Voltage measurement and Displaying in LCD

Learning Objective: -

* Measuring voltage using 8051 with interfacing ADC 0808
* Displaying the voltage value in LCD display
* Indicating the range of voltage using LEDs

Inputs and Outputs: -

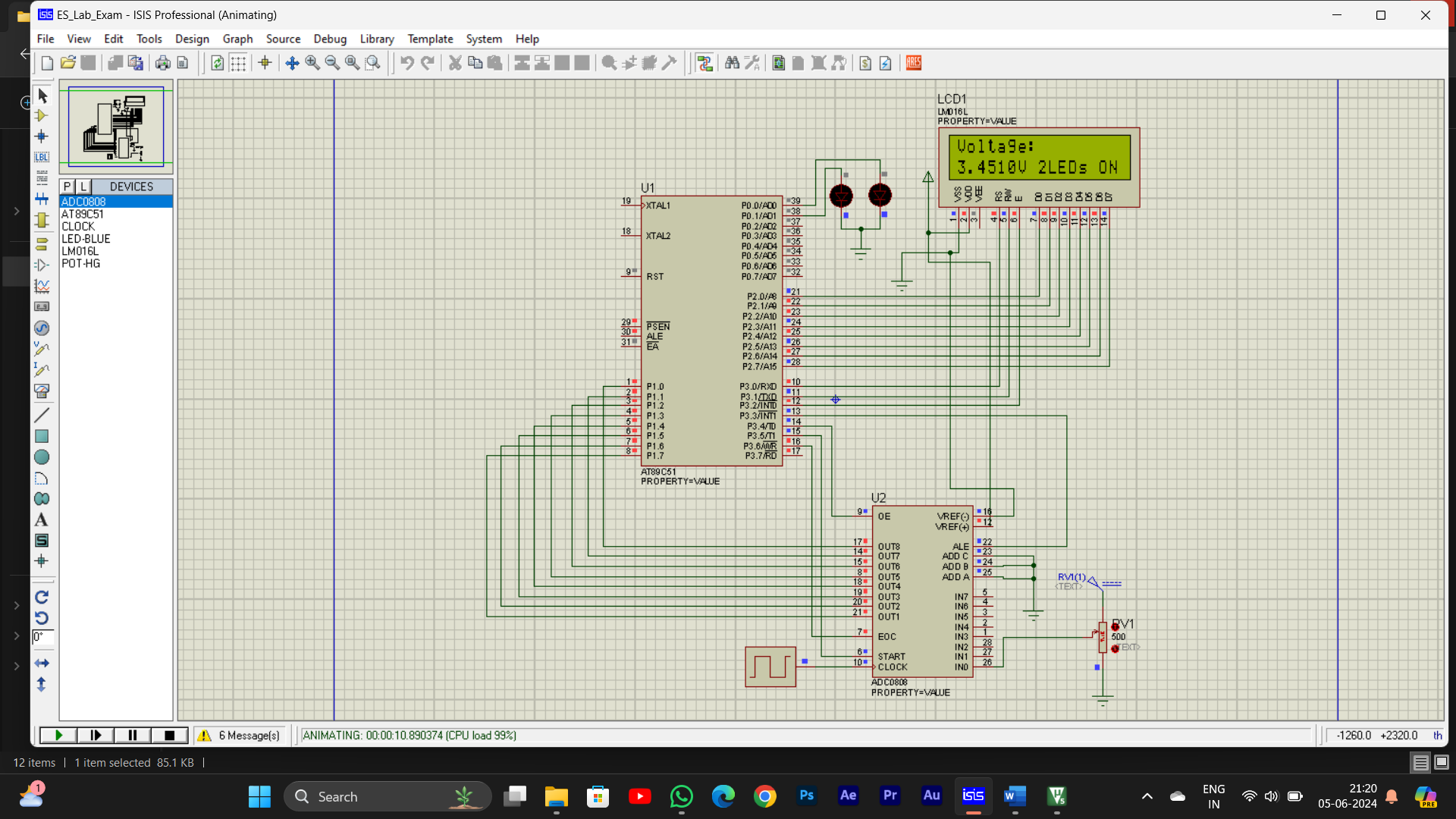
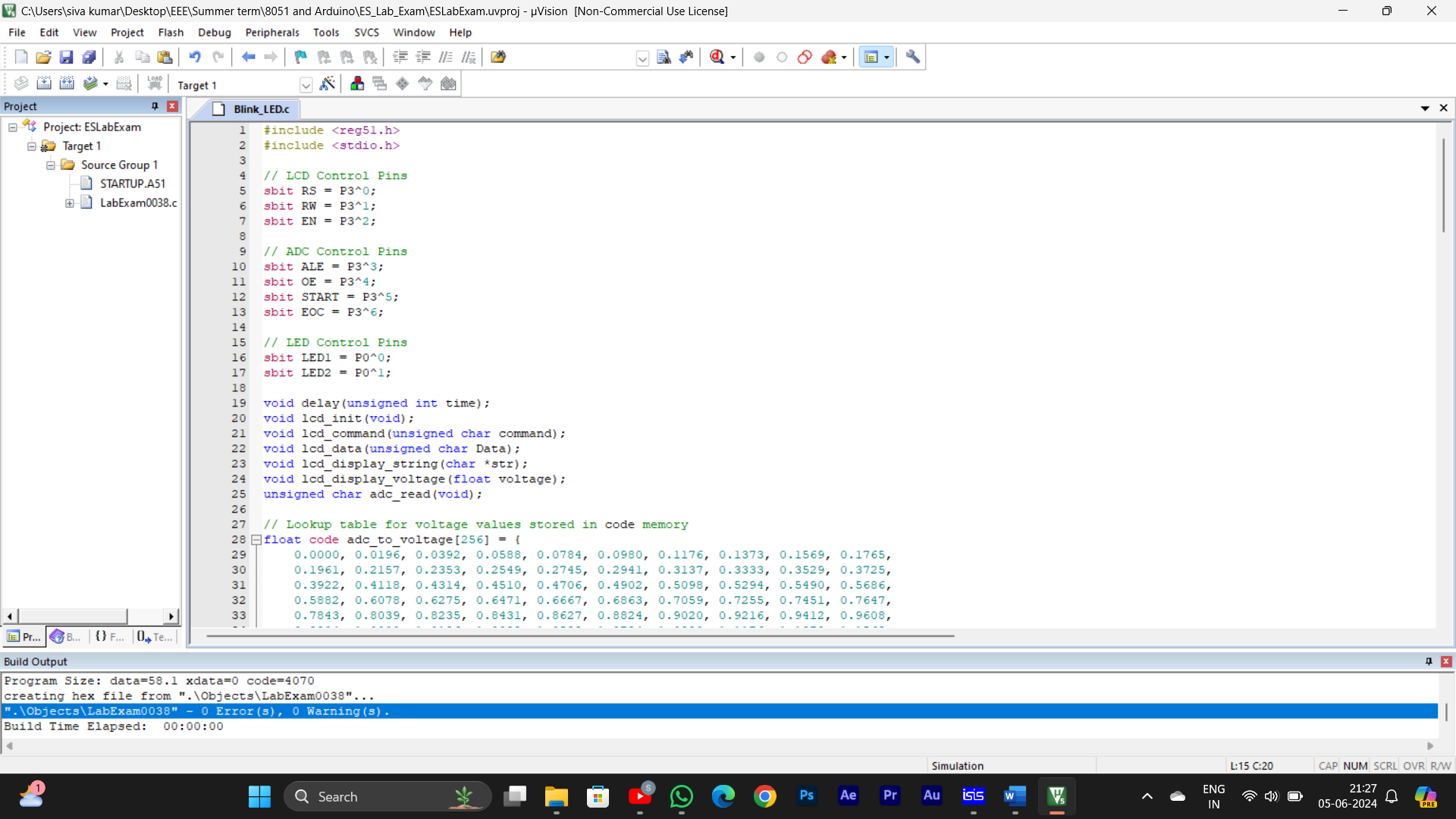
* Input is Potentiometer
* Outputs are LEDs and LCD display

Logic: -

* Connect ADC, LCD, LEDs to 8051 Microcontroller
* The POT and 5v source are connected to ADC 0808
* The ADC will convert the voltage (analog signal) to Digital signal
* That signal is fed to 8051 and processes the signal and send the value to the LCD
* The LCD will display the Voltage applied to ADC and will show the no of LEDs are glown
  + If the voltage is more than 3v, two LEDs will glow
  + If voltage is in between 2v -3v, then 1 LED will glow
  + If voltage is less than 2v, no LEDs will glow
* The maximum voltage that can be measured is 5v DC

Common Mistakes: -

* Improper connection from ADC to 8051
* Not Assigning all port that have been used
* Not displaying decimal point in LCD while displaying voltage
* Checking Active high or low port and assigning the values later

Result: -

