**PROJECT REPORT TEMPLATE**

**Project Title:** Word Guessing Game

**Team Members:**

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**Brief Introduction:**

This project is mainly a word guessing game in which we have to guess a word. There are three levels: medium, hard and difficult. In each level, a word for guessing is given. On guessing correct word, it proceeds to next level. Five lifes are given which decreases on guessing the wrong word. The game ends with a message whether we guess the word correctly or not.

**Tools Used:**

We have used many tools in it such as filing, loops(for loop), conditional statements(if-else,break,continue), functions, string(built-in functions), one and two-dimensional arrays.

**Srand(time(NULL)) Function:** This is a C library function which sets the starting value for generating the sequence of random-integer values. Here NULL specifies that the value(time in seconds) isn't stored anywhere.

**Project Description:**

Our project starts with five chances which will be given to the user. There are three levels: easy, medium and hard depending on the word limit we have given. From main(), we call these functions one by one starting with the easy mode. In easy mode, we use srand(time(NULL) function and here in our project it generates the random words. Then we use filing in which we specifically add the easy.txt file. It copies all the words in the given arrays and then do the function of generating spaces and missing letters through for loops. Similarly, depending on the limit of the words and different files of medium and hard, the further game proceeds.

**Implementation Of the Concepts Of Programming:**

**Logic inside Easy Mode:**

In easy mode, we first use the for loop and the loop will terminate at the condition(i<312). This limit depends on the two-dimensional array we have taken. Then we use random function which generates the random words by the statement(k=rand()%312). We use filing which adds the specific file easy.txt in our program. When an r is used, it tells that the file is opened for reading purpose only. Opening a file for reading requires that the file already exist. If it does not exist, the file pointer will be set to NULL and can be checked by the program. If it is NULL, then an error is shown and the programs exits. Now we use the strcpy(string copy function) which copies the words from file to the array. File will be closed by the function fclose(fp). The first loops puts the spaces in place of missing letters. They will be generated in odd numbered sequence(i+=2).Also it counts the number of missing letters. Now the next loop is for missing letters. The logic will be same as for spaces till the for loop but the logic will be changed from if else conditional statements that is if(word[k][i]==0), it will break. Then we take input in a variable a. If the word is equal to the input provided, then the word is copied in the one-dimensional array. Another loop proceeds which will terminate until the string length(strlen) function and this loop will print the letter which we have given and because of this the missing spaces decreases. But if the user guesses the wrong letter, then lifes decreases with the decreasing of spaces. If the life is equal to one, then it will give a warning of only one chance. Again if there is wrong guess, then at last it will print the right word through the loop. The same logic is applied to the medium and hard functions.