

Functions and Objects

By Mark Luu, for CMPT 141

Comprehensive list of pre-built functions:

<https://www.w3schools.com/python/default.asp>

Function?

```
print(bad_example())  
  
def bad_example():  
    print("I need to grab groceries today")
```

Exercise 1: hidden arguments

```
print("what", end="")  
print(" how", end="")
```

Exercise 2: functions as arguments to functions

```
print(str(float(min(7, 5, 4))) + "thanks")  
  
print(float(min(7, 5, 4)) + "thanks")
```

Exercise 3: Creating some functions

Create a function named “return_three” that returns the value 3.

Create a generalized version of that, “return_input” that returns any input the user puts in the console.

Create a function named “print_input” that prints the user’s input to the console, and returns None.

Create a function named “subtraction” that returns the result of subtracting the second argument from the first.

Print return_three(), its generalized version, print_input(), and subtraction(7, 3.2).

Exercise 3.5

What function creates console output?

What function creates console input?

Which of the following two functions are probably more cohesive?

`brush_teeth()`

`morning_routine(breakfast, water_temp)`

1. `input()`
2. `print()`
3. `brush_teeth()`

Exercise 4: Scope

```
x = 3

def func():
    print(x)

func()
```

Exercise 4.5: Scope?

```
x = 3

def func():
    print(x)
    x = 5
func()
```

Exercise 5: Scope 2

```
x = 3

def func():
    x = 5
    print(x)

func()
print(x)
```

Exercise 5: Scope 2?

```
def func():  
    x = 5  
    print(x)  
  
func()  
print(x)
```

Object: a container of data
and functions (methods) to change that data

Exercise 6: Basic object manipulation

Assign the variable “box” the value “lowercase string”.

Call the method `.upper()` on it.

Is box a mutable object?

Exercise in comedy

```
print(chr(sum(range(ord(min(str(not()))))))))
```