

Homework Assignment: Create a Hangman Game in Python

Instructions:

You are tasked with creating a Hangman game in Python. Follow the steps below to complete the project. Make sure to comment your code and submit it as a Python file when you're done.

Step 1: Set Up Your Project

Create a new Python file (e.g., `hangman.py`) to start your Hangman project.

Step 2: Import Required Libraries

Import the necessary libraries or modules for your project. You might not need any external libraries for this basic version of Hangman.

Step 3: Choose a Word

1. Create a list of words for the game (at least 10 words).
2. Use Python's `random` module to select a random word from the list as the word to guess.

Step 4: Initialize Game Variables

1. Set the maximum number of attempts allowed (e.g., 6).
2. Create an empty list to store guessed letters.
3. Initialize a list to represent the current state of the word with underscores (e.g., `_____`) called `current_word_state`.

Step 5: Create the Game Loop

1. Start a `while` loop that continues until the player wins or runs out of attempts.
2. Display the current state of the word (replace underscores with correctly guessed letters).
3. Prompt the player to guess a letter (ensure input validation).
4. Check if the guessed letter is in the word:
 - If yes, update `current_word_state` accordingly.
 - If no, increment the attempts counter and provide feedback.
5. Add the guessed letter to the list of guessed letters.
6. Check for win or loss conditions within the loop.

Step 6: Win and Lose Conditions

1. If the player wins, display a congratulatory message along with the correct word.
2. If the player loses, display a message indicating that they've run out of attempts and reveal the correct word.

Step 7: Test Your Game

Test your game with various words to ensure it works as expected.

Step 8: Extra Challenges (Optional)

1. Implement a feature to let the player choose to play again.

Submission:

Submit your Python file containing the Hangman game code.

Grading:

Your assignment will be graded based on the following criteria:

- Correct implementation of the game rules (win, lose, and gameplay).
- Proper use of functions and data structures.
- Code readability and comments.
- Bonus points for additional features and creativity.

Good luck with your Hangman project!