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Syllabus (/courses/UTAustinX/UT.6.01x/1T2014/a827a8b3cc204927b6efaa49580170d1/)

We couldn't wait to show you how much fun it is to make the microcontroller interact with real physical devices. So in this section we will take a short side step from the business of concepts and theories to teach you how to connect switches and LEDs to the microcontroller. We will use switches to input data and use LEDs to output results. In this chapter, we will illustrate the design, construction and testing of an embedded system. The switch LED and LaunchPad will then be combined to create a system. You will need a solid understanding of Ohm's Law, so you may need to review current, voltage, power, and resistance from Chapter 3.

Learning Objectives:

- Understanding basic circuit elements like source, ground, and resistors.

- Understanding how switches and LEDs work.

- Application of Ohm's Law

- Analog circuit design and construction on a solderless breadboard

- Interfacing switches and LEDs to a microcontroller
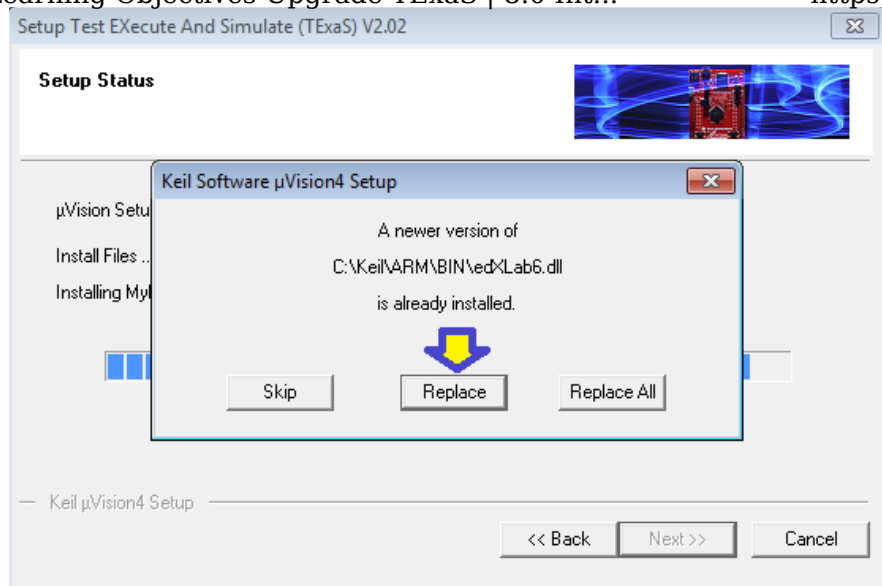
- Programming simple logic.

We recommend you backup any Keil software you have written before upgrading TExaS. The next installment of **TExaS** includes example files and lab starter projects for Chapters 8, 9, 10, and 11. Instructions are shown as Step 4 at

Primary http://edx-org-utaustinx.s3.amazonaws.com/UT601x/download.html (http://edx-org-utaustinx.s3.amazonaws.com/UT601x/download.html)

Alternate http://users.ece.utexas.edu/~valvano/edX/download.html (http://users.ece.utexas.edu/~valvano /edX/download.html)

When the installation is complete there will be 5 new DLLs in **Keil\ARM\BIN** folder, which you will need to grade Labs 8, 9, 10, and 11. The starter projects for labs will be in a **Keil\Labware** folder. Example projects will be added to the **Keil\TExaSware** folder.

On some systems, we have noticed this warning while installing the second batch of DLLs. There are no major changes to Lab 6, but the installer does have the most recent Lab6 DLL, so we recommend you select replace.

Help

Setup Test EXecute And Simulate (TExaS) V2.02

Setup Status

μVision Setu

Install Files ..

Installing Myl

Keil Software μVision4 Setup

A newer version of

C:\Keil\ARM\BIN\edXLab6.dll

is already installed.

[Skip]   [Replace]   [Replace All]

— Keil μVision4 Setup

[<< Back] [Next >>] [Cancel]

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