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Foundations of Programming: Python

Assignment 06

<https://github.com/SSeng-UW/IntroToProg-Python-Mod06>

**Functions**

# Introduction

In week 6 the focus was on repository and creating a new repository and creating a GitHub webpage on the new Github repository and investigating about functions.

* Functions
* Parameters
* Return Values
* Arguments
* Global vs. Local

# Functions

Functions are a process in Python to group one or more statements. Within Python, you need to define which function you want to group. This part executes the function within the grouping. See below:

def my\_function():

print(“Hello from a function”)

my\_function()

prints> Hello from a function

# Parameters

Parameters are variables in Python. They are a placeholder for actual values that the function needs. When the function is called, these parameters or variables are passed as arguments.

# Define the function

def ProcessSomething(parmMessage):

print(“The parameter was: “ + parmMessage)

# call the function of parmMessage

ProcessSomething(“arg ABC”)

There is no limit to how much parameters you use or include. You can pass multiple type of arguments to a function.

# Return Values

Functions return one or more values. These values are captured in variables. By letting the function be utilized, it will return the value, and it is the return statement.

def my\_function(x):

return 5 \* x

print (my\_function(3))

print > 15

# Working with Arguments

Arguments are designed to make functions perform different actions or return different results. Python uses arguments to extract and capture those argument values to modify a programs behavior.

# Overload Functions

Many different types of programming languages allow you to create multiple version of a function. This means placing 2 parameters into one and creating a one bigger parameter but loading with multiple functions. See below:

MyFunction(): # no parameters

MyFunction(p1 :int): # one int parameter

MyFunction(p1: float): # one float parameter, add another variables for 2 floats.

# None Keyword

Within Python, “none” is a special data which its value is none. It is typically used to notion the basense of a parameter value.

# Global VS. Local Variables

In a script it can either be local or global. Variables declared in a function are considered local to the containing function and can’t be outside of the variable. Variables that are in a body are considered global, which can be used anywhere in the script. See below:

Local variable inside its scope.

def MyFunction():

v1 = 15 # local

print (v1) # works

Variable outside

MyFunction()

Print(v1) # does not works

# Assignment06

Please See Github URL

<https://github.com/SSeng-UW/IntroToProg-Python-Mod06>

# Summary

When creating the script, I learned a lot about functions and understanding loops and how they work properly. Utilizing functions into a script really allowed me to create stronger functions within another function.