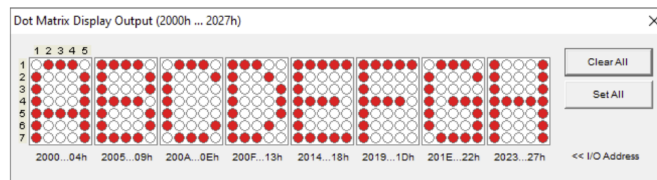# Lab Experiment #5

December 12, 2023

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 the Emulation Kit. Implement text scrolling in an infinite loop.

1. Print Text on Dot Matrix Display Output

First, print a text (your name or surname) on Dot Matrix Display Output. You can refer to the detailed explanation and examples in the Emulation Kit documentation.
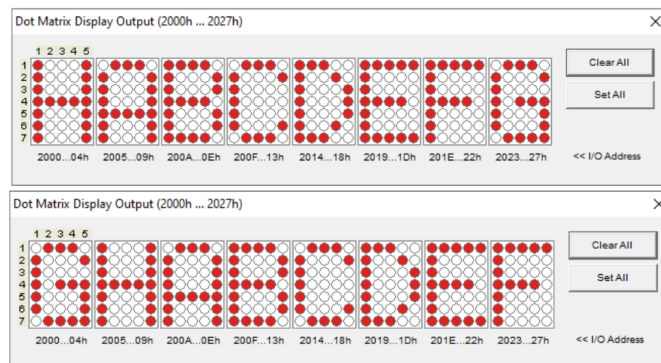

2. Add Delay

After printing the text, put a delay before the next iteration. You can use various code samples available on the Internet, or the following one:

```
MOV CX, OFFFH
WAIT:
    LOOP WAIT
```

3. Implement Text Scrolling

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

Hint: Use the Emulation Kit

- Download the Emulation Kit on MS Teams page and copy the Emulation Kit.exe file to the DEVICES directory under the path where emu8086 is installed.

- Start the kit by using the "#start=Emulation Kit.exe#" instruction in your code.

- Please see the Dot Matrix Display Output section on Emulation Kit Help.pdf for further instructions on using dot matrix displays.

Evaluation

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