# Lab 5: Using A Menu

[7 marks] Write a program with the following nested menu system, and the code to carry out the items indicated in the menus:

```
Main Menu

   1.  LEDs
   2.  LCD
```

```
LED Menu

   1. Red On
   2. Yellow On
   3. Green On
   4. Red Off
   5. Yellow Off
   6. Green Off
   7. All On
   8. All Off
   M. Main Menu
```

```
LCD Menu

    1.  Clear LCD Screen
    2.  Display LCD Story
    M.  Main Menu
```

Here's the "LCD Story":


## Code Submission: [3 marks]

Place your "main.c" file for this project, clearly identified as yours, in the Lab 4 Dropbox so your instructor can grade your descriptive file headers, your code documentation and your use of libraries, and, where appropriate, discuss your coding techniques. Also include your "LCD_Lib.c" library.

Hints:

1. Your menus will be displayed using a number of constant strings. If you use "carriage return/line feed" at the end of each, you should be in the right place for a new line, so you shouldn't have to repetitively locate your position on the screen. (Carriage return is *escape 0x0d* or, in a string, \r; line feed is *escape 0x0a* or, in a string, \f.)
2. With nine items available in the LED Menu, you'll probably want to use a "switch". You can use ASCII characters in your switch. For example, you could use *case '1'*.
3. One good way to handle nested menus is to use the exit selection (in this case, *'M'*) as the condition for staying in the current loop, rather than treating is as one of the menu selections.
4. Your program should respond to both '*m*' and '*M*'.