



Name: Cedric Joel F. Cayaban		Block:4A	Date: December 02, 2024 Deadline December 10, 2024, 5:00pm
Create a simple word-guessing game where the program selects a random word, and the player must guess it letter by letter. After the game ends, the program will display statistics such as the number of attempts and the time taken to guess the word.			
1pt	Create a user-defined module `game_functions.py`		
2pts	choose_word(): Randomly selects a word from a predefined list of words. words = ["python", "java", "laravel", "programming", "inheritance"]		
Code Here	<pre>def choose_word(): words = ["python", "java", "laravel", "programming", "inheritance"] answer = random.choice(words) return answer</pre>		
2pts	get_guess(): Prompts the player to guess a letter and return it.		
Code Here	<pre>def get_guess(answer, attempts, userGuesses, correctGuesses): answerList = list(answer) while True: guess = input('Guess a letter: ').lower() if not guess.isalpha(): print('Error: Letters only\n') elif len(guess) > 1: print('Error: Single character only\n') elif guess not in answer: print(f'Incorrect guess! The letter '{guess}' is not in the word") userGuesses.append(guess) attempts += 1 else: if correctGuesses.count(guess) >= answerList.count(guess): print(f'You already guessed the letter '{guess}'. Try a different one.") else: attempts += 1 return guess, attempts</pre>		
3pts	display_word(): Displays the word with guessed letters revealed and unguessed letters as underscores.		
Code Here	<pre>def display_word(answer, correctGuess): correctCounts = Counter(correctGuess) for letter in answer: if correctCounts[letter] > 0: print(letter, end=' ') correctCounts[letter] -= 1 else: print('_', end=' ') print()</pre>		
2pts	update_guess_history(): Tracks and updates the number of guesses for each letter using collections.Counter.		
Code Here	<pre>def update_guess_history(userGuesses: list, guess): userGuesses.append(guess) guessCounts = Counter(userGuesses) for letter, tries in guessCounts.items(): print(f'{letter}: {tries} tries')</pre>		
3pts	game_over(): Checks if the player has guessed all letters in the word correctly and ends the game.		



Code Here	<pre>def game_over(answer, correctGuess): for letter in answer: if correctGuess.count(letter) < answer.count(letter): return False return True</pre>
1pt	Create your main program `main.py`
1pt	Import the functions from the `game_functions.py` module and start the game by calling the `choose_word` function.

Full clear screenshots of the code (NO CROPPING)
`game_functions.py`

```
File Edit Selection View Go Run ... python3  
2nd half > assignment > game_functions.py > get_guess  
1 import random  
2 import time  
3 from collections import Counter  
4  
5 def choose_word():  
6     words = ["python", "java", "laravel", "programming", "inheritance"]  
7     answer = random.choice(words)  
8     return answer  
9  
10 def get_guess(answer, attempts, userGuesses, correctGuesses):  
11     answerList = list(answer)  
12     while True:  
13         guess = input('Guess a letter: ').lower()  
14         if not guess.isalpha():  
15             print('Error: Letters only\n')  
16         elif len(guess) > 1:  
17             print('Error: Single character only\n')  
18         elif guess not in answer:  
19             print(f'Incorrect guess! The letter '{guess}' is not in the word")  
20             userGuesses.append(guess)  
21             attempts += 1  
22  
23         else:  
24             if correctGuesses.count(guess) >= answerList.count(guess):  
25                 print(f"You already guessed the letter '{guess}'. Try a different one.")  
26             else:  
27                 attempts += 1  
28                 return guess, attempts  
29  
30 def display_word(answer, correctGuess):
```

```
File Edit Selection View Go Run ... python3  
2nd half > assignment > game_functions.py > get_guess  
30 def display_word(answer, correctGuess):  
31     correctCounts = Counter(correctGuess)  
32  
33     for letter in answer:  
34         if correctCounts[letter] > 0:  
35             print(letter, end=' ')  
36             correctCounts[letter] -= 1  
37         else:  
38             print('_', end=' ')  
39  
40     print()  
41  
42 def update_guess_history(userGuesses: list, guess):  
43     userGuesses.append(guess)  
44     guessCounts = Counter(userGuesses)  
45     for letter, tries in guessCounts.items():  
46         print(f'{letter}: {tries} tries')  
47  
48  
49 def game_over(answer, correctGuess):  
50     for letter in answer:  
51         if correctGuess.count(letter) < answer.count(letter):  
52             return False  
53     return True  
54  
55  
56  
57
```



Full clear screenshots of the code (NO CROPPING)

main.py

```
File Edit Selection View Go Run ... ← → python3
EXPLORER 2nd half > assignment > main.py > ...
  PYTHONS
  > 1st half
  > 2nd half
    > assignment
      > __pycache__
      game_functions.py
      main.py
      > modules
  > OUTLINE
  > TIMELINE

2nd half > assignment > main.py > ...
1 import game_functions
2 import time
3
4 userGuesses = []
5 correctGuesses = []
6
7 print('Welcome to the Word Guessing Game!\nTry to guess the word, one letter at a time.\n')
8 answer = game_functions.choose_word()
9 game_functions.display_word(answer, correctGuesses)
10 startTime = time.time()
11 attempts = 0
12
13 while True:
14     userRecord = game_functions.get_guess(answer, attempts, userGuesses, correctGuesses)
15     attempts = userRecord[1]
16     correctGuesses.append(userRecord[0])
17     game_functions.display_word(answer, correctGuesses)
18     game_functions.update_guess_history(userGuesses, userRecord[0])
19
20     if game_functions.game_over(answer, correctGuesses):
21         endTime = time.time()
22         print("\nCongratulations! You've guessed the word correctly!")
23         print("\nGame over! Here's your performance:")
24         print(f'\n-Total attempts: {attempts}')
25         print(f'\n-Time taken: {(endTime - startTime):.2f} seconds')
26         break
27
```

