**Prompt:**

Lab 4 System A

Using two male-to-female jumper wires, you can extend the connection to the probe plugged into an oscilloscope as shown in the test connection diagram in Figure 2. Figure shows oscilloscope CH1 connected to P6.0 of the Launchpad and the CH1 ground connected to the ground of the launchpad.

As studied in Chapter 7 and Chapter 8, you can implement one of the examples to generate a periodic signal.

The frequency of a periodic signal should be between 745 Hz and 755 Hz. The output of the signal should be generated through P6.0. You need to use an oscilloscope to measure the frequency.

Take a photo of the oscilloscope screen to show the frequency clearly. Make sure to include this table in your lab report.

Write a c/c++ program to make this signal come out of P6.0 of the launchpad.

**Example of a program from a previous lab (That might help):**

#include <msp430.h>

int main(void) {

WDTCTL = WDTPW | WDTHOLD; // hold the watchdog timer

PM5CTL0 &= ~LOCKLPM5; // clear LOCKLPM5 bit

P8DIR |= BIT0; // output direction (P8.0)

TA1CCR0 = 2000; // TA1CCR0 value

TA1CTL = TASSEL\_2 | MC\_1 | TACLR; // TA1CTL setup

while(1) {

if ((TA1CCTL0 & CCIFG) != 0) { // check whether CCIFG is set

P8OUT ^= BIT0; // toggle (P8.0)

TA1CCTL0 &= ~CCIFG; // clear CCIFG flag

}

}

return 0;

}

**Example of empty program:**

#include <msp430.h>

/\*\*

\* main.c

\*/

int main(void)

{

WDTCTL = WDTPW | WDTHOLD; // stop watchdog timer

return 0;

}

**Connections:**

MSP430FR5994 Launchpad