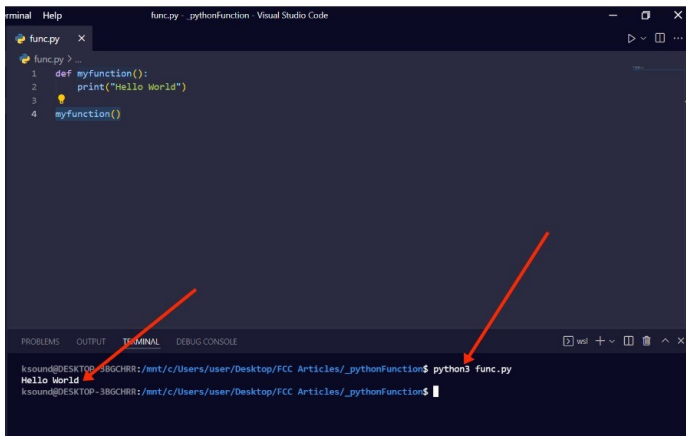
The next thing you have to do is make sure you indent with a tab or 4 spaces, and then specify what you want the function to do for you.



★ Calling a Function

To call a function we simply type the function name with appropriate parameters.

```
def my_function():  
    print("Hello from a function")  
  
my_function()
```



```
func.py > ...  
1 def my_function():  
2   print("Hello World")  
3  
4 my_function()  
  
ksoun@DESKTOP-3BGCHRR:/mnt/c/Users/user/Desktop/FCC_Articles/_pythonFunction$ python3 func.py  
Hello World  
ksoun@DESKTOP-3BGCHRR:/mnt/c/Users/user/Desktop/FCC_Articles/_pythonFunction$
```

★ Arguments

Arguments are specified after the function name, inside the parentheses. You can add as many arguments as you want, just separate them with a comma.

```
def my_function(fname):  
    print(fname + " Refsnes")
```

```
my_function("Emil")  
my_function("Tobias")  
my_function("Linus")
```

