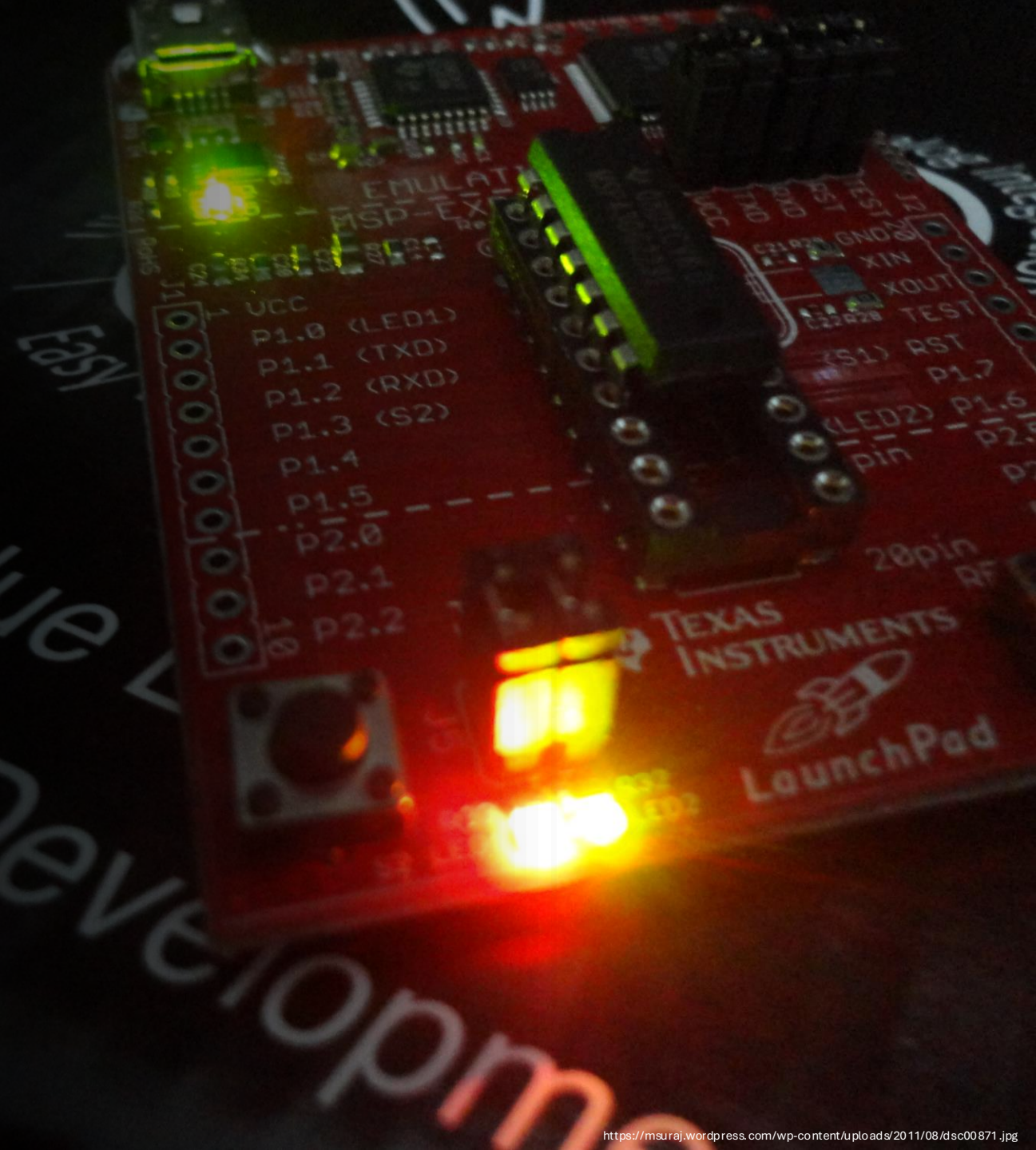# EELE 465 Project 1- Heartbeat LED
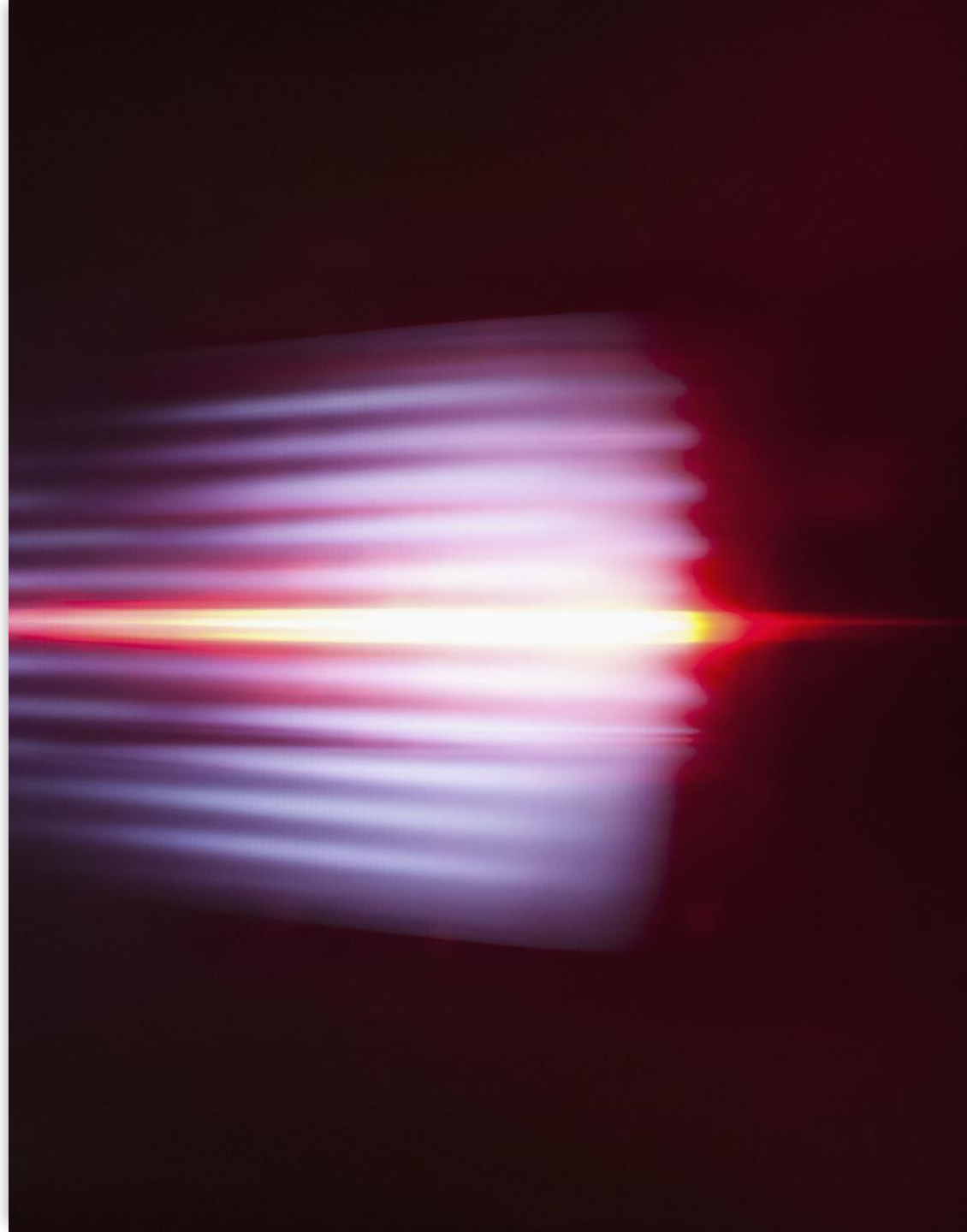
Erik Callery

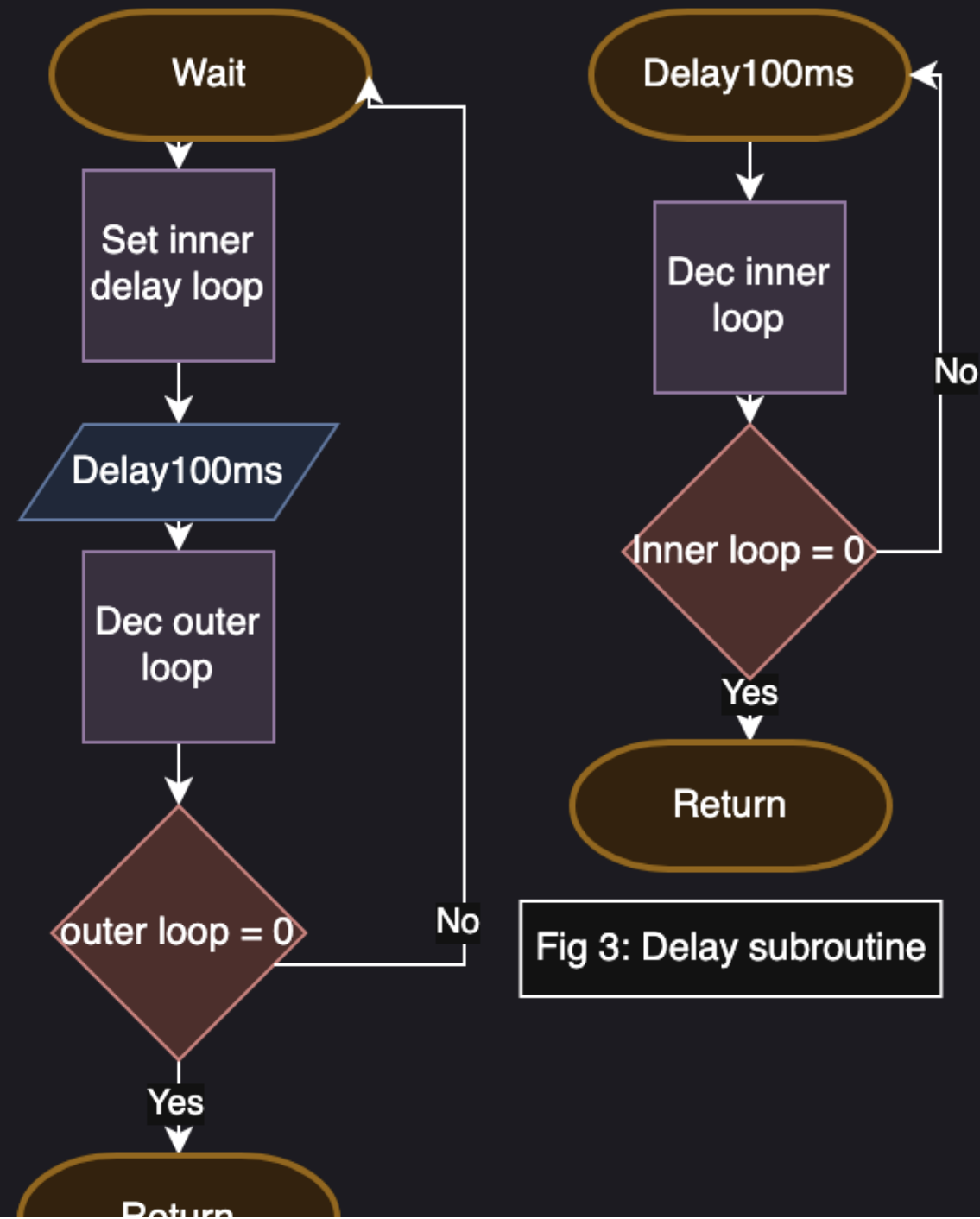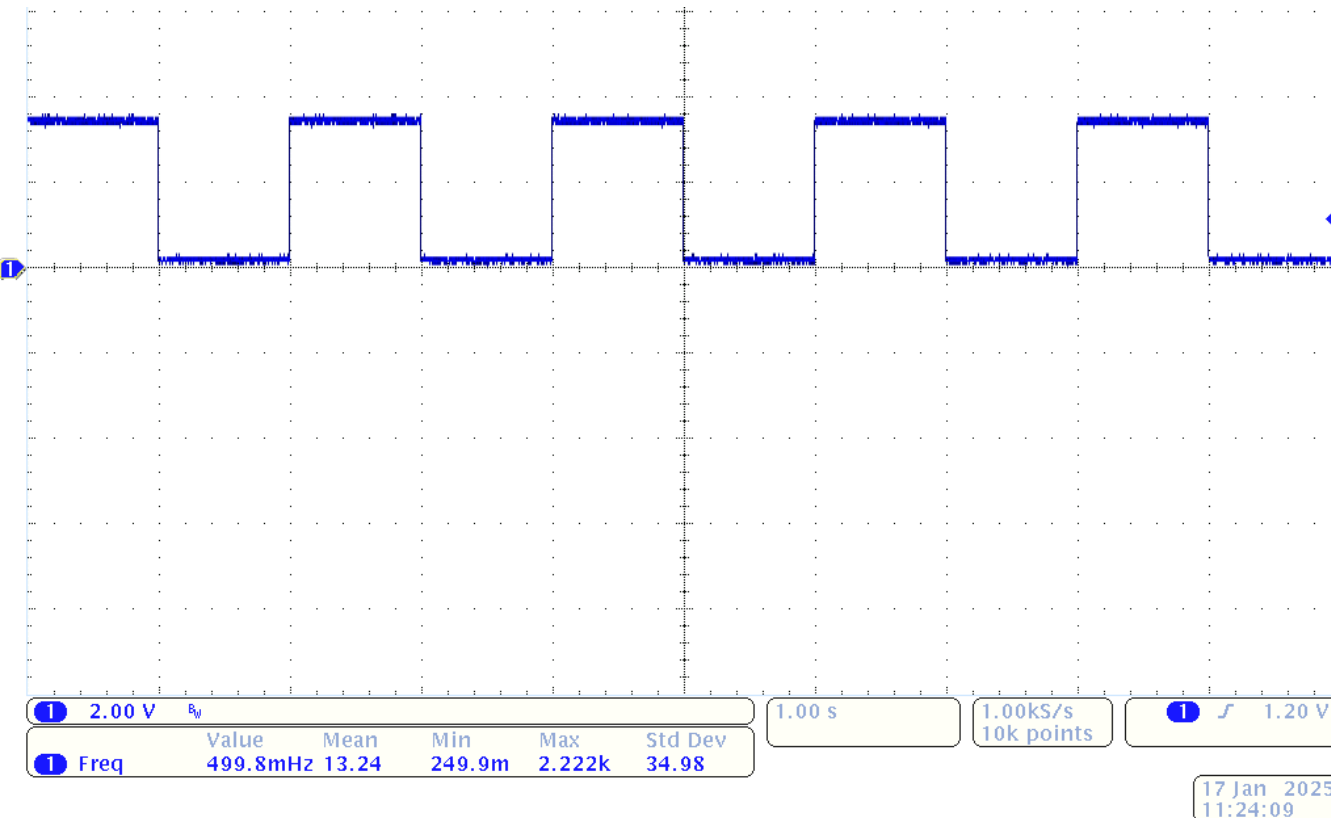# Overview

- Flash the built-in LEDs on the MSP430 at a specified rate
- Can help debug

Delay Loop

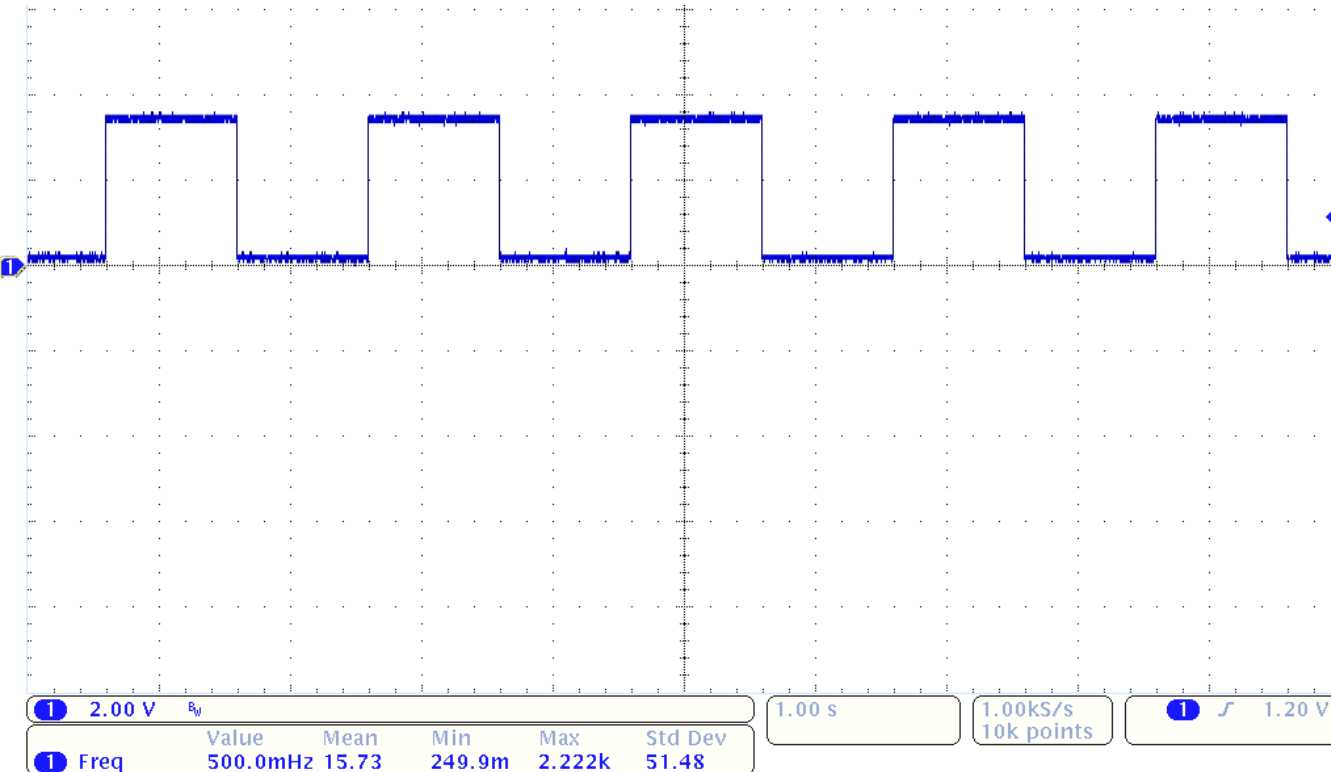- 50000 to 35000
- 100 ms period inner

Fig 3: Delay subroutine

Timer-Interrupt

- Start with ACLK
- 32768 to match full count
- Could have used SMCLK

Init
P6.6 as output

Timer B0 as
*ACLK
*Up counting
* Count to 32768

Enable compare interrupt

TimerB0

Toggle Green LED, clear IFG

Return

Fig 4: Timer B0 ISR

Init
P1.0 As output

Main

Toggle LED1, Init R14 (set outer delay loop)

Wait

Fig 1. Main loop

Wait

Set inner delay loop

Delay100ms

Dec outer loop

outer loop = 0

No

Yes

Return

Fig 2: Wait Subroutine

Delay100ms

Dec inner loop

Inner loop = 0

No

Yes

Return

Fig 3: Delay subroutine

Init
P6.6 as output

Timer B0 as
*ACLK
*Up counting
* Count to 32768

Enable compare interrupt

TimerB0

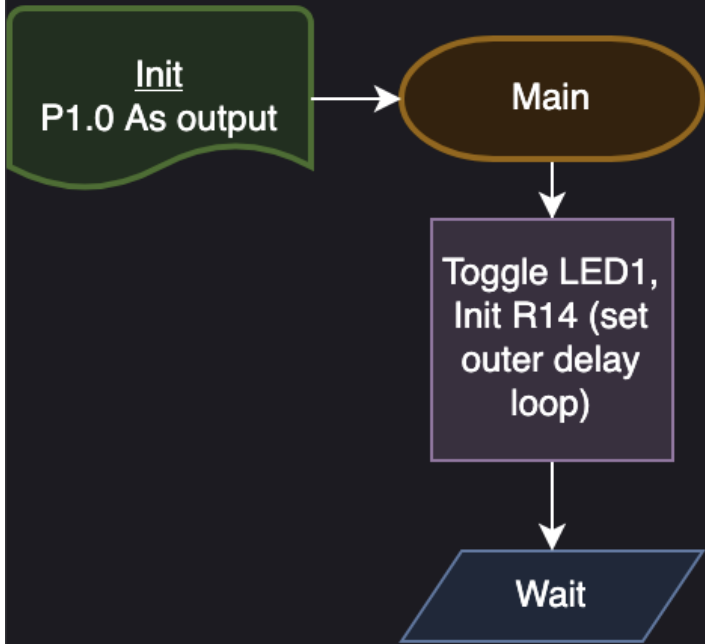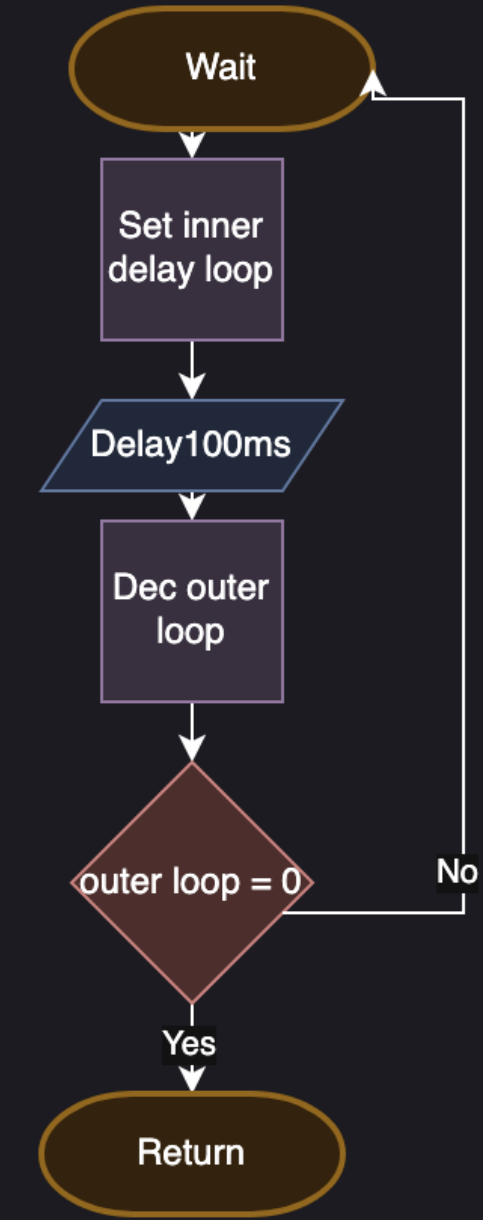Toggle Green LED, clear IFG

Return

Fig 4: Timer B0 ISR