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2019

Python functions

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Functions

`Python`, as well as many other programming languages, has a very useful structure called *function*.

We used functions before:

`print(...)`, `int(...)`, `input(...)`, ...

- they are called “`built-in`” functions/methods

Let's learn how to define our own functions!

We can define functions and use them as we please!

Functions

User-defined functions

```
def myFunction(a,b,c):  
    x = a + b + c  
    y = a * b * c  
    z = a - b - c  
  
    return x,y,z
```

```
myFunction(4,5,6)
```

Functions

function name

User-defined functions

```
def myFunction(a, b, c):
```

```
x = a + b + c  
y = a * b * c  
z = a - b - c
```

```
return x, y, z
```

parameters (formal)

*What does the function return
(if anything)*

function's body

```
myFunction(4, 5, 6)
```

function call

parameters (actual)

Functions

Function Call

```
def myFunction(a, b, c):  
    x = a + b + c  
    y = a * b * c  
    z = a - b - c  
  
    return x, y, z
```

myFunction(4, 5, 6)

myFunction

15, 120, -7

```
x = 4 + 5 + 6 = 15  
y = 4 * 5 * 6 = 120  
z = 4 - 5 - 6 = -7
```

Functions

Let's see these three examples:

FunctionsExample1.py

FunctionsExample2.py

FunctionsExample3.py

Every example is followed up with the in-class activity.
Show all the three activities upon completion to the instructor or in-class tutor.

Functions

What are the reasons for defining functions?

- Program readability
- Modularity
- Code reduction
- Eases location and correction of the errors

This OER material was produced as a result of the CS04ALL CUNY OER project.



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