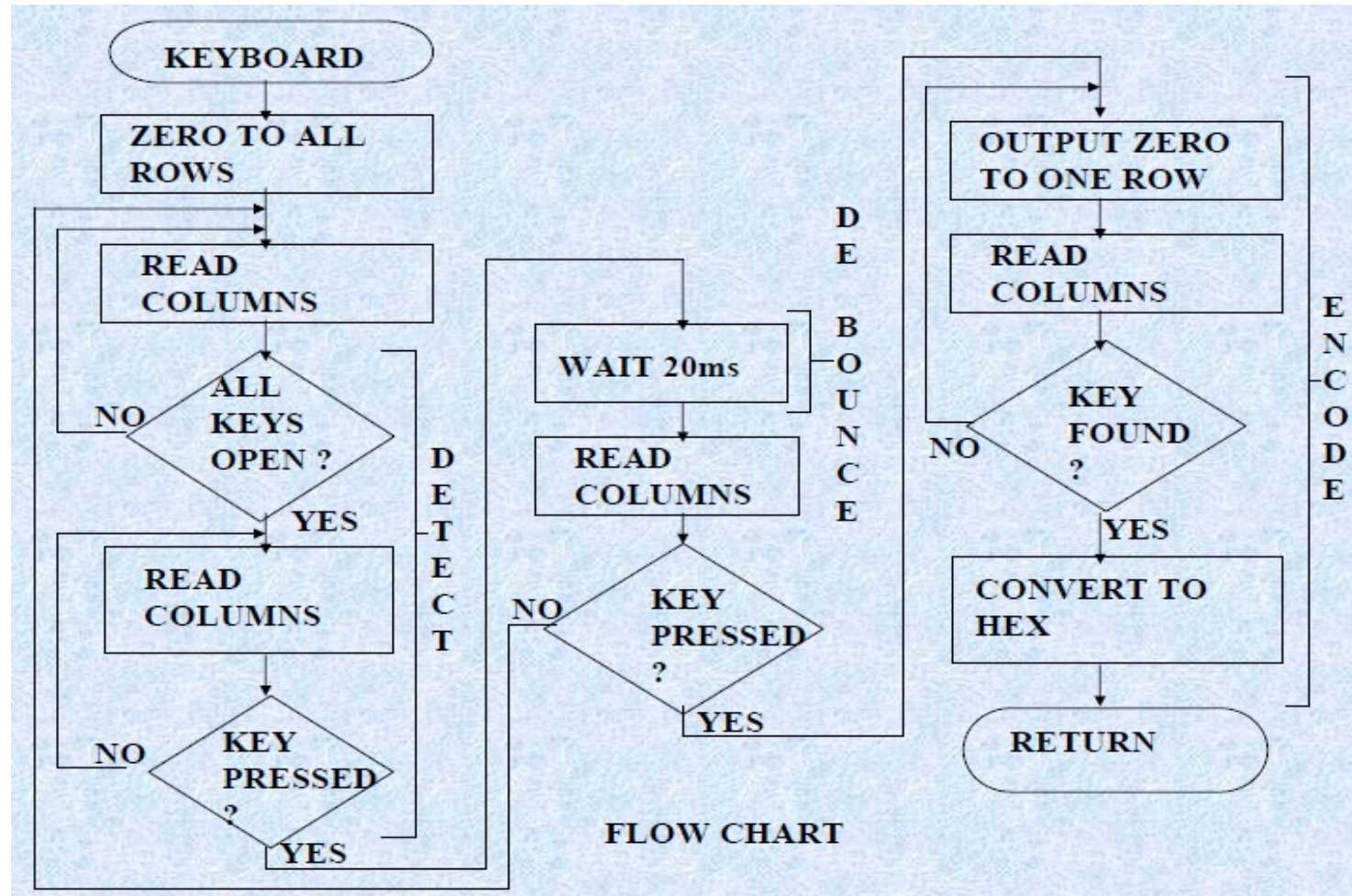


# Unit 5

## Lecture 2

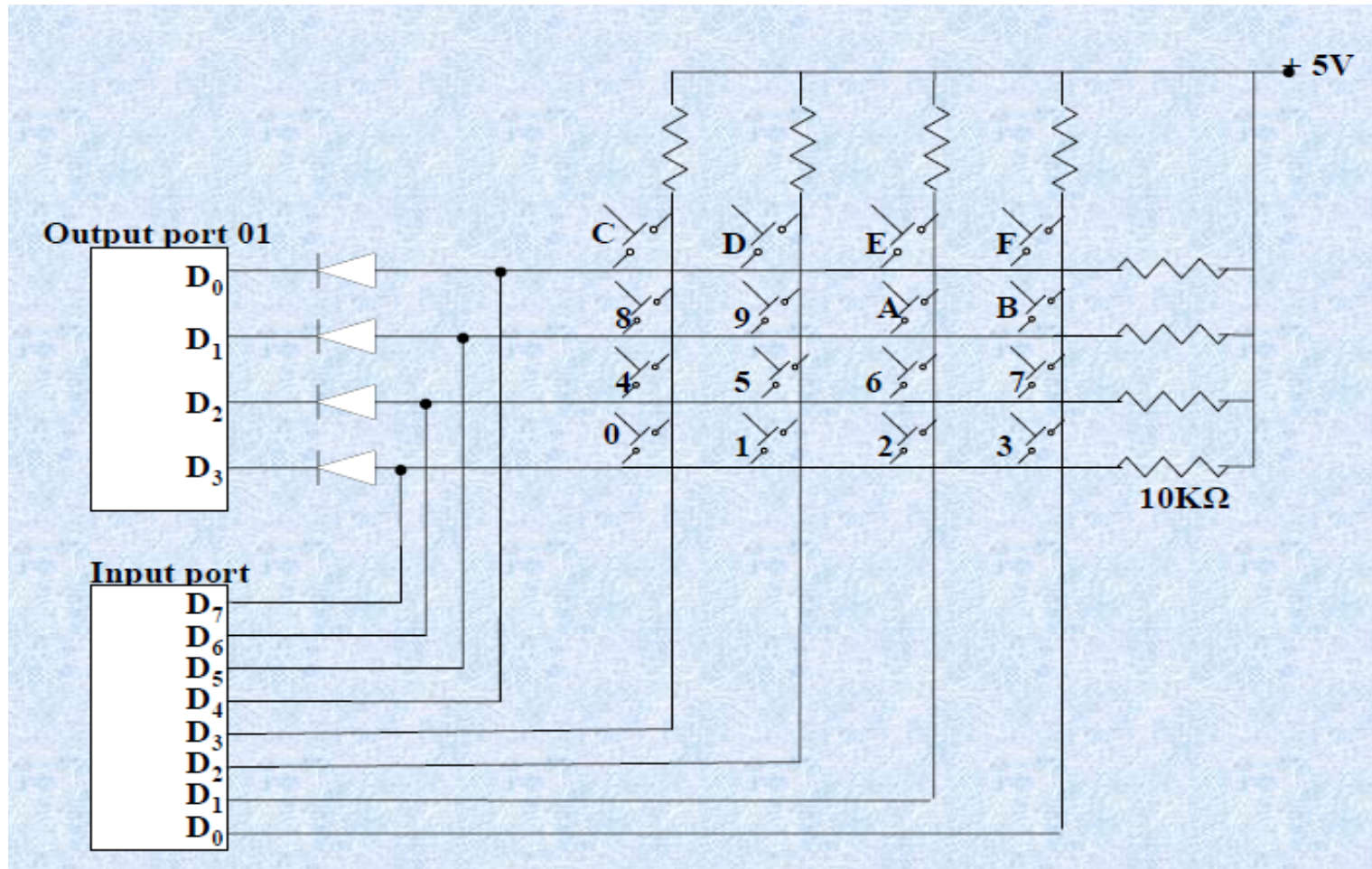
# Flow chart: Key check subroutine



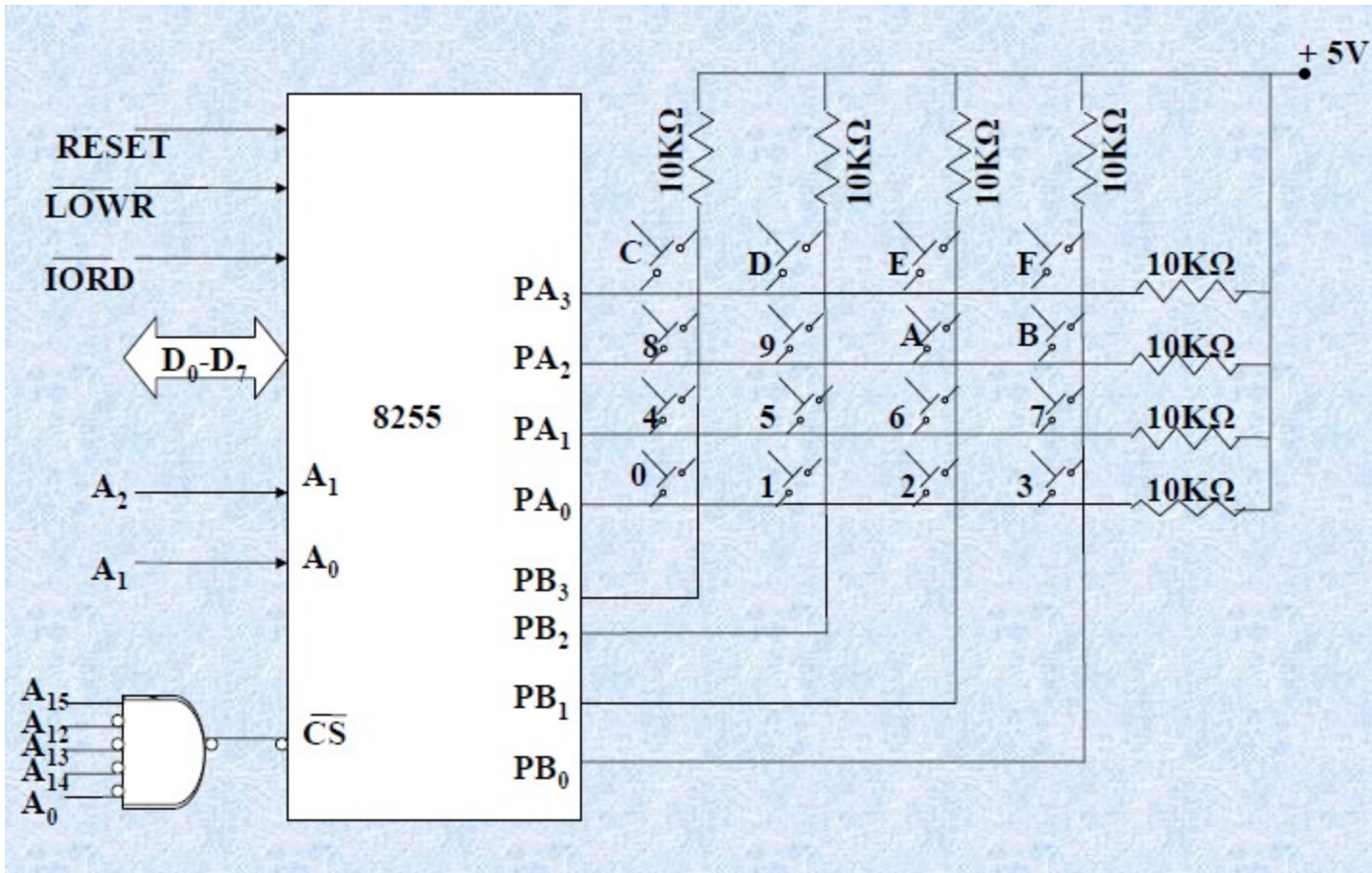
# Program for Keycheck Subroutine

```
KYCHK:          IN PORT A
                 CPI 0FFH
                 JNZ KYCHK
                 CALL DBOUNCE
KYPUSH:         IN PORT A
                 CPI 0FFH
                 JZ KYPUSH
                 CALL DBOUNCE
                 CMA
                 ORA A
                 JZ KYPUSH
                 RET
```

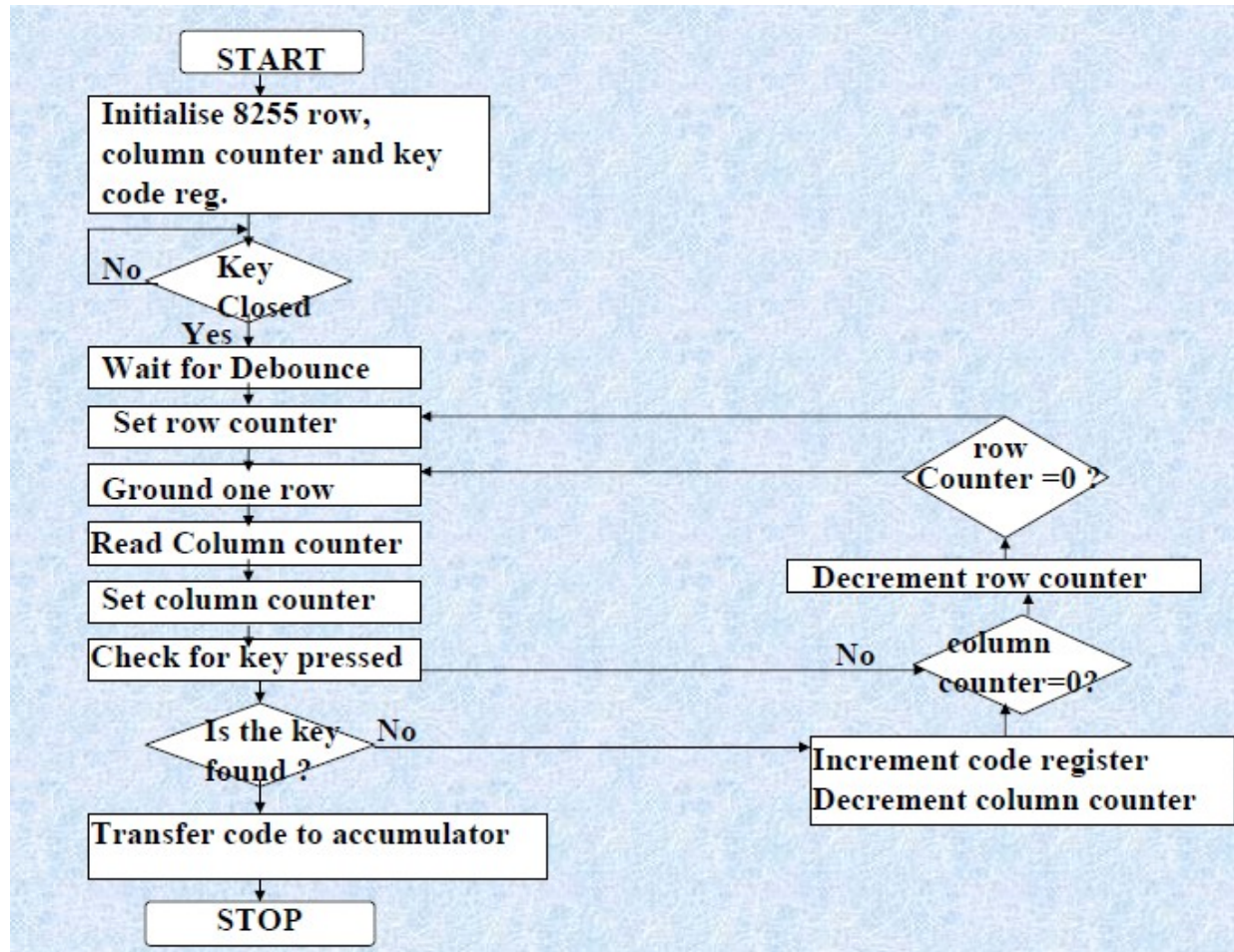
# Port Connections



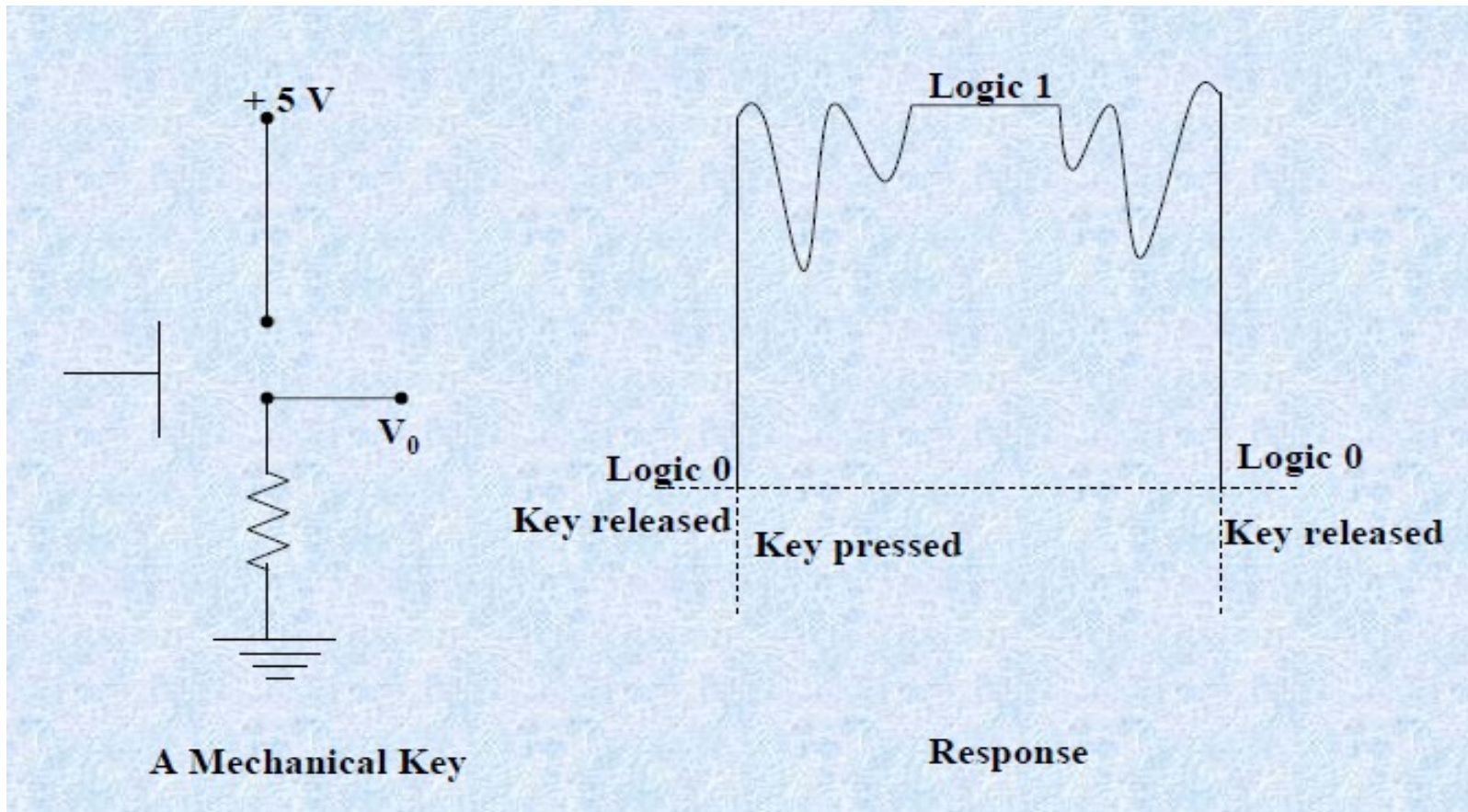
# Interfacing 4\*4 Keyboard



# Flow chart: Keyboard Debounce



# Pushbutton key & Key Debounce



# PROGRAM FOR KEY DEBOUNCE

```
DBOUNCE:    PUSH B
            PUSH PSW
            LXI B,COUNT
LOOP:       DCX B
            MOV A,C
            ORA B
            JNZ LOOP
            POP PSW
            POP BC
            RET
```



# MAIN PROGRAM

## KYBOARD:

```
PORT A      EQU FCH
PORT B      EQU FDH
CNWORD      EQU FFH
STACK       EQU 20 AFH
            LXI SP,STACK
PPI:        MVI A,CNWRD
            OUT CNTRL
NEXTKY:     CALL KYCHK
            CALL KYCODE
            CALL DSPLAY
            JMP NEXTKY
```