Word Guessing Game

Abstract:

This documentation outlines the development and implementation of a word guessing game. The game aims to provide an entertaining and educational experience for players, challenging their vocabulary and problem-solving skills. The document discusses the game's design, features, underlying methodologies, and the results of its implementation.

Introduction:

The introduction presents an overview of the word guessing game, highlighting its purpose, target audience, and potential benefits. It also provides a brief outline of the document's structure, guiding the reader through the subsequent sections.

Literature Survey:

This section reviews existing word guessing games and similar applications available in the market. It analyzes their features, gameplay mechanics, and user feedback to identify strengths, weaknesses, and opportunities for improvement. Additionally, it explores relevant research papers and studies related to gamification, vocabulary acquisition, and cognitive skill development.

Models:

In this section, the document discusses the conceptual models and frameworks employed in the development of the word guessing game. It outlines the game's architecture, including the data structures, algorithms, and design patterns utilized to facilitate gameplay, user interaction, and content management.

Methodology:

The methodology section details the step-by-step process followed in designing, developing, and testing the word guessing game. It covers aspects such as requirements analysis, prototyping, implementation strategies, quality assurance procedures, and user testing methodologies. Additionally, it highlights any challenges encountered during the development process and the corresponding solutions adopted.

Result:

In the results section, the document presents the outcomes of the word guessing game's implementation. It includes performance metrics, user feedback, and any insights gained through post-launch evaluations. Furthermore, it discusses future enhancements and potential directions for further research and development.

Source Code:

```
import random
# Function to read words from a file
def read_words_from_file(file_name):
    with open(file_name, "r") as file:
        # Read the contents of the file and split into lines
        words = file.read().splitlines()
    return words
def play_game(word, max_attempts):
    player_guesses = []
    # Game Loop
    while max_attempts > 0:
        guess = input("Enter your guess: ").lower()
        # Check if the guess is a valid single letter
        if len(guess) != 1 or not guess.isalpha():
            print("Invalid guess. Please enter a single letter.")
            continue  # Continue to the next iteration of the loop.
        if guess in player_guesses:
            print("You've already guessed that letter. \nTRY AGAIN!!!")
        player_guesses.append(guess)  # Add the valid guess to the list of player's
guesses.
     # Provide feedback on the correctness of the guess
        if guess in word:
            print("Correct guess!")
        else:
            print("Wrong guess!")
            max_attempts -= 1  # Decrement the number of remaining attempts.
        revealed_word = ""  # Initialize an empty string to store the revealed word.
        # Update the revealed word with correctly guessed letters and underscores
```

```
        for letter in word:
            if letter in player_guesses:
                revealed_word += letter + " "
            else:
                revealed_word += "_ "
        print("Word:", revealed_word)  # Print the current state of the word with correctly guessed letters and underscores.
        print("Attempts left:", max_attempts)
        # Check if all the letters in the word have been guessed
        if all(letter in player_guesses for letter in word):
            print("Congratulations! You guessed the word correctly!")
            break  # Exit the loop.
        # Check if the player has run out of attempts
        if max_attempts == 0:
            print(f"Out of attempts. The word was: {word}. Better luck next time!")
            break  # Exit the loop.
def main():
    # Read words from the file "words.txt"
    words = read_words_from_file("guessing_game.txt")
    # Choose a random word from the list of words
    word = random.choice(words)
    max_attempts = 5
    print("Welcome to the word-guessing game!")
    player_name = input("Enter your name:")
    print(f"Hello, {player_name}!")
    print(f"The word has {len(word)} letters.")
    print(f"You have {max_attempts} attempts to guess the word.")
    play_game(word, max_attempts)
if __name__ == "__main__":
    main()
```

Output:

```
Welcome to the word-guessing game!
Enter your name:SINDHU
Hello, SINDHU!
The word has 4 letters.
You have 5 attempts to guess the word.
Enter your guess: S
Wrong guess!
Word: _ _ _ _
Attempts left: 4
Enter your guess: i
Wrong guess!
Word: _ _ _ _
Attempts left: 3
Enter your guess: c
Correct guess!
Word: c _ _ _
Attempts left: 3
Enter your guess: h
Wrong guess!
Word: c _ _ _
Attempts left: 2
Enter your guess: e
Wrong guess!
Word: c _ _ _
Attempts left: 1
Enter your guess: f
Wrong guess!
Word: c _ _ _
Attempts left: 0
Out of attempts. The word was: curl. Better luck next time!
```

Conclusion

The conclusion summarizes the key findings and contributions of the word guessing game documentation. It reiterates the game's significance, achievements, and implications for both entertainment and educational purposes. Additionally, it encourages further exploration and refinement of the game concept to enhance its effectiveness and appeal to a broader audience.