

Assignment 7

The purpose of this assignment is to understand functions in terms of connecting them to a main program, passing to and from information, and overall increase and comprehend the power and efficiency of user-built functions.

0.1 Functions

0.1.1 Research

Research the structure of the program (You can rewatch my lesson online or use google), how to pass values to and from it and how to connect it to a main program.

0.2 Programs

Create two files, do not save them just yet. One program will be your main program and the other, your function program. Name your main program "main.m" and your function program "Funtion4main.m"

In your main program, label three variables as x, y, and z. x will be a number, y will be a 1 by 5 array, z will be a string. You will be passing these three values to the function.

In your function program, return three variables labeled as nums, arrs, and strings. In your function, the inputs will be renamed to X,Y,Z. Add X by 12, divide all components in Y by 2, and add "s" to Z.

Test cases:

$$x = 1, y = [12345], z = \text{"Apple"} \quad (1)$$

$$x = 1.02, y = [123, 1.5, 98, 12341354, 435.312], z = \text{"Orangutan"} \quad (2)$$

Notes: Notice how functions can seriously automate your programs. Imagine programming something really difficult and all you have to do is give it input and it will spit it out just like that. Imagine, dealling with really large matrices and having to divide by 2 over and over again for all its components. That would be a hassle!