Case Study : Wordle

Name: Vishal Kalita

Class: 1MCA-B

Registration Number: 2347264

Team Members:

Suryansh Bachchan Verma (2347260)

Nayan Raj (234740)

Case Study: Wordle Game Implementation in C

DESCRIPTION: Wordle is a popular word puzzle game where a player attempts to guess a hidden word within a limited number of attempts. The game provides feedback on each guess by indicating correct letters in the correct positions and correct letters in the wrong positions. The objective is to deduce the hidden word through intelligent guessing.

AIM: The objective of this project is to implement a command-line version of the Wordle game using the C programming language. The implementation would allow players to interactively play the game by entering their guesses and receiving feedback until they either correctly guess the hidden word or exhaust their allowed attempts.

SCOPE:

The scope of this project involves creating a functional Wordle game that meets the following requirements:

1. ***User Interface:***
   - The game is implemented as a command-line application.
   - The player will be able to input their guesses using the keyboard.
2. ***Game Rules:***
   - The hidden word, to be guessed by the player, will be predetermined by the program.
   - The hidden word will consist of a fixed number of characters (e.g., 5, 6, 7 or 8 characters).
   - The player will have a limited number of attempts to guess the hidden word (e.g., 6 attempts).
3. ***Feedback Mechanism:***
   - After each guess, the player will receive feedback indicating the number of correct letters in the correct positions and the number of correct letters in the wrong positions.
   - The feedback will be displayed to the player.
4. ***Game Flow:***
   - The player's guess and feedback will be displayed after each attempt.
   - The player is informed whether their guess is correct or if they have exhausted their attempts.
   - If the player guesses the hidden word correctly, the game will terminate with a congratulatory message.
5. ***Error Handling:***

The program can handle invalid input gracefully, providing appropriate messages to the player.

SCREENSHOTS

COMPILATION:

```
vishal@LAPTOP-QG279C1Q:/mnt/d/MCA 1st/C Programming/WORDLE/WORDLE$ make
clang -ggdb3 -O0 -Qunused-arguments -std=c11 -Wall -Werror -Wextra -Wno-sign-compare -Wno-unused-parameter -Wno-unused-variable -Wsha
dow -lm -o wordle wordle.c helper.c cs50.c
vishal@LAPTOP-QG279C1Q:/mnt/d/MCA 1st/C Programming/WORDLE/WORDLE$
```

ERROR HANDLING:

```
vishal@LAPTOP-QG279C1Q:/mnt/d/MCA 1st/C Programming/WORDLE/WORDLE$ ./wordle 10
Error: wordsize must be either 5, 6, 7, or 8
vishal@LAPTOP-QG279C1Q:/mnt/d/MCA 1st/C Programming/WORDLE/WORDLE$
```

GAME PLAY:

```
vishal@LAPTOP-QG279C1Q:/mnt/d/MCA 1st/C Programming/WORDLE/WORDLE$ ./wordle
Usage: ./wordle wordsize
vishal@LAPTOP-QG279C1Q:/mnt/d/MCA 1st/C Programming/WORDLE/WORDLE$ ./wordle 5
This is WORDLE50
You have 6 tries to guess the 5-letter word I'm thinking of
Input a 5-letter word: vegan
Guess 1: v e g a n
Input a 5-letter word: women
Guess 2: w o m e n
Input a 5-letter word: taken
Guess 3: t a k e n
Input a 5-letter word: alien
Guess 4: a l i e n
Input a 5-letter word: align
Guess 5: a l i g n
Input a 5-letter word: allen
Guess 6: a l l e n
You Lose!
The correct word was allen
vishal@LAPTOP-QG279C1Q:/mnt/d/MCA 1st/C Programming/WORDLE/WORDLE$
```