Topic: String, Method, Math.Random, Basic Syntax

For this problem, you will implement a variation of the classic word game Hangman. For those of you who are unfamiliar with the rules, you may read all about it [here](http://en.wikipedia.org/wiki/Hangman%20%28game%29).

**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.
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.

1. 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.

You can see output example on the next page.

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.

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You have 8 guesses left.

Available letters: abcdefghijklmnopqrstuvwxyz

Please guess a letter: a

Good guess: \_ a\_ \_

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You have 8 guesses left.

Available letters: bcdefghijklmnopqrstuvwxyz

Please guess a letter: a

Oops! You've already guessed that letter: \_ a\_ \_

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You have 8 guesses left.

Available letters: bcdefghijklmnopqrstuvwxyz

Please guess a letter: s

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

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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

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You have 6 guesses left.

Available letters: bcdefghijklmnopquvwxyz

Please guess a letter: m

Oops! That letter is not in my word: ta\_ t

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You have 5 guesses left.

Available letters: bcdefghijklnopquvwxyz

Please guess a letter: c

Good guess: tact

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Congratulations, you won!

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.

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You have 8 guesses left.

Available Letters: abcdefghijklmnopqrstuvwxyz

Please guess a letter: a

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

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You have 7 guesses left.

Available Letters: bcdefghijklmnopqrstuvwxyz

Please guess a letter: b

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

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You have 6 guesses left.

Available Letters: cdefghijklmnopqrstuvwxyz

Please guess a letter: c

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

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You have 5 guesses left.

Available Letters: defghijklmnopqrstuvwxyz

Please guess a letter: d

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

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You have 4 guesses left.

Available Letters: efghijklmnopqrstuvwxyz

Please guess a letter: e

Good guess: e\_ \_ e

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You have 4 guesses left.

Available Letters: fghijklmnopqrstuvwxyz

Please guess a letter: f

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

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You have 3 guesses left.

Available Letters: ghijklmnopqrstuvwxyz

Please guess a letter: g

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

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You have 2 guesses left.

Available Letters: hijklmnopqrstuvwxyz

Please guess a letter: h

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

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You have 1 guesses left.

Available Letters: ijklmnopqrstuvwxyz

Please guess a letter: i

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

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