AE1PGA Lab 7

If you haven't completed Lab's 5 and 6, complete those first. Once you have completed them, there are some problems below about strings and characters, and then a bigger task to complete from a problem description. When doing the exercises, pay particular attention to not accessing out-of-bounds locations in arrays or other undefined behaviour.

Textbook: Q8.6

Basics of string handling and character functions.

Textbook: Q8.7

Basics of converting strings to numbers.

Textbook: Q8.11

"Mad-libs"-style automatic sentence generation. You don't need to do the short-story generation!

Textbook: Q8.19

Editing strings.

Rogue-like game movement

We are going to develop the first stages of a turn-based "Rogue-like" game. The most important part of a game is where the players play - ie, the world. In our game, the

world will consist of a flat area of land that will be represented using text characters. the map should look like below:

```
##########
#...@....#
#........#
#........#
#........#
#........#
#........#
#........#
##########

Command:
```

The dimensions of the map are 10 x 8 locations. The character '@' represents the player, the '#' represents a solid wall which the player cannot move through, and the '.' represents empty space which the player can move through. Below the map there is a blank line then a prompt for the user to enter a command and press return.

- If the user enters '8', the character should move 1 location up.
- If the user enters '2', the character should move 1 location down.
- If the user enters '4', the character should move 1 location left.
- If the user enters '6', the character should move 1 location right.
- If the user enters '0', the program should exit.

If the user tries to move the character into a position that is impossible, the character should stay in the current position, and an error message should appear between the bottom of the map and the command prompt saying "Invalid move!".

You can represent the game map any way you wish. One way is to use a 2D char array to represent the map.

End