

THE HANGMAN GAME

PROBLEM STATEMENT

Hangman is a paper and pencil guessing game for two or more players. One player thinks of a word and the other tries to guess it by suggesting the letters. The word to guess is represented by a row of dashes, giving the number of letters. If the guessing player suggests a letter which occurs in the word, the program writes it in all its correct positions. If the suggested letter does not occur in the word, the other player draws one element of the hangman diagram as a tally mark. The game is over when:

The guessing player completes the word, or guesses the whole word correctly.

HOW TO PLAY: My code will generate a word which has to be guessed by the player. So, at the output screen will exist marked out blanks (short lines) for each letter of a word. Then the player will guess a letter. If that letter is in the word(s) then the project will write the letter at everyplace it appears, and cross out that letter in the alphabet. If the letter isn't in the word then we cross out the lifelines (which are usually a finite no. of chances) from the list. The player will continue guessing the letters until he can either solve the word (or phrase) or he will end up losing all the lifelines and he will be declared a LOSER.

So, it is basically a TWO PLAYER game. But in my project a single player plays the game and the rules are strictly followed by the programme.

THE STRATEGY OF THE GAME - GOALS and DELIVERABLES

In the English language, the 12 most commonly occurring letters in descending order are: e-t-a-o-i-n-s-h-r-d-l-u. This and other letter-frequency lists are used by the guessing player to increase the odds when it is their turn to guess. On the other hand, the same lists can be used by the puzzle setter to stump their opponent by choosing a word which deliberately avoids common letters or one that contains rare letters.

Another common strategy is to guess vowels first, as English only has six vowels (a,e,i,o,u, and y), and almost every word has at least one.

Thus the user wins if he can guess the word or else he is a loser. In this programming assignment I intend to implement the user interface by which the code takes input as letters of the word and checks for its presence. Also another task is to reduce the no. of chances (lifelines) one by one as the user keeps on guessing incorrect letters.

SOLUTION DESIGN

1) Formulating a word list (with or without a hint) and store them in a data structure with the list of all 26 alphabets of English Language.

2) The actual method which does the logical reasoning, whether the letter exists or not if yes, write it down at all the places else strike off a lifeline. This forms the main part of the code.

3) Final word to be displayed if guessed wrongly else, interactive message saying that "oops! The word was:"

Hangman Game Strategies

The most common used English letter is 'e' so one better starts by guessing it. The 4 other vowels ('a', 'o', 'i', 'u') are next popular after 'e'. The other most commonly used letters are 't', 'n', 's', 'h', 'r', 'd' and 'l'.

Using these letter can give one better odds for guessing the word, but they can also decrease the level of fun while playing and not necessarily will help one win, but words that are less common like "rhythm" don't qualify for this strategy.