Unit 2: Functions Cheatsheet

**Function**

1. *A block of code (indented)*
2. *Can be run (or “called”) multiple times*
3. *Can take inputs (called arguments)*
4. *Can give output (called return value)*

**Defining a function**

1. *Always has a:*
   1. *‘def’ keyword*
   2. *Function name*
   3. *Parenthesis* ***()***
   4. *A colon* ***:***
   5. *At least one line of code in a code block (indented)*
2. *Can also have a:*
   1. *Arguments inside of the parenthesis*
   2. *A return value*

**Calling a function**

1. *You can “run” a function anytime by typing its name and then parenthesis ().*
2. *If your function has arguments, you must put the values inside of the parenthesis in order.*
3. *If the function has a return value, it will substitute this call with the return value when it runs the ‘return’ keyword*

**Return Value**

1. *If you use the ‘return’ keyword, the function ends*
2. *If you put a value on the line after the ‘return’ keyword, that is the return value*
3. *A function call will be substituted with the value of its return value*

**Define a Function**

#The next line is the “function header”

def sayHello():

#Everything one indent in from the header is part of

# the function’s code block

print(“Hello”)

#Everything on the same indent as the function header is

#outside of the function

print(“This is not part of the function”)

**Call a Function**

#This will “call” the function in the previous example

#When a function is called, it executes all of its code

#inside of its code block

sayHello()

**Define a Function with arguments**

#This function takes two arguments in its parenthesis

def introduction( name, age ):

#This uses the arguments like normal variables

print( “My name is “ + name + “ and I am “ + str(age) )

**Call a Function with arguments**

#Here we give the function the values ‘Bob’ and 47 as values

#These values are then stored in the arguments ‘name’ and ‘age’

introduction( ‘Bob’, 47 )

**Function Return Value Substitution**

#This function returns a value

def introduction( name, age ):

return “My name is “ + name + “ and I am “ + str(age)

#It will substitute where it was called with the return value

print( introduction( ‘Bob’, 47 ) )