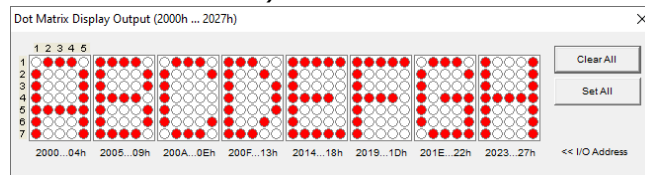# LAB EXPERIMENT #5

Objective(s)
- ▪ Become familiar with using I/O devices and the Emulation Kit.

Lab Work
Write an assembly program that can print scrolling text on Dot Matrix Display Output in Emulation Kit. Implement text scrolling in an infinite loop.
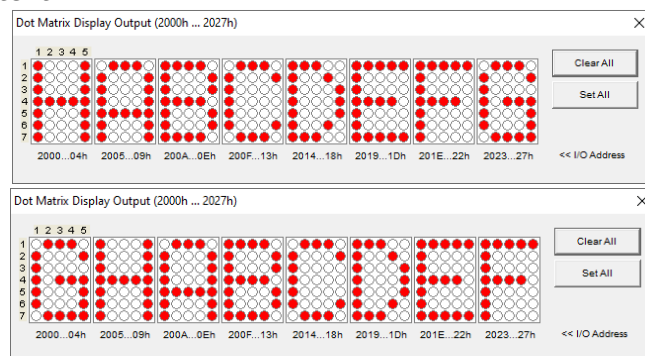
1. First, print a text (your name or surname) on Dot Matrix Display Output (You can see the detailed explanation and examples on Emulation Kit documentation).

2. After printing text, put a delay before the next iteration. Several code samples are available for making a delay on the Internet. Alternatively, use the following one:

```
MOV CX, 0FFH
WAIT:
LOOP WAIT
```

3. After the delay, shift the port numbers to make the text look like a scrolling text:

Hint: Using Emulation Kit
1. Download Emulation Kit on MS Teams page and copy the Emulation Kit.exe file to DEVICES directory under the path where emu8086 is installed.
2. Start the kit by using the "#start=Emulation Kit.exe#" instruction in your code.
3. Please see the Dot Matrix Display Output section on Emulation Kit Help.pdf for further instructions on using dot matrix displays.

Evaluation:
Complete lab work until lab hour. The evaluation will be in the lab session.