

proj06: Hangman

Goal:

Implement a function, `hangman()`, that will start up and carry out an interactive Hangman game between a player and the computer.

Specifications:

1. The computer must select a word at random from the list of available words that was provided in `words.txt`. The functions for loading the word list and selecting a random word have already been provided for you in `proj06.py`.

2. The game must be interactive: it should let a player know how many letters the word the computer has picked contains and ask the user to supply guesses. The user should receive feedback immediately after each guess. You should also display to the user the partially guessed word so far, as well as either the letters that the player has already guessed or letters that the player has yet to guess.

3. A player is allowed some number of guesses. Once you understand how the game works, pick a number that seems reasonable to you. Make sure to remind the player of how many guesses s/he has left after each turn.

4. A player loses a guess only when s/he guesses incorrectly.

5. The game should end when the player constructs the full word or runs out of guesses. If the player runs out of guesses (s/he “loses”), reveal the word to the player when the game ends.

The output of an example game may look like this:

```
Welcome to the game, Hangman!
I am thinking of a word that is 4 letters long.
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You have 8 guesses left.
Available letters: abcdefghijklmnopqrstuvwxyz
Please guess a letter: a
Good guess: _a _ _
-----
You have 8 guesses left.
Available letters: bcdefghijklmnopqrstuvwxyz
Please guess a letter: s
Oops! That letter is not in my word: _a _ _
-----
You have 7 guesses left.
Available letters: bcdefghijklmnopqrtuvwxyz
Please guess a letter: t
Good guess: ta _t
-----
You have 7 guesses left.
Available letters: bcdefghijklmnopgruvxyz
Please guess a letter: r
Oops! That letter is not in my word: ta _t
```

```
-----  
You have 6 guesses left.  
Available letters: bcdefghijklmnopquvwxyz  
Please guess a letter: m  
Oops! That letter is not in my word: ta _t  
-----  
You have 5 guesses left.  
Available letters: bdefghijklmnopquvwxyz  
Please guess a letter: c  
Good guess: tact  
Congratulations, you won!
```

Hints:

- You should start by using the provided functions to load the words and pick a random one.
- Consider using `string.lowercase`.
- Consider writing helper functions. For instance, we found that creating functions to fill in guessed letters (generating strings like “ta_t”) and to display unused letters made partitioning the problem easier.