EEE204 - Introduction to Embedded Systems

Experiment 5

Objectives

The MSP-EXP430F5529LP LaunchPad has two general-purpose digital I/O pins connected to red (P1.0) and green (P4.7) LEDs for visual feedback. The main objective of this experiment is to blink the LEDs connetcted to P1.0 and P4.7 using GPIO. This experiment will help you to learn and understand the procedure for programming the MSP430F5529 GPIO pins as output.

Materials

- Code Composer Studio IDE
- MSP-EXP430F5529LP USB LaunchPad development kit

Experimental Work

E1 Write assembly language programs to do the following operations. Expand the P1 register in the Register Viewer, step your program through the main loop and observe the change in P1 registers.

a) Turn on the led connected to the P1.0.

b) Toggle the led connected to the P1.0 at fixed time intervals determined within the code.

E2

a) Write an assembly language program to turn on the leds connected to P1.0 and P4.7.

b) Write an assembly language program to toggle the led1 and led2 together at fixed time intervals

c) Write an assembly language program to turn on and off each led in turn.