

CS 12 - Assignment 4

Strings

Due Friday, February 13

In this assignment you will be using strings. Be sure to include all necessary information at the top of your program and use good commenting and style throughout. You must use linux to do this program.

Write a program that plays the game Hangman. The user should be allowed to guess either a letter or try to solve the puzzle by guessing the word. Between guesses, you should nicely display the letters that have been guessed and the state of the word being guessed. The “state of the word” means that for the letters that have not been guessed, an underscore character (`_`) should be shown. Those letters that have been guessed correctly should show the position of the letter. For example, if the word was “hippo” and the letters that had been guessed so far were ‘e’, ‘i’, ‘s’, and ‘p’, the screen should show something like:

```
Letters guessed:  eisp
```

```
_ipp_
```

You should store the letters guessed thus far as a string. You can use `strcat()` to append each future guessed letter. If the user guesses a previously guessed letter (implying that it is already in the string that holds the guessed letters), you should display a message that the letter has already been guessed. The *guessed letters* string should never show any particular letter more than once.

You should have a file called “words.dat” that contains 10 words. To set the word to be guessed, you should randomly pick one of the words in the file to be used as the answer.

You should use dynamic allocation whenever possible and you should use the string manipulating functions located in `string.h` whenever possible. You will not receive full credit without taking full advantage of the string functions. You should also use functions throughout your program.

Each run of the program only is required to play the hangman game once. You may assume that the word will always be in lower case and that the user will always enter a lower case letter.