FSM Learning Activity

Spencer Hernandez - **ECE 3430** - September 12, 2022

I. Intro

The purpose of this lab was to implement a Finite State Machine using LEDs on the MSP432 Micro-controller.

II. Part A

This first part was done by using a 2-dimensional array of FSM states and transitions, that could be indexed by using the CurrentState and CurrentInput of the FSM object. To verify that this code works, the DIO pins on the AD2 were used, and a separate port pin on the MSP432 was configured to act as the pushbutton. The AD2 then generated a square waveform that would toggle the "pushbutton" (the other port pin) on/off. The results are shown below in Figure 1.
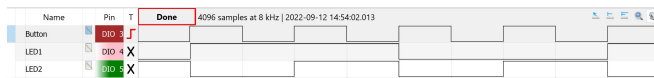

Fig. 1. Verification for Part A

III. Part B

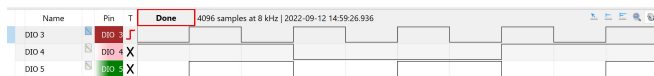This part was done using by replacing the 2-dimensional array with an array of pointers. The verification can be seen below in Figure 2

Fig. 2. Verification for Part B