**Take Home: Quiz 3 (15 pts) – Modular Design & Functions in C**

Using Canvas <https://canvas.wsu.edu/>, please submit your solution to the correct quiz folder. Your solution should be a .pdf file with the name <your last name>\_quiz3.pdf and uploaded. To upload your solution, please navigate to your correct Canvas ***lab*** course space. Select the “Assignments” link in the main left menu bar. Navigate to the correct quiz submission folder. Click the “Start Assignment” button. Click the “Upload File” button. Choose the appropriate .pdf file with your solution. Finally, click the “Submit Assignment” button.

1. (3 pts) What is a function in computer programming? Please elaborate.

In computer programming, a function is a set of code outside of main() that performs a single task. Functions can be called as many times as the programmer needs, so functions can be used to reduce redundant code.

1. (4 pts - 2 pts/definition) In your own words define *actual argument* and *local variable.*

Actual arguments are the values of the variables in the function when the function gets called in main().

A local variable is a variable defined in a function. This makes the scope of that variable only inside the function, so it cannot be used elsewhere.

1. (2 pts) What is a structure chart? Explain.

A structure chart is a diagram that is split up into smaller programs that shows how to solve a problem in programming. It is made up of the problem, and the functions needed to solve the problem.

1. (2 pts) Provide the prototype for a function called is\_odd() that accepts one integer parameter, called num, and returns the number *1* if the number is *odd* or *0* if it is *even*.

Take in an integer num and return the integer solution of num % 2.

1. (4 pts – 1 pt for the header, 2 pts for determining if number is odd, 1 pt for return value) Provide the function definition for is\_odd(). Also, be sure to provide the function header for is\_odd(). **NOTE: for those of you that are more advanced, you should NOT use if () statements.**

int is\_odd(int num);

int is\_odd(int num) {

return(num % 2); // 2 would return 0, 3 would return 1

}