# Explanation of Hangman Game Code

This document explains the Hangman game code written in Python. The explanation covers how each part of the code works and why it is necessary.

## 1. Initialization

word = "python"  
attempt = 6  
guessed = ["\_"] \* len(word)  
  
How:  
- The variable 'word' stores the secret word to guess.  
- 'attempt' is the number of lives (6 chances).  
- 'guessed' is a list of underscores representing unguessed letters.  
  
Why:  
- To keep track of the word, number of attempts left, and the current state of guessed letters.

## 2. Game Loop

while attempt > 0 and "\_" in guessed:  
  
How:  
- The game continues while attempts remain and the word is not fully guessed.  
  
Why:  
- Ensures the game stops when the player either wins or loses.

## 3. Display Progress

print("Word:", guessed)  
  
How:  
- Shows the current progress of the guessed word.  
  
Why:  
- Helps the player know which letters are correct so far.

## 4. Taking Input

guess = input("Enter a letter: ")  
  
How:  
- Asks the user to enter a letter.  
  
Why:  
- Needed so the player can guess the word step by step.

## 5. Checking Guess

if guess == 'p':  
 guessed[0] = 'p'  
elif guess == 'y':  
 guessed[1] = 'y'  
... etc.  
  
How:  
- The program checks each guess and fills in the correct position if matched.  
  
Why:  
- To update the guessed word with correct letters and show progress.

## 6. Wrong Guess

else:  
 attempt -= 1  
 print('wrong, attempts left:', attempt)  
  
How:  
- Reduces attempts when the guess is wrong.  
  
Why:  
- To limit the number of tries and make the game challenging.

## 7. Drawing Hangman

if attempt == 5: ...  
elif attempt == 4: ...  
...  
  
How:  
- Displays parts of the hangman figure as attempts decrease.  
  
Why:  
- Gives a visual representation of mistakes and progress towards losing.

## 8. Game Over Conditions

if '\_' not in guessed:  
 print('You won! The word was:', word)  
else:  
 print('You lost! The word was:', word)  
  
How:  
- Checks whether the player guessed the whole word.  
  
Why:  
- To decide if the player wins or loses.

