



Computer Training Institute Assignment on Python

Implementation of word game HANGMAN

In this problem, the player will be the User and the operator will definitely be the computer, who will be picking a word at random.

Implement a function, called **hangman**, that will carry out an interactive Hangman game between a player and the computer. Before working on this function, first implement a few helper functions to get you going.

For this problem, you will need the following code files:

Hangman.py

Words.txt

Now do the following:

- Open `hangman.py` file
- The template `hangman.py` file should now be open. Run the file.

The code we have given you loads list of words from a file. If everything is working okay, after a small delay, you should see the following as output:

```
Loading word list from file...
```

```
55909 words loaded.
```

Requirements

Here are the requirements for your game:

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 `hangman.py`.
2. The game must be interactive; the flow of the game should go as follows:
 - At the start of the game, let the user know how many letters the computer's word contains.
 - Ask the user to supply one guess (i.e. letter) per round.
 - The user should receive feedback immediately after each guess about whether their guess appears in the computer's word.
 - After each round, you should also display to the user the partially guessed word so far, as well as letters that the user has not yet guessed.
3. Some additional rules of the game:
 - A user is allowed 8 guesses. Make sure to remind the user of how many guesses s/he has left after each round. Assume that players will only ever submit one character at a time (A-Z).
 - A user loses a guess **only** when s/he guesses incorrectly.
 - If the user guesses the same letter twice, do not take away a guess - instead, print a message letting them know they've already guessed that letter and ask them to try again.
 - The game should end when the user constructs the full word or runs out of guesses. If the player runs out of guesses (s/he "loses"), reveal the word to the user when the game ends.

Please refer sample test run for both winning and losing scenarios.

Sample Output

The output of a winning game should look like this...

```
Loading word list from file...

55900 words loaded.

Welcome to the game, Hangman!

I am thinking of a word that is 4 letters long.

-----

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: a

Oops! You've already guessed that letter: _ 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

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You have 7 guesses left.

Available letters: bcdefghijklmnopqruvwxyz

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: bcdefghijklmnopquvwxyz

Please guess a letter: c

Good guess: tact

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Congratulations, you won!
```

And the output of a losing game should look like this...

```
Loading word list from file...

55900 words loaded.

Welcome to the game Hangman!
```

I am thinking of a word that is 4 letters long

You have 8 guesses left

Available Letters: abcdefghijklmnopqrstuvwxyz

Please guess a letter: a

Oops! That letter is not in my word: _ _ _ _

You have 7 guesses left

Available Letters: bcdefghijklmnopqrstuvwxyz

Please guess a letter: b

Oops! That letter is not in my word: _ _ _ _

You have 6 guesses left

Available Letters: cdefghijklmnopqrstuvwxyz

Please guess a letter: c

Oops! That letter is not in my word: _ _ _ _

You have 5 guesses left

Available Letters: defghijklmnopqrstuvwxyz

Please guess a letter: d

Oops! That letter is not in my word: _ _ _ _

You have 4 guesses left

Available Letters: efghijklmnopqrstuvwxyz

Please guess a letter: e

Good guess: e _ _ e

You have 4 guesses left

Available Letters: fghijklmnopqrstuvwxyz

Please guess a letter: f

Oops! That letter is not in my word: e _ _ e

You have 3 guesses left

Available Letters: ghijklmnopqrstuvwxyz

Please guess a letter: g

Oops! That letter is not in my word: e _ _ e

You have 2 guesses left

Available Letters: hijklmnopqrstuvwxyz

Please guess a letter: h

Oops! That letter is not in my word: e _ _ e

You have 1 guesses left

Available Letters: ijklmnopqrstuvwxyz

Please guess a letter: i

Oops! That letter is not in my word: e _ _ e

Sorry, you ran out of guesses. The word was else.