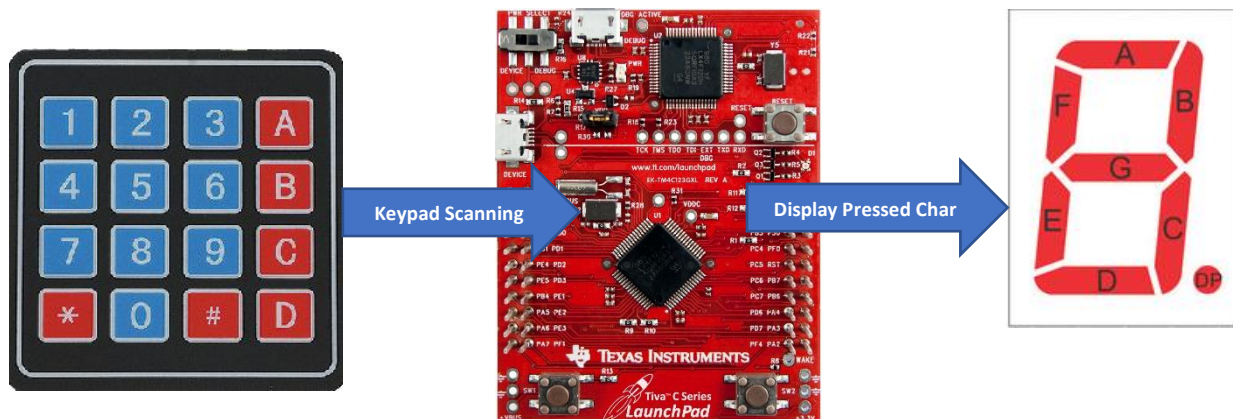


Displaying Keypad Characters over 7 Segments Display

A 4x4 matrix membrane keypad makes use of the matrix connection between the rows and columns, to scan 16 buttons over only 8 interfacing pins. The keypad scanning algorithm depends on the assignment of 4 pins to be outputs, while the other 4 pins are to be assigned as inputs to read the signal from one of the output pins when the intersecting button is pressed.



You are required to create your own definitions for the 4x4 keypad to interface 8 pins of the keypad as well as the 7 segments to display the pressed characters over the 7-SEG.

Assessment Criteria:

- 1- Multi-file project is a must.
- 2- "*" and "#" characters are to be displayed as "E" and "F" respectively.

In the Project Report:

- 1- Tabulate the functions you have created for the project with the developer name and the files names where the function is defined and prototyped.
- 2- The block diagram of your project indicating which ports and pins assigned for the connected pins.