CSC 252 – Project 2: Lingo
Due: Monday, October 19, 2020, by 11:59pm

Description

Your first project is to implement the game of Lingo. In this game, the computer chooses a random 5-letter word. The player's job is then to guess the word that the computer has chosen. After each guess by the player, the computer will give feedback:

1. The first is which letters are in the proper position.

2. The second is which letters are not in the proper position.

The player wins when they guess the exact word the computer chose. The player must guess correctly in 5 or fewer guesses, otherwise the player loses.

What you need to do:

- Choose a random 5-letter word from a list of 10 such words declared in the .data section. Output the first letter and 4 blanks (underscores separated by spaces).

- Read a guess from the user as a string (see example below). Assume the input is lowercase.

- Convert each letter to uppercase in the output (see example below).

- For each letter that is correct, report if it is in the proper position or not.

- Allow the user to continue to guess until they get it correct, or reach 5 turns and they lose.

- Allow the user to play the game multiple times.

Example:

```
Welcome to Lingo!

The word to guess is: C _ _ _ _

Enter guess number 1: chair

C is in the right place
H is in the word but not the right place

Enter guess number 2: couch

You win!
Would you like to play again? yes
```

Hints:

- Read the user's guess as a string, and then loop through it reading each character.

  - To read a string, you must provide the system call with the address of some memory allocated to hold the user's input

  - We can allocate arbitrary space in the .data segment using the .space directive:
    ```
    input_str: .space    6    #allocates 6 bytes at the
    address represented by the label input_str
    ```

  - Remember that the input will also have a NUL-terminator, so allocate enough space for the input plus one extra byte

- Be careful when scoring the right letter, wrong position statistic. Correct letter matches must be excluded and you cannot double count a guess (guessing "chair" for "couch" should output that the first 'c' is in the right position but say nothing about the second 'c' in the word "couch").

- Use auxiliary arrays to help with the above problem.

- For syscall help, go to recitation, check the class website examples, and visit the MARS documentation page:
  http://courses.missouristate.edu/KenVollmar/MARS/Help/SyscallHelp.html

- You may simply check the first letter of the user's response to the play again question regardless of how much they input. If they enter something that starts with 'Y' or 'y', consider it yes, all other answers should be taken as no.

Submission
Upload your Lingo.asm file to D2L by the due date for credit