

Lab 6: Functions

This lab is about functions. Write the functions below as instructed

The first function is named `add` and takes two integers as input and returns their sum as an integer.

The second function is also named `add` and takes two doubles as input and returns their sum as a double.

The third function is called `multiply`. It takes two integers as input and calls the `add` function you wrote previously over and over again in order to get the product of your two input variables. So for instance, if a user inputs the numbers 3 and 4, the `multiply` function will run a loop that calls the `add` function 4 times. The `add` function will add the previous result and the number three together in each iteration of the loop. This function returns an integer as output.

The fourth function is called `power`. It takes two integers as input and calls the `multiply` function you wrote previously over and over again in a loop in order to get the power of the inputs. So, just like in the previous function, if the input parameters are 2 and 4, the function will call `multiply` in a loop 4 times, multiplying the previous result by two each time.

The fifth function is called `concatenate`. It will take two strings as input and return a single string as output of both input strings combined into one.

The sixth function is called `passByReference`. It will pass two integers by reference and increment both of them.

The seventh function is called `getMood()`. It takes a `bool` as input and returns the string "happy" if the input was true and the string "sad" if the input was false.

The eighth function should be named `impervious` and pass a long value as input. The function should add 10 to the input value and return the resulting value.

The ninth function is called `stat`. It should take no parameters as input and return an integer. Inside the function, there should be a static integer variable that gets incremented and then returned by the function.

In your main function you should call each function at least twice to verify that they work as expected. Check the values of your input variables from main before entering the function and after entering the function for each call by printing them to standard output.