**Functions**

A function is a block of code which is executed when it is called from somewhere in the program. A function will return a value.

Functions are perfect for abstraction. They allow us to write blocks of code which can be reused in different ways and in different programs.

**Creating a Function**

In Python a function is defined using the **def** keyword:

**def my\_function():**

  print("Hello from a function")

**Calling a Function**

To call a function, use the function name followed by parenthesis:

def my\_function():

  print("Hello from a function")

**my\_function()**

**Arguments**

Information can be passed into functions as 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.

The following example has a function with one argument (fname). When the function is called, we pass along a first name, which is used inside the function to print the full name:

def my\_function(**fname**):

  print(fname + " Refsnes")

my\_function("Emil")

my\_function("Tobias")

my\_function("Linus")

**Output**

Emil Refsnes

Tobias Refsnes

Linus Refsnes

**Example to demonstrate functions**

def add(a, b):

    answer = a + b

    return answer

total = add(5, 2)

print(total)

**Output**

7

**Explanation**

(5, 2) is a function call. We can call the procedure as many times as we wish in the program. 5 and 2 are values which we pass to the two arguments a and b.

**Syntax for functions**

#define the function

def functionName(arg1, arg2, ...):

    print('put instructions here')

    return value

#call the function

functionName()

**Using an argument with a function**

def ageInDays(years):   #years is the argument (input) given to the function

    days = years \* 365  #the 'days' variable is only available in this function

    return days         #return the days variable

ageYears = int(input('How old are you? '))

ageDays = ageInDays(ageYears)   #call the function and assign the result to the variable 'agedays'

print(ageDays)

**Output**

How old are you? 15

5475