REPORT ON EXPERIMENT 8

Course No EEE 416

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Section : A2

Step 1 : Designing the schematic.

In this stage the schematic diagrams were designed based on the lab reference video.

Initially the 8086 part is created while creating the project through project wizard. The following parts were sequentially placed in the schematic capture.

1. 74HC373 2. 8255A 3. 3 seven segment displays

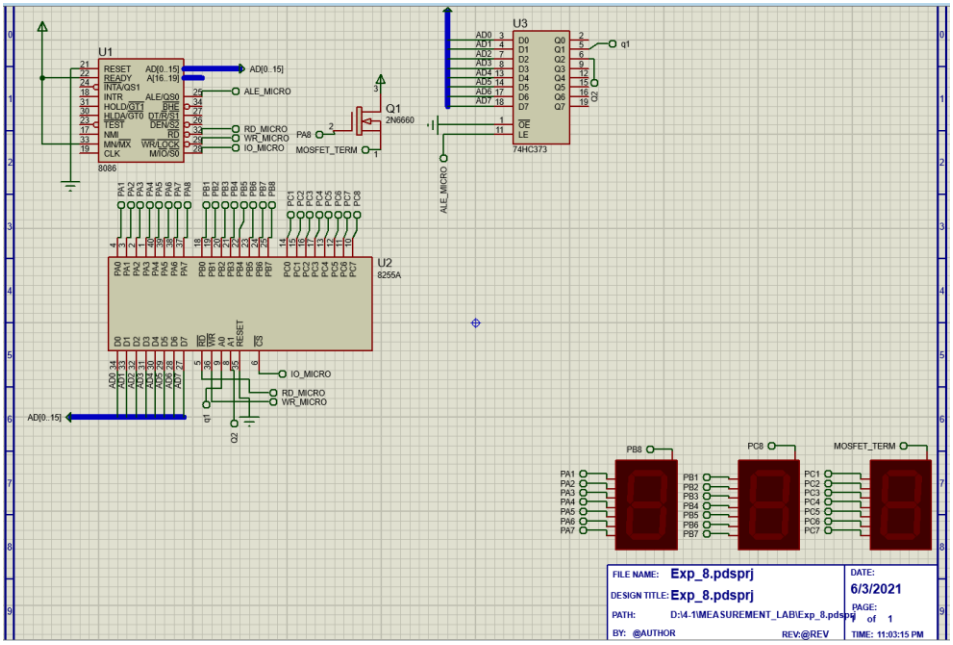

Figure 1 Total schematic layout

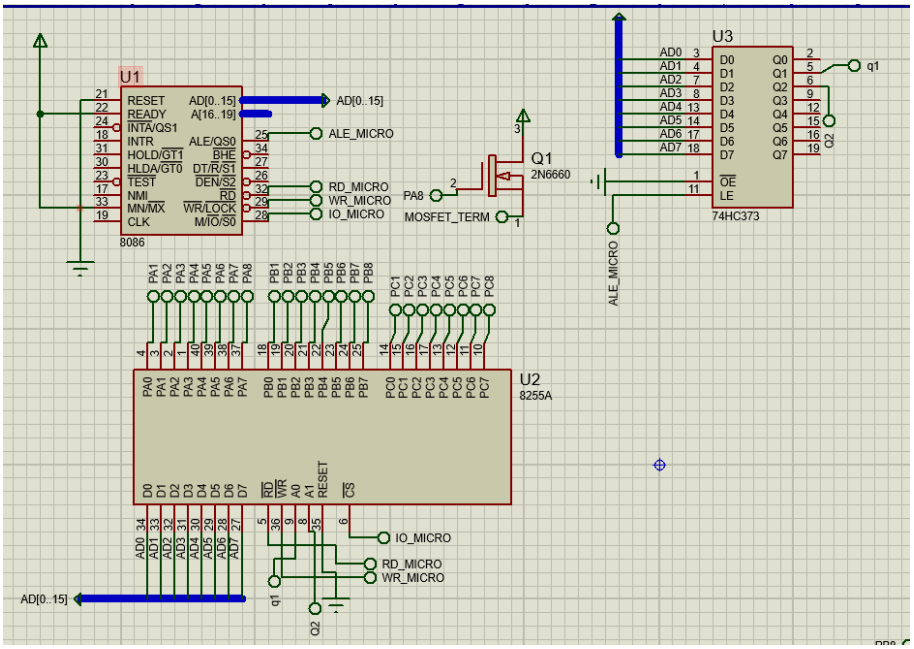

Figure 2 Schematic Capture of the 8225A and 74HC373

Step 2: Creating the source code

Coding for the microprocessor was initially debugged using emu8086.

```
; Main.asm file generated by New Project wizard
;
; Created:   Fri May 28 2021
; Processor: 8086
; Compiler:  MASM32
;
; Before starting simulation set Internal Memory Size
; in the 8086 model properties to 0x10000
;=========================================================================

DATA SEGMENT
     P_A EQU 00H
     P_B EQU 02H
     P_C EQU 04H
     CONNECT EQU 06H
DATA ENDS

CODE SEGMENT
      ASSUME CS:CODE
      ASSUME DS:CODE
      ASSUME ES:CODE
      ASSUME SS:CODE

      ORG 0000H ;
      MOV AX, DATA
      MOV DS, AX
      MOV AL, 10000000B ;
      OUT CONNECT, AL

MAIN_LOOP:
      ; HUNDREADTH POSITIONAL DATA
      MOV AL, 11000000B
      OUT P_A, AL
      ; TENTH POSITIONAL DATA
      MOV AL, 10110000B
      OUT P_B, AL
      ; UNIT POSITIONAL DATA
      MOV AL, 10000000B
      OUT P_C, AL ; Output data

JMP MAIN_LOOP
CODE ENDS
END ;
```

step 3: To display the result, the code was copy pasted to “source code section”. and on running the code, the following out put was opbtained

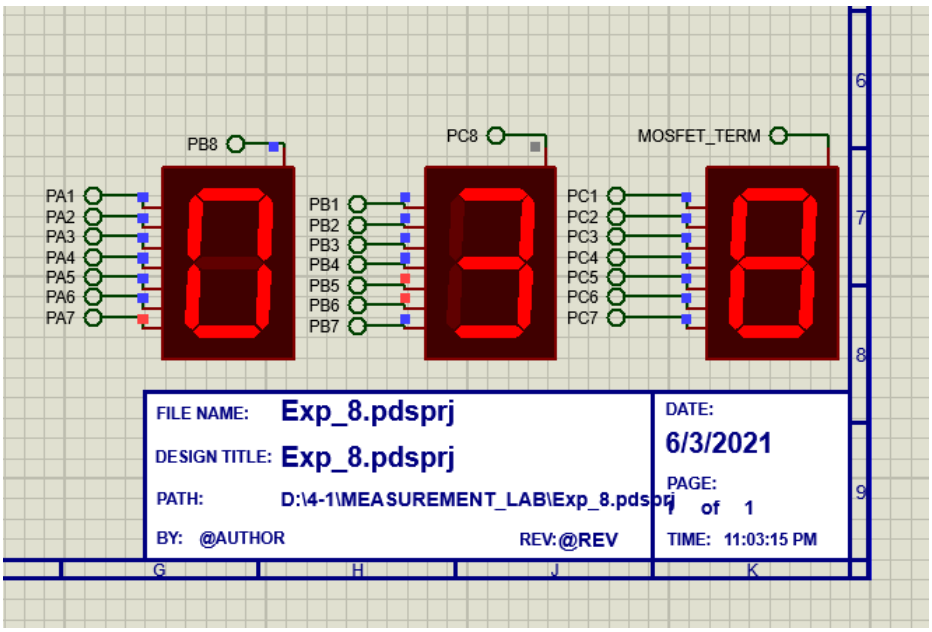

Figure 3 Output