NORTH SOUTH UNIVERSITY

Department of Electrical & Computer Engineering

Assignment On

Course Code: *CSE331*

Course Title: *Microprocessor Interfacing & Embedded System*

Submission by_

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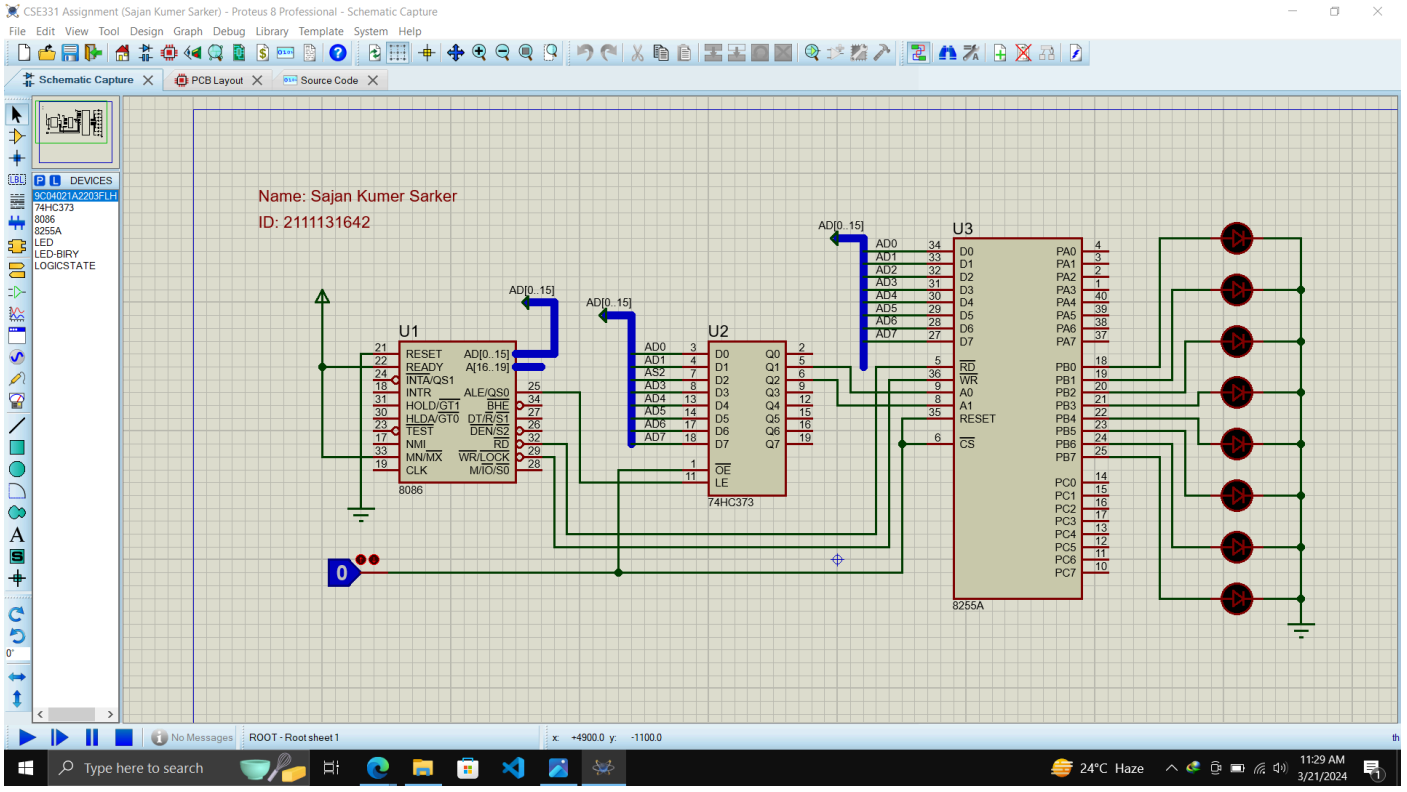
Section : 3

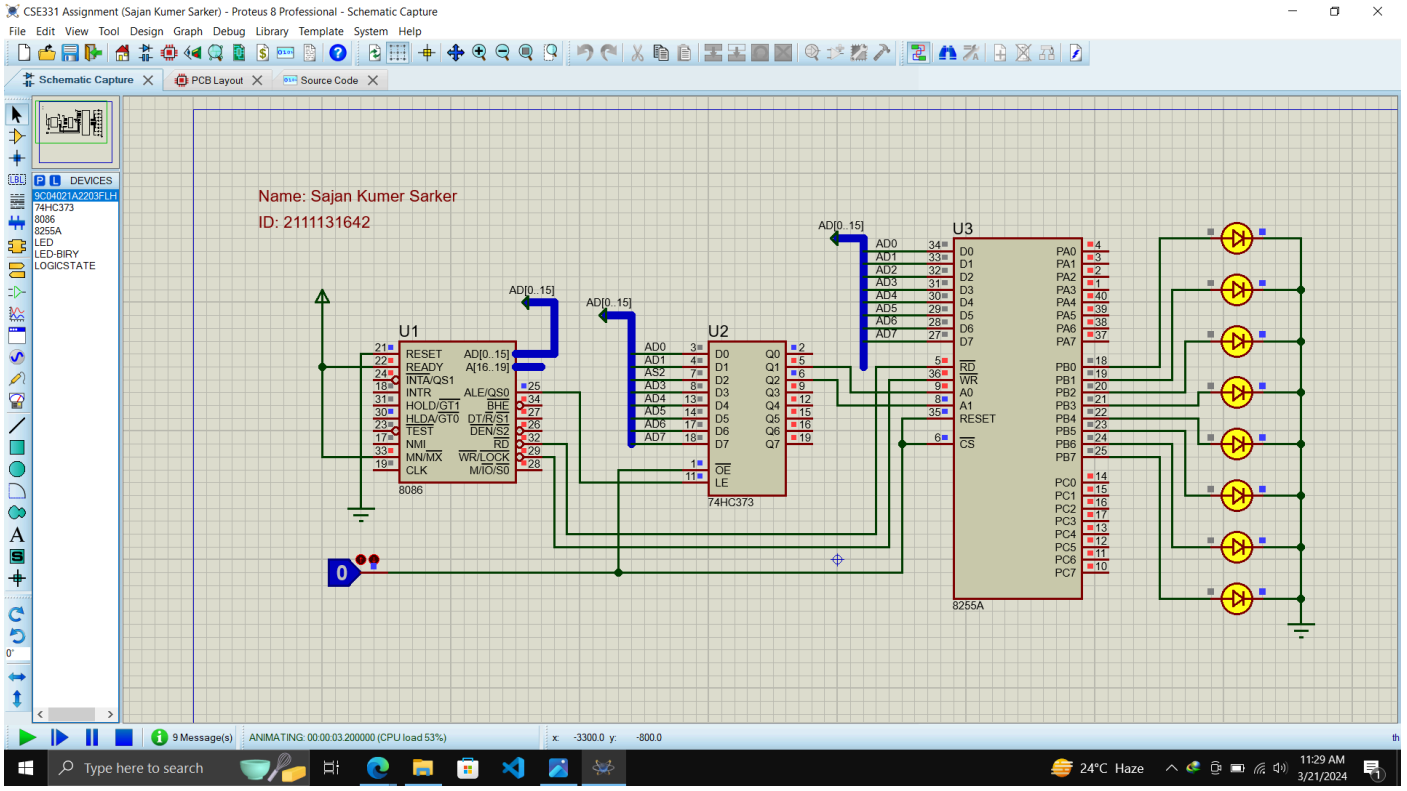
Assignment Title : 8086 Interfacing with 8 LEDs via 8255
Submission Date : 21st March, 2024

Submitted to_

Instructor : Syed Mahmud Husain (SMH2)

Simulation Screenshots:

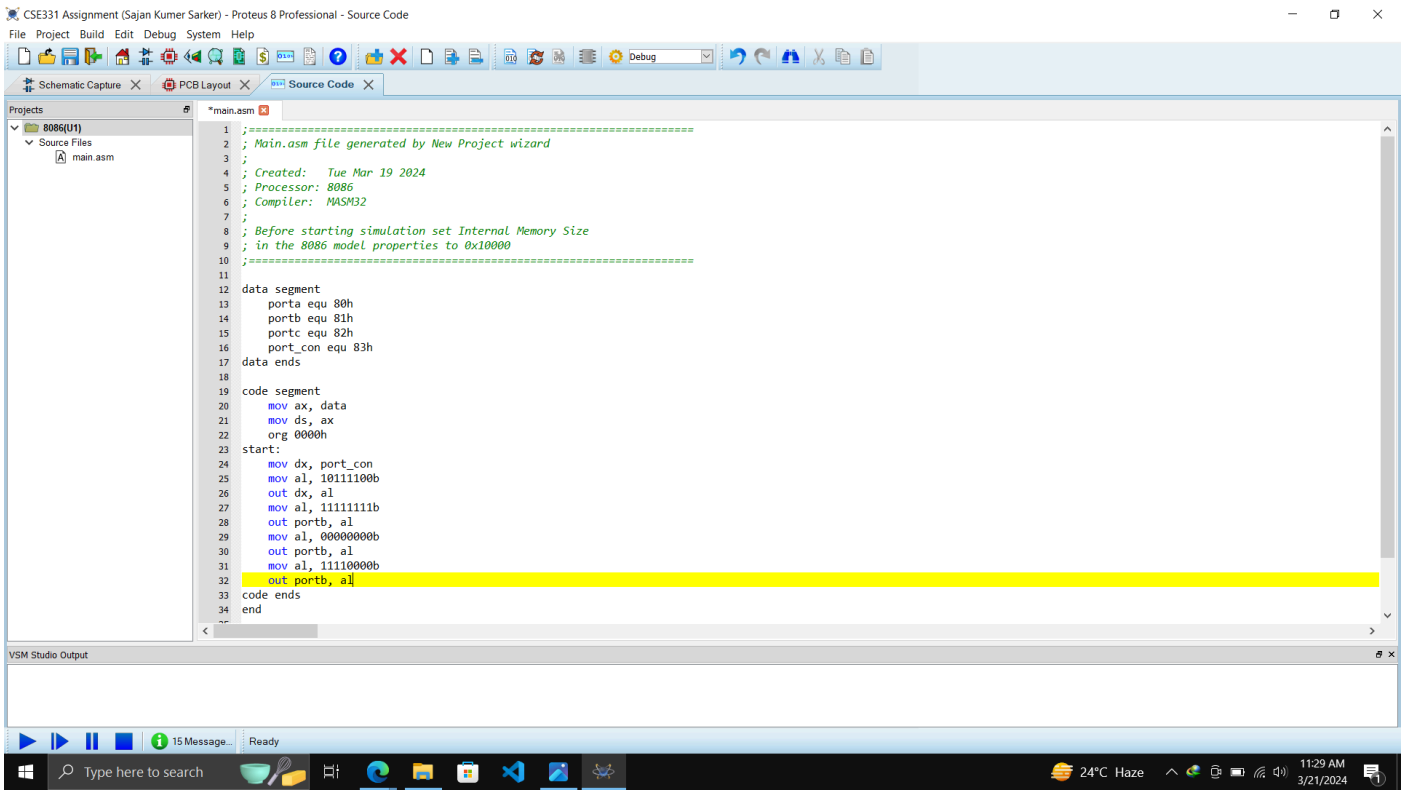




Code:

```
data segment
    porta equ 80h
    portb equ 81h
    portc equ 82h
    port_con equ 83h
data ends

code segment
    mov ax, data
    mov ds, ax
    org 0000h
start:
    mov dx, port_con
    mov al, 10111100b
    out dx, al
    mov al, 11111111b
    out portb, al
    mov al, 00000000b
    out portb, al
    mov al, 11110000b
    out portb, al
code ends
end
```



Discussion:

For this assignment I've simulated the 8086 Interfacing with 8 LEDs via 8255 in Proteus software. For this first i need to find the port address of 8255 PPI and then Find the Address of Control Word Register. I need to show the output from Port B. So I just put value 11111111b through Port B which just turned on my LED which was connected to Port B. To simulate this I needed some components which were: 8086 MicroProcessor, 8255 PPI, 74HC373 Octal D-type Transparent Latch, and 8 LEDs in proteus. Then I wrote the assembly code for this simulation where for Port B address I used: 81h, for Control Register Address I used: 83h, and for Control Word Register Address I used: 10111100b (BCh). For output Signal I used 11111111b (FFh) Through AL register.