**Assignment – 5**

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Ques- The Hangman Game is one of the most famous games played  
on computers.  
The Rules of the game are as follows:  
1. There is given a word with omitted characters and you  
need to guess the characters to win the game.  
2. Only 3 chances are available and if you win the Man  
survives or Man gets hanged.  
So, it is the game can be easily designed in C language with  
the basic knowledge of if-else statements, loops, and some  
other basic statements. The code of the game is easy, short,  
and user-friendly.

Sol:

#include <stdio.h>

#include <string.h>

#define MAX\_TRIES 3

void printWord(char word[], int guessed[], int length) {

for (int i = 0; i < length; i++) {

if (guessed[i]) {

printf("%c ", word[i]);

} else {

printf("\_ ");

}

}

printf("\n");

}

int main() {

char word[] = "hangman";

int length = strlen(word);

int guessed[length];

for (int i = 0; i < length; i++) {

guessed[i] = 0;

}

int attempts = 0;

char guess;

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

while (attempts < MAX\_TRIES) {

printf("\nCurrent word: ");

printWord(word, guessed, length);

printf("Enter your guess: ");

scanf(" %c", &guess);

int found = 0;

for (int i = 0; i < length; i++) {

if (word[i] == guess && !guessed[i]) {

guessed[i] = 1;

found = 1;

}

}

if (found) {

printf("Good guess!\n");

} else {

printf("Incorrect guess.\n");

attempts++;

}

int allGuessed = 1;

for (int i = 0; i < length; i++) {

if (!guessed[i]) {

allGuessed = 0;

break;

}

}

if (allGuessed) {

printf("Congratulations! You guessed the word: %s\n", word);

break;

}

}

if (attempts == MAX\_TRIES) {

printf("Sorry, you've been hanged! The word was: %s\n", word);

}

return 0;

}