ASSIGNMENT 5

The Hangman Game

```c
#include <stdio.h>
#include <string.h>
#include <ctype.h>

// Function to display the current state of the word
void displayWord(const char* word, const int guessed[]) {
    for (int i = 0; i < strlen(word); i++) {
        if (guessed[i]) {
            printf("%c", word[i]);
        } else {
            printf("_");
        }
    }
    printf("\n");
}

// Main function
int main() {
    char word[] = "PROGRAMMING"; // The word to guess
(can be changed)
    int guessed[strlen(word)];   // Array to track guessed
letters
    int chances = 3;        // Number of incorrect guesses
allowed
    int correct_guesses = 0;    // Count of correct guesses
    int word_length = strlen(word);
```

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    // Initialize guessed array to 0
    for (int i = 0; i < word_length; i++) {
        guessed[i] = 0;
    }

    printf("Welcome to Hangman Game!\n");
    printf("You have to guess the word. You have %d chances.\n", chances);

    while (chances > 0) {
        printf("\nCurrent word: ");
        displayWord(word, guessed);

        printf("Enter a letter: ");
        char guess;
        scanf(" %c", &guess);
        guess = toupper(guess); // Convert guess to uppercase

        // Check if the guess is correct
        int found = 0;
        for (int i = 0; i < word_length; i++) {
            if (word[i] == guess && !guessed[i]) {
                guessed[i] = 1;
                correct_guesses++;
                found = 1;
            }
        }

        if (found) {
            printf("Good guess!\n");
```

```c
        } else {
            chances--;
            printf("Wrong guess! You have %d chance(s) left.\n",
chances);
        }

        // Check if the player has guessed the entire word
        if (correct_guesses == word_length) {
            printf("\nCongratulations! You guessed the word:
%s\n", word);
            printf("The Man survives!\n");
            return 0;
        }
    }

    // If the player runs out of chances
    printf("\nYou lost! The word was: %s\n", word);
    printf("The Man gets hanged!\n");
    return 0;
}
```