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IT FDN 110 A

Module 6

https://github.com/vrplkv/IntroToProg-Python-Mod06.git

## Assignment06 task

Add functions to organize the code of the starter script called Assignment06\_Starter.py that manages a “to do list.”

Text

Description automatically generated

Figure 1: A screenshot of the script running from a command shell.

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Figure 2: A screenshot of the script running from Pycharm.

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Figure 3: A screenshot of the data file

## Knowledge documentation

The new concepts introduced in this assignment were Functions and Classes. For this assignment I re-used some of the code from the previous assignment but reformatted it to work within the structure of the starter code which organized the code by sections: data, processing, presentation (inputs and outputs) and the main body. In the main body I mostly called functions from the processing and presentation sections and passed parameters and returned the to-do list table.

### Functions

Functions allow you to group code and call that group of code when needed. Parameters (arguments) may be passed into a function to be processed and the functions can also return values which can be saved as variables or used right away like expressions. Python also allows the programmer to make use of tuple packaging and unpackaging which is useful to return multiple items which can be bundled together. Lists can accomplish this task as well.

It is important to note how different types of data are passed as variables. Stings, integers, floats and tuples automatically pass as values. While lists and dictionaries are automatically passed as references.

Default parameters can be specified in the program so the user does not have to specify all of the parameters. None is a special parameter that can be used to indicate the absence of a value. It is often used as a default parameter. It is important to remember to use the “is” operator when working with None for comparison.

In the homework the functions, and parameters were already created in the starter script and I added the code functionality to make them work, the return variables were also already in the script. Default values were also pre-set in the data section and I did not need to change them while editing the script.

### Classes

Classes allow you to group functions, variables, and constants.

In the homework, classes were pre-defined. They grouped the processing functions and the presentation functions for input and output.

# Summary

Functions and Classes are useful tools for organizing and simplifying code. Parameters allow those functions to be robust and process different items to effectively re-use code that has a similar utility.