

Lab 4

Interaction with the Real World

Introduction

Up till now, we have never seen our assembly code do anything special. Our code affected the internal registers of either the 8086 or the Cortex-M3, and nothing else. This lab we will finally do something meaningful. The “hello world” of the hardware realm is using buttons to control some LEDs.

Givens

You are provided with one Texas Instruments (TI) CC 1350 Launchpad XL and a micro-USB cable. There is also a piece of paper with a picture of the board, and a link to a TI website with some resources related to the board. On the GitHub repo of the course, you can find the datasheet of the board (**swcu117i.pdf**) which was downloaded from said link.

The board has many peripherals. The ones that matter to us this lab are the two onboard LEDs, and a single push button.

Requirements

Since one LED is green and the other is red, it would make most sense that we code a traffic light controller.

The given project has a number of comments labeled **TODO**. You are required to perform the actions in the comments such that the end result is the following:

1. When board starts up, the light must be red.
2. When the button is pressed, the green led lights up and the red light turns off.
3. When the button is pressed again, the light should be red, etc....

