**Example Pseudocode for Scanning the Keypad Matrix.**

Configure 3 columns to be outputs and 4 rows to be inputs with pull\_up resistors.

Define a list of keys corresponding to the order they will be scanned as follows:

keys = [‘1’,’4’,’7’,’\*’,’2’,’5’,’8’,’0’,’3’,’6’,’9’,’#’]

Initialize kindex to 0.

Output 0 on column 1, 1’s on the others

For each row bit:

If bit is zero:

Return keys[kindex]

Increment kindex

Output 0 on column 2, 1’s on the others

For each row bit:

If bit is zero:

Return keys[kindex]

Increment kindex

Output 0 on column 3, 1’s on the others

For each row bit:

If bit is zero:

Return keys[kindex]

Increment kindex