My task was to create a hangman game with multiple levels of difficulty. To solve this solution, I used the rand function in C paired along with srand, to create a random number generator so that a different word is chosen each time the game is ran. Using the time function, I set an alarm for the given amount of time for each level, once this alarm was completed then an output signal would be given to end the game. I used an infinite while loop to continually prompt the user for an input until the word has been guessed, user has reached maximum number of tries or the time was over. As I was using an infinite loop, when the program was intended to finish, it wouldn’t stop, therefore I used program termination to forcefully stop the program once one of the conditions were met.

The chosen paradigm for the C code was procedural. The code I have written uses procedures, instead of returning a value to the program, the value is stored in one of the parameters taken by the procedure. I used pointers so that the values of the procedures would be stored in the variable’s address to be accessed by the program. For example, the program calls the wordGuessedCorrect procedure, which checks if the word has been guessed and stores either 1 for yes or a 0 for no in the address of the variable result. This is then later checked by the program to know if the word was guessed correctly.