ASSIGNMNET 5

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.

**CODE-**

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <time.h>

#define MAX\_TRIES 3

#define WORD\_LIST\_SIZE 5

void print\_hangman(int tries) {

switch (tries) {

case 0: printf(" +---+\n | |\n |\n |\n |\n |\n=========\n"); break;

case 1: printf(" +---+\n | |\n O |\n |\n |\n |\n=========\n"); break;

case 2: printf(" +---+\n | |\n O |\n | |\n |\n |\n=========\n"); break;

case 3: printf(" +---+\n | |\n O |\n /| |\n |\n |\n=========\n"); break;

case 4: printf(" +---+\n | |\n O |\n /|\\ |\n |\n |\n=========\n"); break;

case 5: printf(" +---+\n | |\n O |\n /|\\ |\n / |\n |\n=========\n"); break;

case 6: printf(" +---+\n | |\n O |\n /|\\ |\n / \\ |\n |\n=========\n"); break;

}

}

int main() {

const char \*word\_list[WORD\_LIST\_SIZE] = {"programming", "hangman", "computer", "language", "challenge"};

char guessed\_word[20];

char guessed\_letters[26];

int tries = 0, correct\_guesses = 0, word\_length, word\_index;

char guess;

int found;

// Seed the random number generator

srand(time(0));

word\_index = rand() % WORD\_LIST\_SIZE;

const char \*selected\_word = word\_list[word\_index];

word\_length = strlen(selected\_word);

memset(guessed\_word, '\_', word\_length);

guessed\_word[word\_length] = '\0';

memset(guessed\_letters, 0, sizeof(guessed\_letters));

printf("Welcome to Hangman!\n");

while (tries < MAX\_TRIES && correct\_guesses < word\_length) {

printf("\nCurrent word: %s\n", guessed\_word);

print\_hangman(tries);

printf("Guessed letters: %s\n", guessed\_letters);

printf("Enter your guess (a single letter): ");

scanf(" %c", &guess);

// Check if the letter has already been guessed

if (strchr(guessed\_letters, guess)) {

printf("You already guessed that letter. Try again.\n");

continue;

}

// Add the letter to guessed letters

guessed\_letters[strlen(guessed\_letters)] = guess;

found = 0;

for (int i = 0; i < word\_length; i++) {

if (selected\_word[i] == guess) {

guessed\_word[i] = guess;

found = 1;

correct\_guesses++;

}

}

if (!found) {

tries++;

printf("Incorrect guess! You have %d tries left.\n", MAX\_TRIES - tries);

}

}

if (correct\_guesses == word\_length) {

printf("\nCongratulations! You've guessed the word: %s\n", selected\_word);

} else {

print\_hangman(tries);

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

}

return 0;

}

**OUTPUT-**

A screenshot of a computer program

Description automatically generated

A computer screen shot of a computer program

Description automatically generated

A screenshot of a computer program

Description automatically generated