

## CPS 171 Machine Problem 5 – Due 04/08/2015

This assignment is to give you practice using enums, string variables and the functions of the string class, as well as more practice writing your own functions. In order to get full credit for the program you must use these topics.

You are to write a program that will play a word game similar to the game "Hangman". The computer will read a word from a file and tell the user how many letters it contains. The user must then guess letters in the word until they are able to guess the entire word (but with a maximum of 7 turns). The program will then print a message of congratulations or condolence and start again with a new word. This continues until the end of the file is reached, at which time a message showing how many games the user won is printed.

**Make a data file called mp5wordguess.dat.** Copy this file to the folder containing your project. It contains one word on each line. Here is the words:

```
HANGMAN
ALGORITHM
HELP
ABRACADABRA
RYTHM
```

You are **REQUIRED** to use functions, enums, string variables, arrays, and string functions in the solution to this problem. Define an enum for the Status of the game (with the values CONTINUE, WON and LOST) and have the loop that plays the game keep going as long as the game state is CONTINUE. You will use an array to track the letters already guessed (for the same word). In the case of a letter already guessed, you print a warning and do NOT count that as a failed guess. That is the only required use of array in the program although you are welcome to use one elsewhere if you find a use.

For simplicity, you may assume that all words contain just upper-case letters and the user enters upper-case responses at all times. For each turn, the user chooses a letter, the program finds out whether there are any occurrences of that letter in the word and, if so, replaces ALL occurrences of the letter. The word with the correctly guessed letters is then shown on the screen (with \*'s in the places of the unknown letters) and the user is asked whether they want to guess the whole word. This process continues until the user either guesses the word or runs out of turns.

A sample output of the game for the word HANGMAN is shown on the next page.

To assist us in grading your programs, when you hand in your program, **the first game must be like the sample.** **Enter the user guesses in exactly the same order as below.** For the remaining games, make sure that you demonstrate the correctness of your program by having a games where

1. the word is guessed before 7 turns
2. the user fails to guess the word.

Word guessing game by J.Remen

Starting a new game

My word has 7 characters.

User word is \*\*\*\*\*

Enter a letter: A

The word is now \*A\*\*\*A\*

Do you want to guess the word? 'Y' or 'N' N

Enter a letter: H

The word is now HA\*\*\*A\*

Do you want to guess the word? 'Y' or 'N' N

Enter a letter: P

Sorry, no occurrences of P

Do you want to guess the word? 'Y' or 'N' N

Enter a letter: N

The word is now HAN\*\*AN

Do you want to guess the word? 'Y' or 'N' Y

Enter your word now:HANDMAN

Sorry, that is not the word

Enter a letter: T

Sorry, no occurrences of T

Do you want to guess the word? 'Y' or 'N' N

**Enter a letter: P**

**Sorry, you already guessed P!**

Enter a letter: M

The word is now HAN\*MAN

Do you want to guess the word? 'Y' or 'N' N

Enter a letter: E

Sorry, no occurrences of E

Do you want to guess the word? 'Y' or 'N' This is your last chance!

Y

Enter your word now:HANGMAN

Congratulations