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| Worksheet VIIIIntroduction to functions in Python |

Find out on the Internet what the purpose of coding (or writing) a function in Python

There are also built-in functions in Python. What is a built-in function? Give few examples.

1. The following example show how to write a simple Python function and will triple the value that is entered into the function.

 

* Try print(triplevalue(2)), print(triplevalue(5))
1. The following function takes two inputs; a and b, and find the sum of the two values

 

* Write a Python function to take three inputs and find the average value.
1. Fill in the blank to compute factorial of 4



First blank? \_\_\_\_\_\_\_\_\_\_

Second blank? \_\_\_\_\_\_\_\_\_\_\_\_\_

* Find whether print(factorial(4)) operates inside or outside def factorial(n)? \_\_\_\_\_\_
* Compute 6!, 10!, 0! using the same function in exercise 1).
1. Try



* Take note the differences between functions factorial(n) and fact2(n) in exercises 1) and 2), respectively.

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1. Try



* How many attempts can you try if you do not answer correctly (e.g., enter any character other than ‘y’ or ‘n’)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Which argument in function ask\_ok() does determine the number of attempts? \_\_\_\_\_\_\_
* How many arguments are there in function ask\_ok()? \_\_\_\_\_\_\_\_\_

Try

ask\_ok('OK to overwrite the file?', 2)

* What do you observe here in terms of number attempts?

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Try

ask\_ok('OK to overwrite the file?', 2, 'Come on, only yes or no!')

* What do you observe here? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What do you observe from the number of arguments you can enter when you call a function? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write a function simplemath( ) that takes three arguments, namely a, b, and op. Then write a Python program that takes two inputs and one operand (+, -, \*, /) and print the output value of the operation of a and b.
2. x = [3, 1, 56, 34, 23, 100, 10], write a function that sorts list x and print it out.
3. From list x in the exercise 7), try sorted(x) and sorted(x, reverse=True)

Also try, x.sort() or x.sort(reverse=True), then print(x)

1. What is the purpose of the given function?

What is the purpose of float(‘inf’)? Search the answer from the Internet.

def second\_smallest(numbers):

 a1, a2 = float('inf'), float('inf')

 for x in numbers:

 if x <= a1:

 a1, a2 = x, a1

 elif x < a2:

 a2 = x

 return a2

 print(second\_smallest([1, 2, -8, -2, 0]))

* Write a function that find the second largest value in the given list.