Hangman Game PF Lab Project

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Overview

In the game of Hangman, the computer chooses a word at random from a given list of words. This word is the answer. The player then tries to guess the word, by guessing one letter at a time. Whenever the user guesses a letter that is in the answer, all occurrences of that letter are revealed to the user. The game ends when the user has guessed every letter in the word before he reaches the allowed number of strikes. This program is an interactive Hangman game. The focus is to use and manipulate strings and loops.

Specifications and Features

1. This project implies the concepts of loops, functions, and other pre-defined functions like rand() and some string library functions, etc.
2. A function is used to display the Hangman visuals. It provides a user-friendly appeal to the game that is in console mode.
3. The computer generates a random country name from a dictionary provided in the code in the form of a string array.
4. The rand(); function is seeded to time(NULL); from <ctime> library.
5. Players must guess the whole word by entering letters one by one.
6. When the player enters a letter, the program automatically inputs the character and also displays it with the help of **_getche();** function
7. The program displays the secret word in the form of a password and as the user enters the correct letters, the secret word uncovers itself.
8. The player is given a set of lives/tries. In this game, there are 5 tries.
9. If a player fails a try, then one life will be taken.
10. If a player fails all the tries, then the character will be hanged and the program will display the “you failed message”.
11. In case the player successfully guesses the secret name, then the program displays a congratulations message.

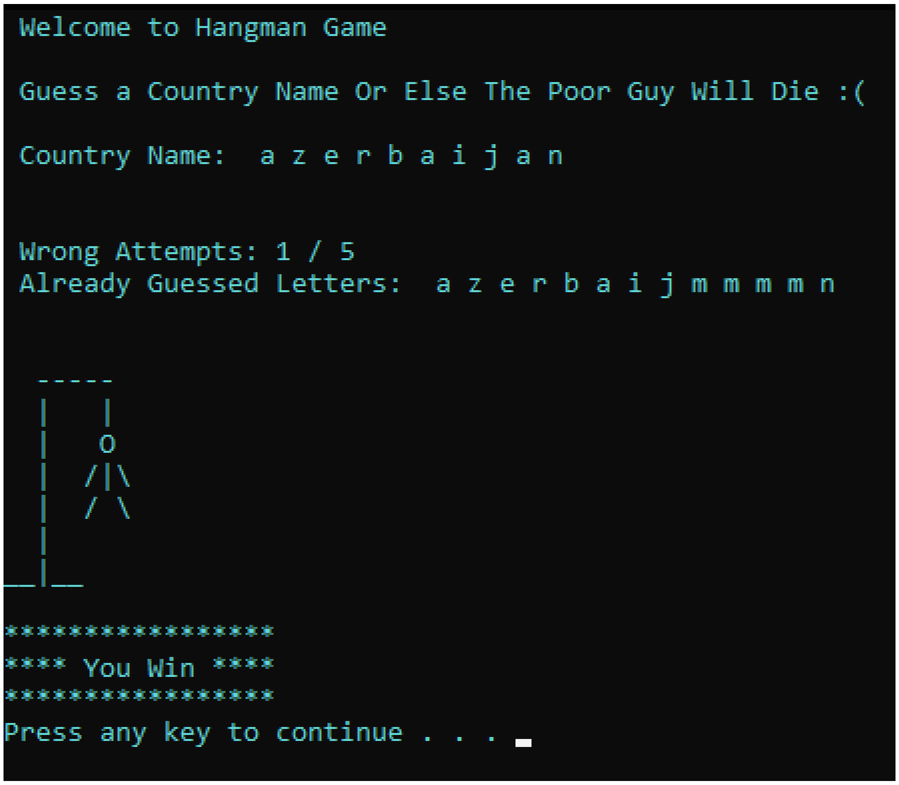
SOURCE CODE

- **Note: Triple right click anywhere inside the black box to select all the source code and then copy it easily.**

```
#include<iostream>
#include<string>
#include<stdlib.h>
#include<conio.h>
#include<ctime>
using namespace std;

//function for displaying Hangman
void HangMan(int tries)
{
      cout << endl << endl;
      cout << "  -----" << endl;
      cout << "  |   |" << endl;
      cout << "  |"; if (tries < 5 ) cout << "   O    "; cout << endl;
      cout << "  |"; if (tries <= 3) cout << "  /|\\   "; cout << endl;
      cout << "  |"; if (tries <= 1) cout << "  / \\    "; cout << endl;
      cout << "  |" << endl;
      cout << "__|__" << endl;
}

int main()
{
      srand(time(0));  //seeding time into rand function

      //Below string array stores the list of countries to be guessed by the user
      //Program chooses one element using rand function
      string wordList[10] =
      {
            "pakistan",
            "turkey",
            "azerbaijan",
            "malaysia",
            "bangladesh",
            "australia",
            "iran",
            "japan",
            "oman",
            "iraq"
      };

      string word;  //randomly chosen country name is stored here
      string guessed;  //Already guessed letters are stored here

      word = wordList[rand() % 10]; //randomly chosen name is being assigned

      int wordLength = word.length();  //assigning length of secret name to variable
      string dispWord(wordLength, 'X');  //function to display multiple characters

      int found = 0; //variable to store the number of letters found by user
      char guess = ' '; //variable to store the input letter by the user
      int tries = 5; //number of total tries
      int flagFound = 0; //variable for identifing if the user entered wrong input

      while (tries >= 0) //loop will only run if there are enough tries left
      {
            system("cls"); //for clearing the screen
            cout << " Welcome to Hangman Game\n\n Guess a Country Name Or Else The Poor Guy
Will Die :(" << endl
                  << endl << " Country Name: ";

            //loop for displaying the secret name in hidden form e.g "xxxx"
            for (int i = 0; i < wordLength; i++)
            {
                  cout << " " << dispWord[i];
            }
            cout << endl << endl << endl;

            cout << " Wrong Attempts: " << tries << " / " << 5 << endl;
            cout << " Already Guessed Letters: " << guessed << endl;

            HangMan(tries); //calling the Hangman diplaying function

            //if statement if the user wins
            if (found == wordLength)
            {
                  cout << endl;
                  cout << "*****************" << endl;
                  cout << "**** You Win ****" << endl;
                  cout << "*****************" << endl;
                  break;
            }

            //if no tries left, the while loop will break
            if (tries == 0)
```

```
        {
            break;
        }

        cout << "Guess a Letter: ";
        guess = _getche(); //fetching chracter while displaying it

        //adding the chracters already gussed by the user
        guessed = guessed + " " + guess;

        //identifying wether the guess of the user is true or not
        if (dispWord.find(guess) != string::npos)
        {
            tries++;
        }

        flagFound = 0; //reseting the identifier

        //loop will run if the guess is not already guessed by the user
        for (int i = 0; i < wordLength; i++)
        {
            if (word[i] == guess && dispWord[i] == 'X')
            {
                dispWord[i] = guess;
                found++;
                flagFound = 1;
            }
        }

        //statment to minus the tries if the guess was wrong
        if (!flagFound)
        {
            tries--;
        }
    }//while loop ends here

    //display in case the user fails all the tries
    if (found != wordLength)
    {
        cout << endl;
        cout << "*************************" << endl;
        cout << "******* You Lose *******" << endl;
        cout << "*  Please Try Again :( *" << endl;
        cout << "*************************" << endl;
    }
    system("pause"); //function for pausing the program
    return 0;
}
```

OUTPUT:-



```
 Welcome to Hangman Game

 Guess a Country Name Or Else The Poor Guy Will Die :(

 Country Name:  a z e r b a i j a n


 Wrong Attempts: 1 / 5
 Already Guessed Letters:  a z e r b a i j m m m m n


  -----
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  |  /|\
  |  / \
  |
__|__

*****************
**** You Win ****
*****************
Press any key to continue . . .
```