Embedded Systems Report
DAY 3
LED Blinking In Sequence

Ahmed
BU21EECE0200026

Learning Objective:

- To understand how to write and debug a embedded C program to blink LEDs in sequence using Keil uVision LDE and Proteusan on 8051 microcontroller .

Input and Output:

Input:

- There are no external inputs in this program. The microcontroller runs autonomously to blink the LEDs.

Output:

- The output is the sequential blinking of LEDs connected to port P1 of the microcontroller.

Logic:

- The code initializes the microcontroller and enters an infinite loop (while(1)).
- Inside the loop, there is a for loop that iterates from n=0 to n=7.
- During each iteration, the value of k is shifted left by one position using the bitwise shift operator .
- The value of k is assigned to P1, turning on the corresponding LED.
- There is a delay of 50 ms between each LED toggle.
- After the loop, if all bits are shifted out (k==0), k is reset to 0x01 to start the cycle again.

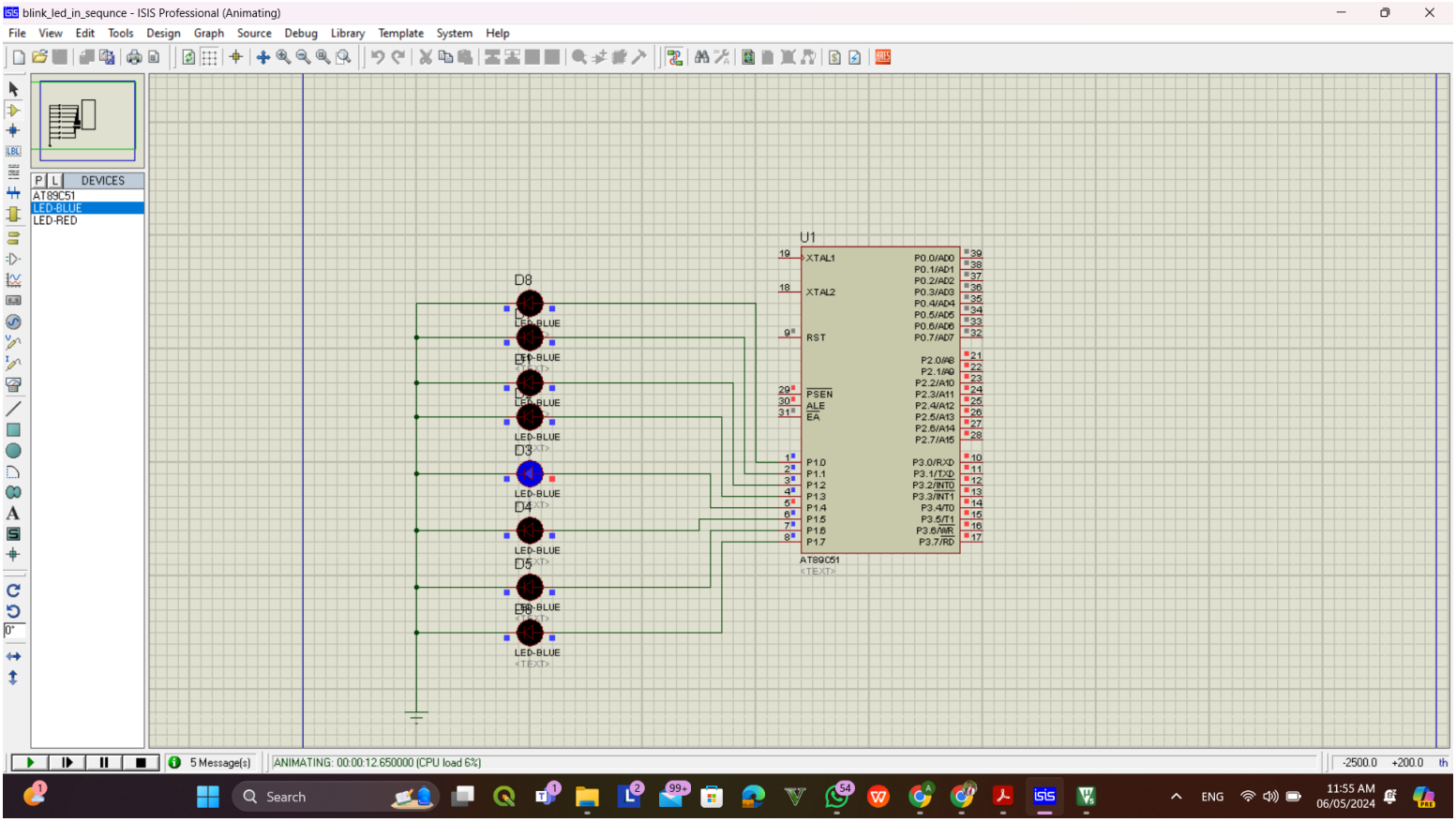
Results:

- The program results in a sequential blinking of LEDs connected to port P1 of the microcontroller. Each LED turns on and off in sequence with a 50 ms delay between each change.

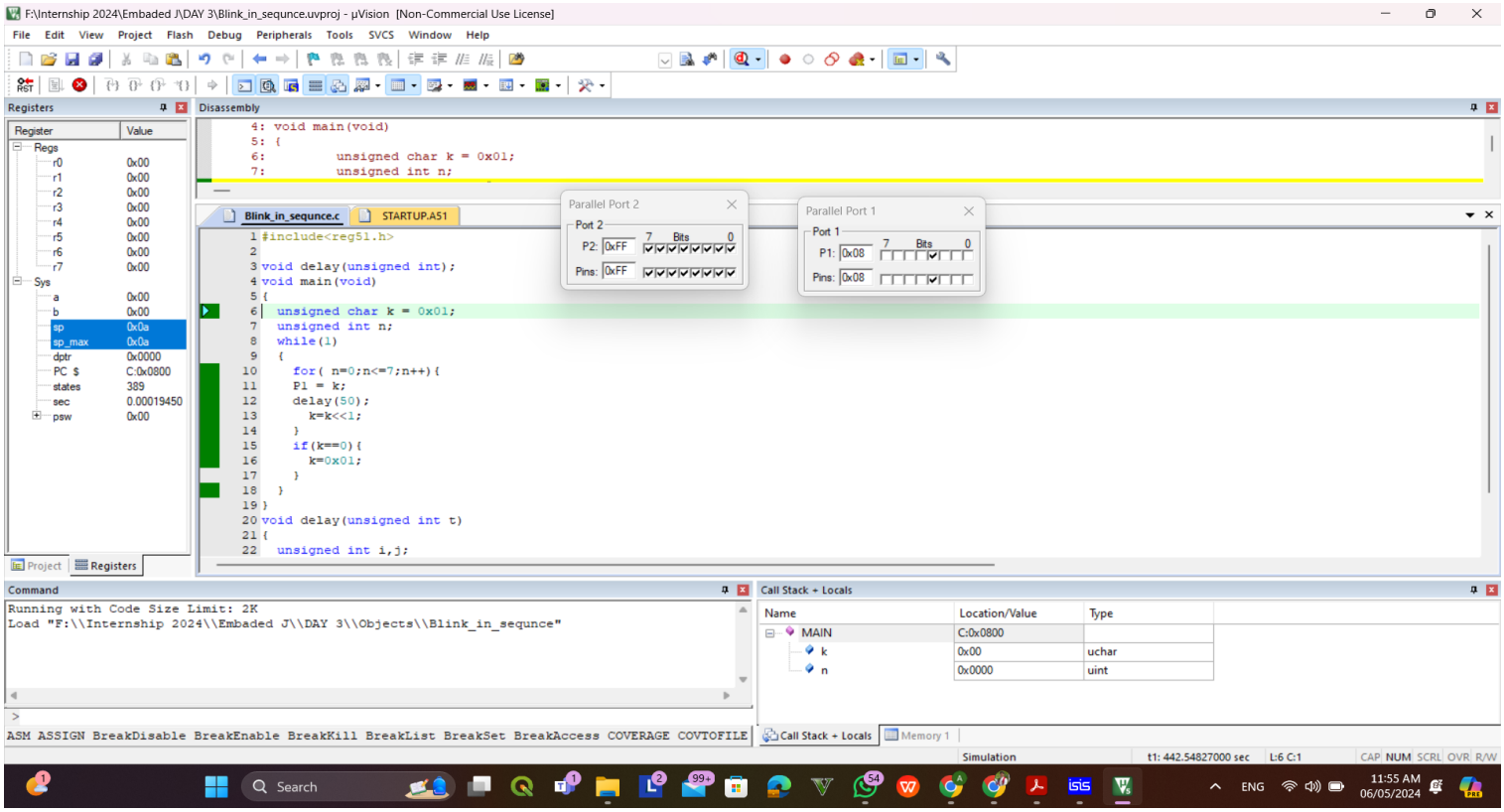
Embedded Systems Report
DAY 3
LED Blinking In Sequence

Ahmed
BU21EECE0200026

➢ Screen Shots:



Proteus Simulation



Keil uVision