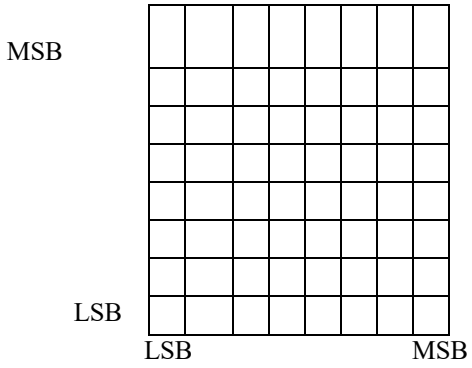
MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
COURSE TITLE: MICROPROCESSOR AND MICROCONTROLLER SESSIONAL
COURSE CODE: CSE 306
LAB MANUAL 3

Table: MDA-8086 I/O Address Map

Address	I/O Port Functions	Device
18H	Port A Data Register	8255A-CS1(DOT & ADC interface)
1AH	Port B Data Register	
1CH	Port C Data Register	
1EH	Control Register	

Theory and Methodology:
The operation of DOT matrix

The LED DOT matrix display is an array of LEDs arranged in a 2 dimensional grid. Some matrix contains bidirectional LEDs which gives another color when the power connection is reversed. Suppose, PORTC is connected to the column lines (vertical lines) and PORTA, PORTB is connected with the row lines (horizontal lines).



Notes:
1. PORTB is connected with GREEN LEDs.
2. PORTA is connected with RED LEDs.
3. In order to turn a LED on, a logical 0 should be provided to the row and a logical 1 should be provided to column.

Experiments:

1. Rotate the row of dot matrix using green light
2. Rotate the column of dot matrix using red light
3. Show any letter in the matrix
4. Blink the letter in the matrix
5. Scroll an assigned number in the dot matrix from left to right/from right to left
6. Scroll an assigned number in the dot matrix from top to bottom/from bottom to top