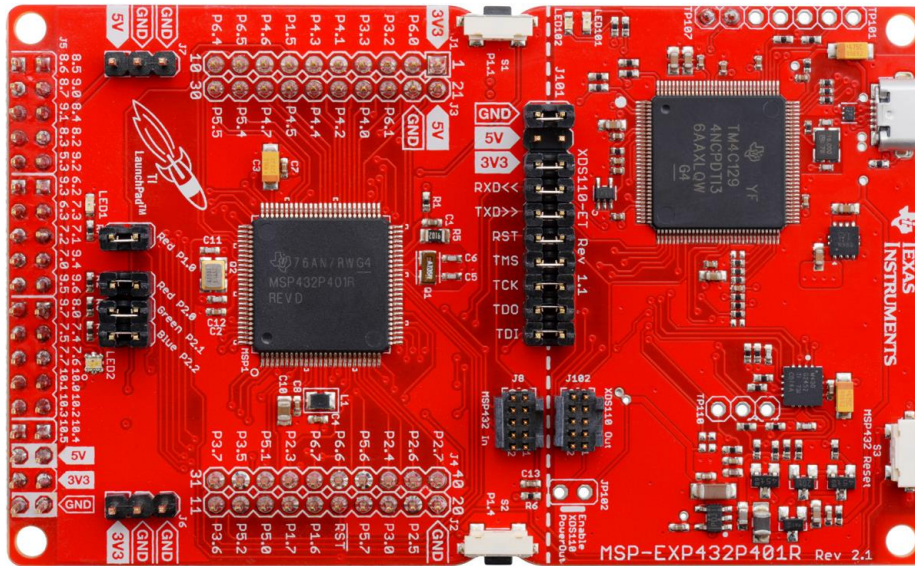# Lab 0

Getting started with MSP432:

Programming Software (IDE) for MSP430 LaunchPad:

The MSP432 Launchpad can be program through a variety of Environments. The Official one is the **Code Composer Studio commonly known as the CCS**. This software is available free of cost. Also, it requires some minimal level of experience with Microcontrollers.

There is one more IDE available to write program into MSP432 i.e. **Energia IDE**.

Energia IDE vs. Code Composer Studio:

Energia is an Open source and free Environment that enables us to program the TI Microcontrollers easily. The main aim of Energia is to make programming TI MCU's as easy as programming in Arduino. So **Energia is an Equivalent for Arduino** that supports MSP432 Microcontroller. People who have used Arduino will agree more on this once they download and launch the Energia IDE.

Code Composer Studio (CCS) is a more versatile professional IDE which has more functionalities and capabilities in terms of accessing the inside architecture of microcontroller. It has inbuilt debugging function which can check errors in your code and you can run your code line by line that helps in finding error without any headache.
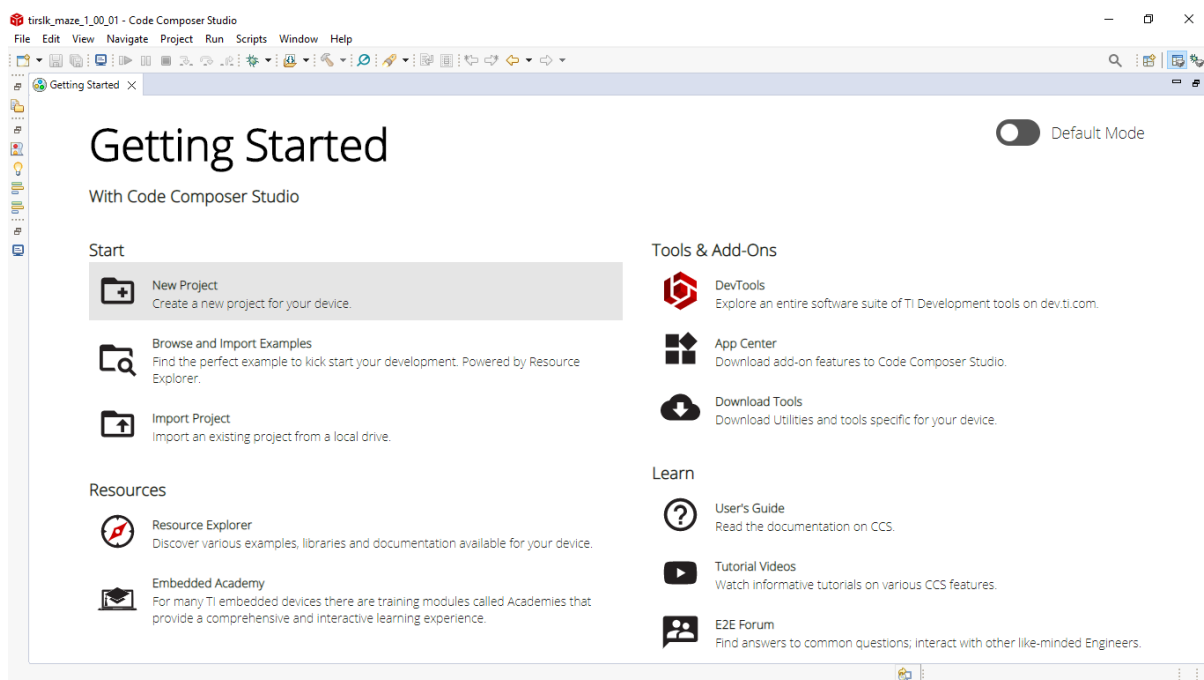
It will take some time to get comfortable with CCS. Once you set with this awesome software, trust me you will get to know anything about a particular microcontroller. You have to take help of Datasheet of the microcontroller to write your program.
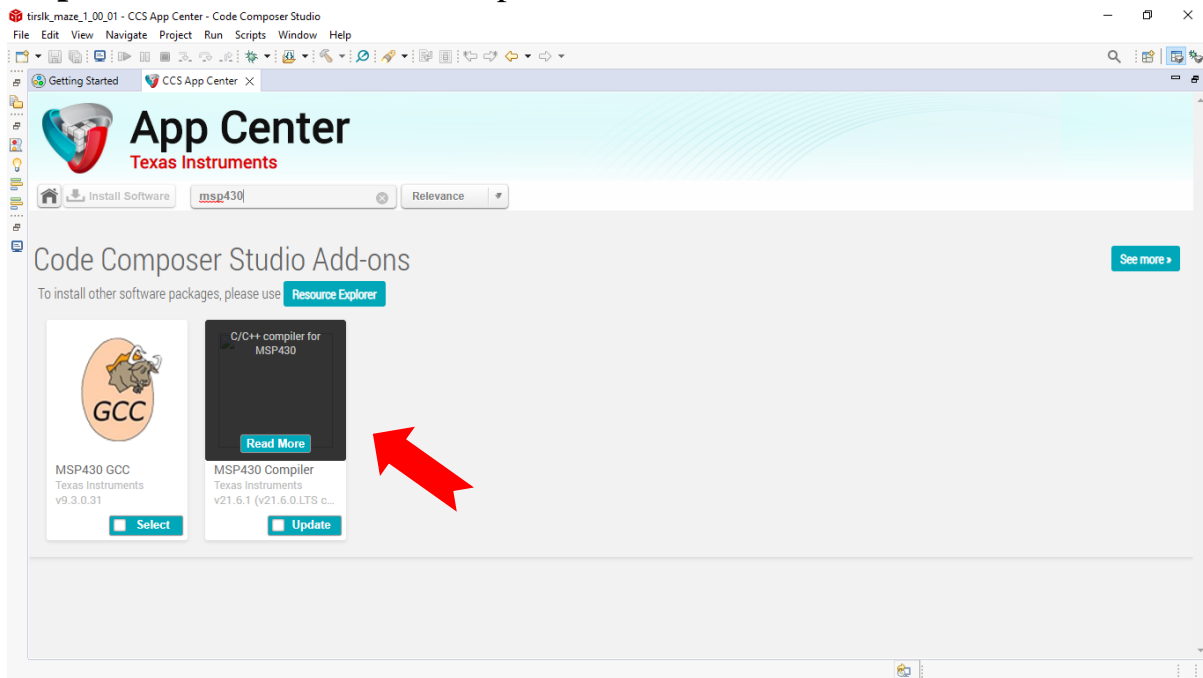
Code Composer Studio Setup:

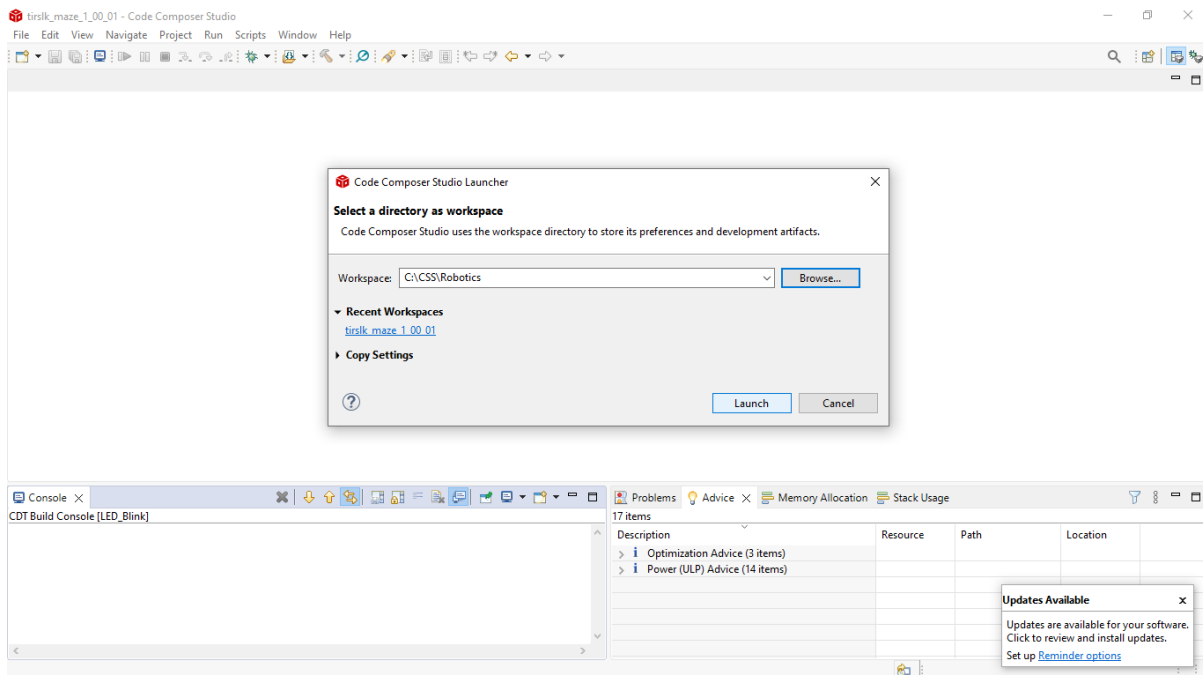**Step 1:** Download Code Composer Studio. [Download Link](#).

Step 2: Install CCS.

Step 3: Open CSS

Step 4: Install the MSP430 Compiler.

Step 5: Create Workspace.

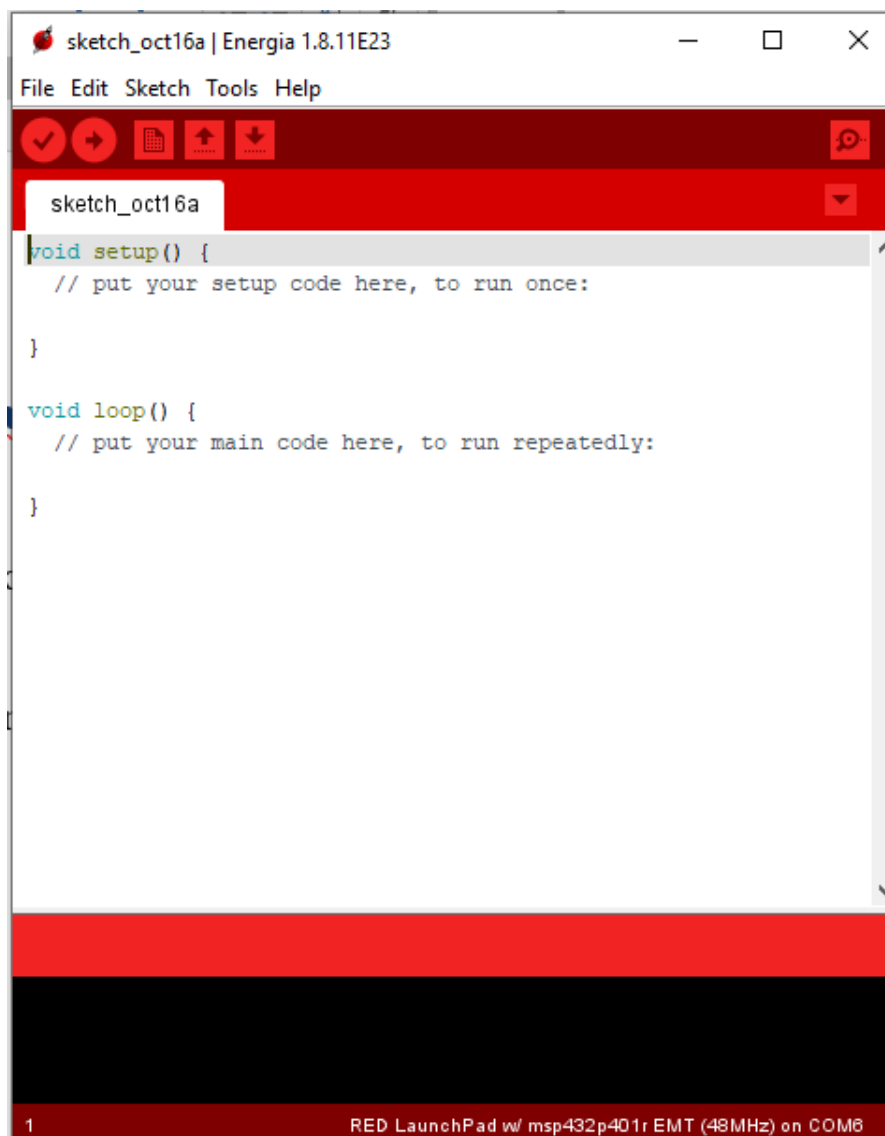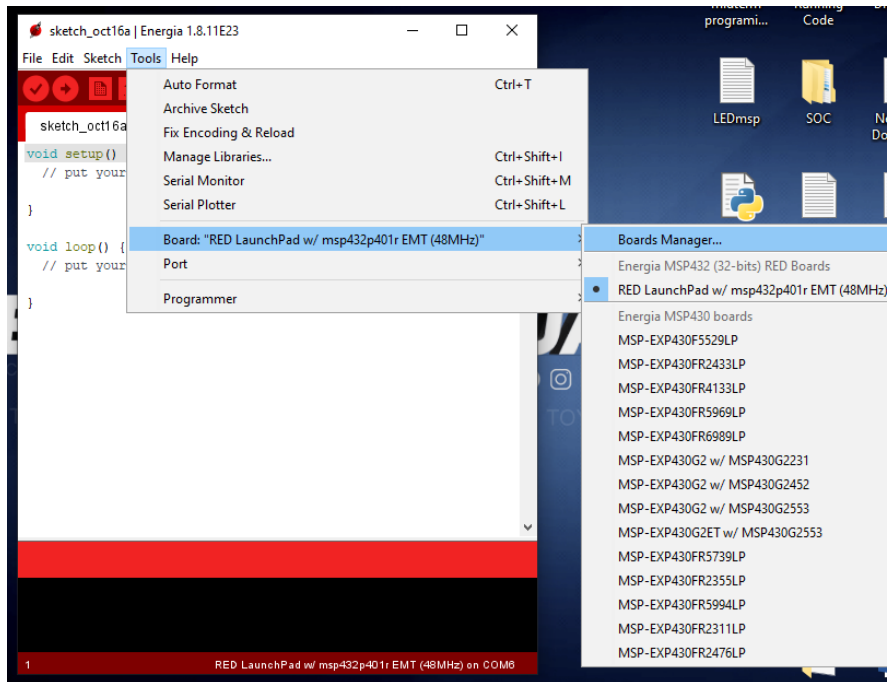**Code Composer Studio Setup is Done.**

Energia IDE Setup:
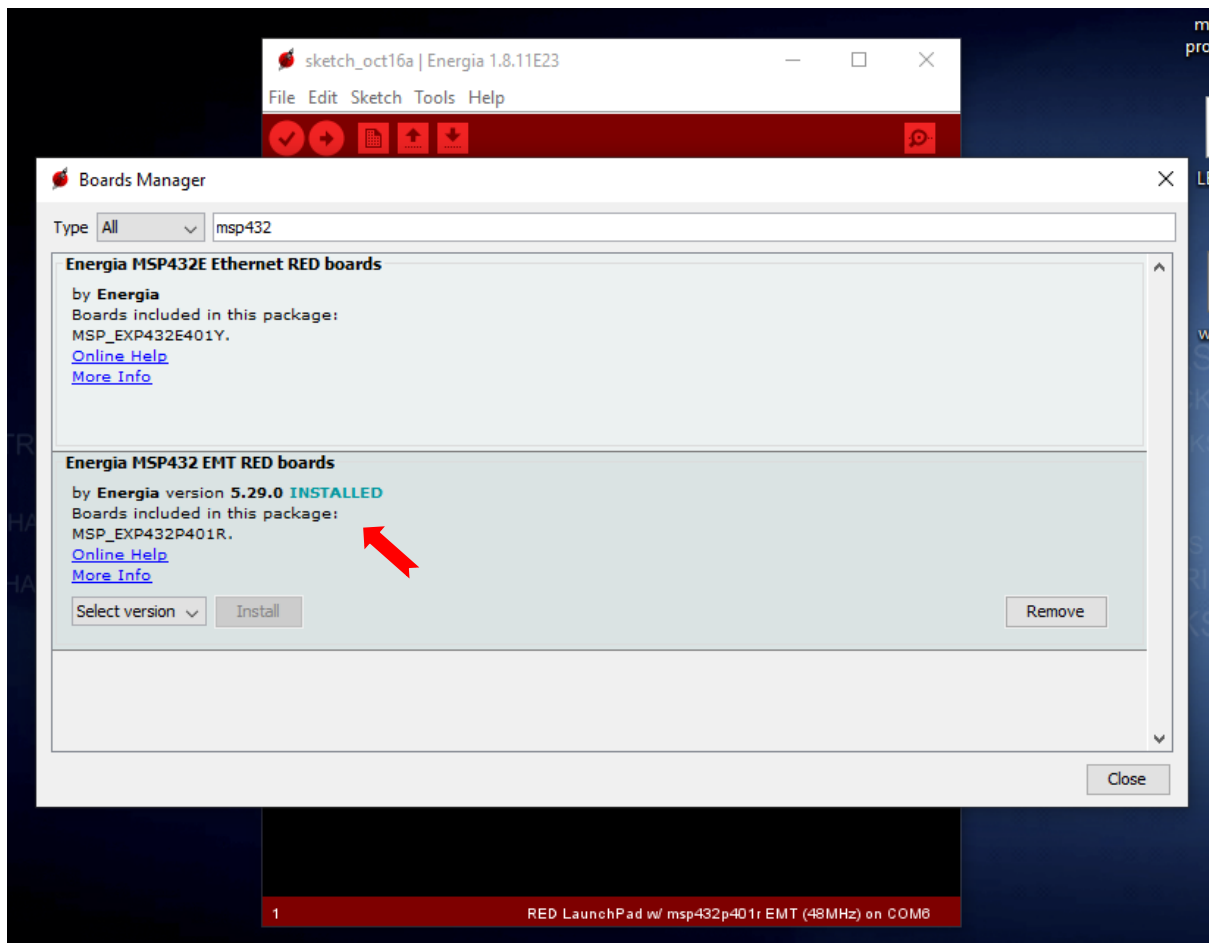
Step 1: Download Energia IDE. [Download Link](#).

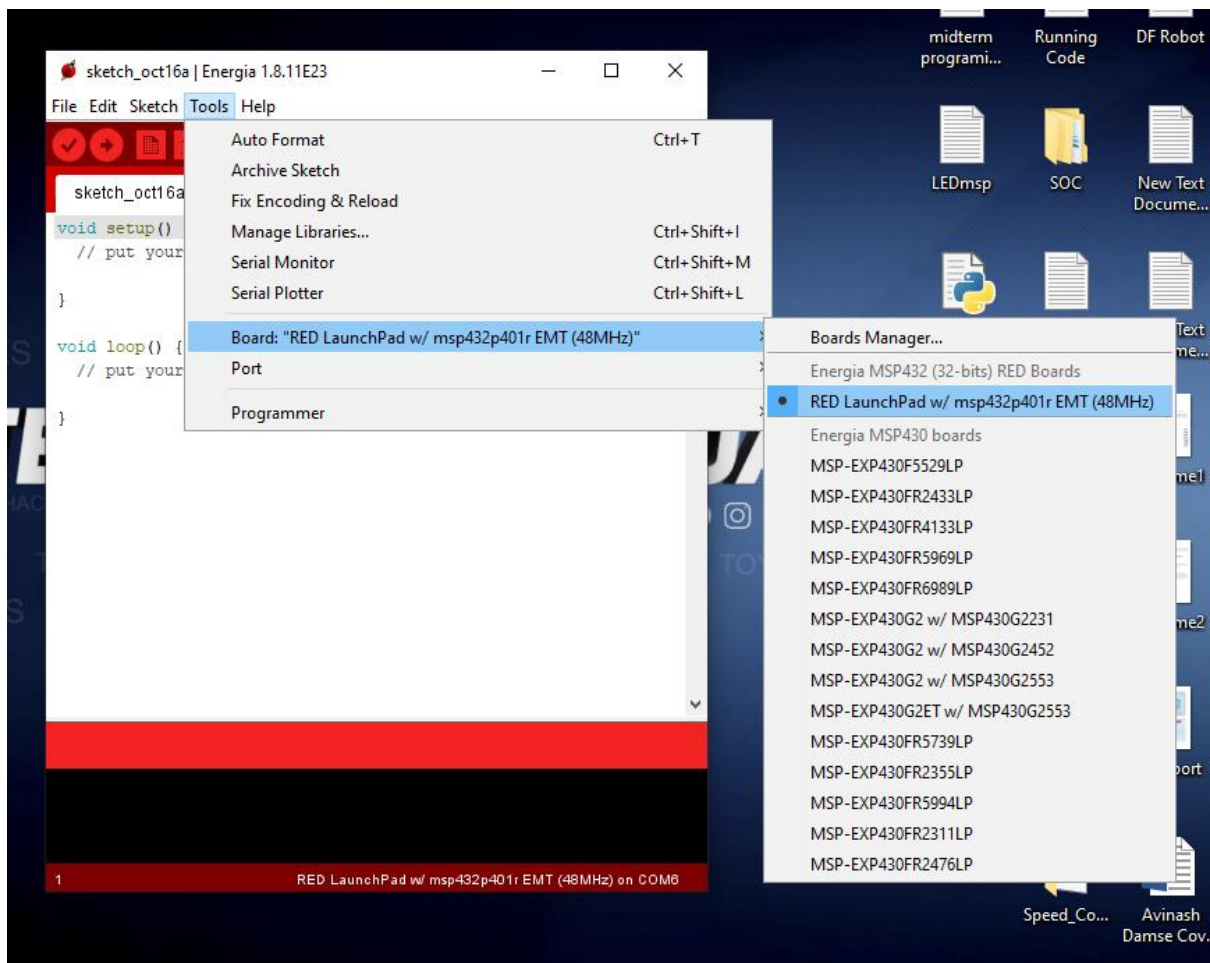**Step 2:** Unzip The Downloaded File and Install Energia IDE.

Step 3: Click Tools->Board: "MSP-EXP430…" then select "Boards Manager…" on the top of the pull-down menu

Step 4: Search MSP432 in search box and install Energia MSP432 EMT RED boards.

Step 5: Select "RED LaunchPad w/ msp432p401r EMT (48Mhz)".

Energia IDE Setup is Done.