

**HANGMAN GAME**

**Submitted By:**

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**Submitted To:**

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**CS 161 Programming Fundamentals**

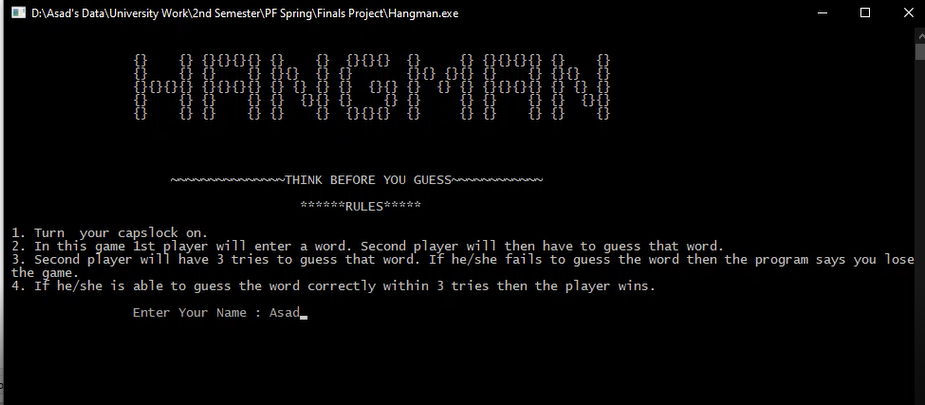
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**Abstract:**

**HANGMAN** is a paper and pencil guessing game for two or more players. One player thinks of a word, phrase or sentence and the other(s) tries to guess it by suggesting letters within a certain number of guesses.

**Wireframes:**



**Data Structure:**

Globally declared variables and arrays:

**Variables:**

string guess\_word;

string original\_word;

string user;

int I;

int j;

int wrong;

int p = 0;

int score = 0;

int a;

int b;

char c , x , X;

**2D Arrays:**

string map[18][32];

string words[4][4];

**Functions:**

void header();

void rules();

void showmap();

void hangman();

void user\_info();

void random\_word();

void guess();

char check\_answer();

void print\_score();

void gotoxy(short a, short b);

**Function Header and Description:**

* void header();

This will display welcome header

* void rules();

That function is to display game rules

* void showmap();

That will display hang map

* void hangman();

That will display hangman

* void user\_info();

That will take user info (name)

* void random\_word();

That will generate random word which is to guess

* void guess();

That will check if user is guessing correct word or not

* char check\_answer();

That will check if word is correct or not.

* void print\_score();

That will print total score

* void gotoxy(short a, short b);

**Code:**

#include <iostream>

#include <stdlib.h>

#include <stdio.h>

#include <conio.h>

#include <ctime>

#include <string>

#include <windows.h>

using namespace std;

//Variables

string guess\_word , original\_word , user;

int i , j , wrong , p = 0 , score = 0;

char c , x , X;

int a , b;

//Functions

void header(); // that will display welcome header

void rules(); // that function is to display game rules

void showmap(); // that will display hang map

void hangman(); // that will display hangman

void user\_info(); // that will take user info (name)

void random\_word(); // that will generate random word which is to guess

void guess(); // that will check if user is guessing correct word or not

char check\_answer(); // that will check if word is correct or not.

void print\_score(); // that will print total score

void gotoxy(short a, short b);

//2d Array

char map[18][32] = {

"+#############################+",

" ",

" ",

" ",

" \_\_\_\_\_\_\_\_ ",

" | ) ",

" | ",

" | ",

" | ",

" | ",

" | ",

" \_\_|\_\_\_\_\_\_\_\_\_\_ ",

" | ",

" ",

" ",

" ",

" ",

"+#############################+"};

string words[4][4] = {{"PAKISTAN", "SHIELD", "MJOLNIR", "WORTHY"},

{"BLUSHING", "DYNAMIC", "DELIGHT", "STRAWBERRY"},

{"THOR", "SPARKLE", "DARK", "CAPTAIN"},

{"GROOT", "ROGERS", "WATCH", "SENORITTA"}};

int main()

{

system("cls");

rules();

user\_info();

system("cls");

header();

showmap();

wrong = 0;

random\_word();

while (guess\_word.compare(original\_word) != 0 && wrong < 5)

{

guess();

}

check\_answer();

print\_score();

}

void header() // that will display welcome header

{

cout << "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*" << endl;

cout << "Welcome to HANGMAN game" << endl;

cout << "\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*" << endl;

cout << endl;

}

void showmap() // that will display hanging map

{

for (int i = 0; i < 18; i++)

{

for (int j = 0; j < 32; j++)

{

cout << map[i][j];

}

cout << endl;

}

}

void user\_info() // that will take user info

{

cout << "\n\n\t\t Enter Your Name : ";

cin>>user;

cout << "\n\n\t\t HELLO " << user << "\n\n\n\t\t \*\*\* PLEASE TURN ON CAPSLOCK \*\*\* " << endl;

}

void rules()

{

cout << endl;

cout << endl;

cout << " {} {} {}{}{}{} {} {} {}{}{} {} {} {}{}{}{} {} {} " << endl;

cout << " {} {} {} {} {}{} {} {} {}{} {}{} {} {} {}{} {} " << endl;

cout << " {}{}{}{} {}{}{}{} {} {} {} {} {}{} {} {} {} {}{}{}{} {} {} {} " << endl;

cout << " {} {} {} {} {} {}{} {} {} {} {} {} {} {} {}{} " << endl;

cout << " {} {} {} {} {} {} {}{}{} {} {} {} {} {} {} " << endl;

cout << endl;

cout << endl;

cout << endl;

cout << endl;

cout << " ~~~~~~~~~~~~~~~THINK BEFORE YOU GUESS~~~~~~~~~~~~" << endl;

cout << endl;

cout << " \*\*\*\*\*\*RULES\*\*\*\*\*" << endl;

cout << endl;

cout<<" 1. Turn your capslock on. " << endl;

cout<<" 2. In this game 1st player will enter a word. Second player will then have to guess that word."<<endl;

cout<<" 3. Second player will have 3 tries to guess that word. If he/she fails to guess the word then the program says you lose the game."<<endl;

cout<<" 4. If he/she is able to guess the word correctly within 3 tries then the player wins.";

}

void random\_word() // this function will use for generating random word

{

srand(time(0));

original\_word = words[rand() % 4][rand() % 4];

guess\_word = original\_word;

for (int i = 0; i < guess\_word.length(); i++)

guess\_word[rand() % ((guess\_word.length()) / 2)] = '\*';

}

void guess()

{

cout << "\n\n\t\t GUESS CHARACTER IN : " << endl;

for (int j = 0; j < guess\_word.length(); j++)

{

cout << guess\_word[j];

}

cout << " \t";

cin >> c;

for (int j = 0; j < guess\_word.length(); j++)

{

if (original\_word[j] == c)

{

gotoxy(5, 22);

p++;

if (guess\_word[j] == c)

{

cout<<" ";

gotoxy(5, 22);

break;

}

else

{

guess\_word[j] = c;

}

}

}

if (p == 0)

{

wrong++;

hangman();

gotoxy(5, 22);

}

p = 0;

}

char check\_answer()

{

if (guess\_word.compare(original\_word) == 0)

{

score = score + 10;

cout << "\n\n\t\t Well Done \t The original word is :";

for (i = 0; i < guess\_word.length(); i++)

{

cout << original\_word[i];

}

cout << " \n\n\t\t Did you enjoy playing it (y/n) : ";

cin >> x;

X = ((x == 'y' || x == 'Y' || x == 'n' || x == 'N'));

}

else

{

cout << "\n\n\n";

cout << " \*\*\*\*\*\*\*\*\*\*\*\*\*OH NOOOO!! GAME OVER \*\*\*\*\*\*\*\*\* ";

cout << " The Original Word was : ";

for (i = 0; i < guess\_word.length(); i++)

cout << original\_word[i];

cout << " \n\n\t\t Did you enjoy playing it (y/n) : ";

cin >> x;

X = ((x == 'y' || x == 'Y' || x == 'n' || x == 'N'));

}

return X;

}

void print\_score()

{

system("cls");

cout << endl;

cout << endl;

cout << " Thanks for playing " << user << ". Your final score is " << score << ".";

}

void hangman()

{

if (wrong == 1)

{

gotoxy(13, 10);

cout << "O";

}

if (wrong == 2)

{

gotoxy(13, 11);

cout << "|";

}

if (wrong == 3)

{

gotoxy(12, 12);

cout << "/|\\";

}

if (wrong == 4)

{

gotoxy(12, 13);

cout << "/|\\";

}

}

void gotoxy(short a, short b)

{

HANDLE hStdout = GetStdHandle(STD\_OUTPUT\_HANDLE);

COORD position = {a, b};

SetConsoleCursorPosition(hStdout, position);

}