SE420 Laboratory Assignment 1
Welcome to the SE420 Lab (Where: Room 3075 ECEB)

Goals for this Lab Assignment:

1. Provide access to the lab room and its PCs

2. Go over the use of the PCs, where you will be saving your data, etc.

3. Rules for lab usage.

4. Quick introduction to the DSP controller we will be using and its development software called Code Composer Studio.

5. Quick introduction to our TortoiseSVN repository, and "GE420ProjCreator"

DSP/BIOS Objects Used:

None

Daughter Card Library Functions Used:

get_switchstate, set_LEDstate

Matlab Functions Used:

None

Prelab: No Prelab.

Laboratory Exercise 1   Lab Policies

You will be granted 24-hour access to the Control Systems Lab room #3075 ECEB for your lab work. You should be able to finish some of the lab assignments in your weekly 2-hour lab session, but there will be times when you will need to finish work outside of lab time. With 24 hour access come rules that you will have stick to else forfeit your privilege.

Rules for 24-hour Access to the Control Systems Lab

1. **Nothing is to be removed from the lab (even for a short period of time) without permission from the Lab Manager, Dan Block. If any item is found stolen during the semester the entire class will lose the 24-hour access privilege.**

2. **Do not prop open the two doors to the hallway.   All students using the lab should have a key card for access so there should be no reason to prop open the door.**

3. **Absolutely No Food or Drink in the Lab.**

4. **Do not let students into the lab room that you are not familiar with.**

5. **Log off the PC, turn off equipment, put away DSP kit and turn off lights before leaving.**

Grading Policy

- Each lab is worth 10 points. 10 labs x 10 points = 100 points.

Points	Grade
90	A
80	B
70	C

- Each lab should be completely signed off by your lab instructors before the beginning date of the next lab assignment.
- If you do not complete the lab by the beginning of the next lab, you will be given a one week extension to complete the lab without losing points. It is highly recommended that you keep up with the given due dates. This way you will not get far behind and have to rush though lab assignments to catch up.
- After this one week grace period you will be docked points for late work. This is summarized below:

Lab's Due Date	The beginning of the next Lab.
One Week after Due Date	Grace period, no points taken off.
Two Weeks after Due Date	Lose 3 points from grade.
Three Weeks after Due Date	Lose 2 more points from grade.
Four Weeks after Due Date	Zero points for the lab.

- We will not check off previous labs during the current lab session. This must be done outside lab time.

Lab Stations

When you login on the stations in the Control Systems Lab, the computer will automatically map your own personal drive labeled "U:". This is your personal space to store your DSP projects and other files related to the GE420 class. Every individual's U: drive will be backed up regularly, so make sure to backup all your code and data to this drive because we cannot insure the safety of your data on the lab PCs.

Today for the Lab Exercise we are going to walk you through the creation of your first DSP project for the semester. Your TA will walk you through Creating a Project, Building a Project and finally Running that Project.

Laboratory Exercise 2   Disk space and file management.

Recommended Drive Usage:

C: Drive   Use a temporary directory on this drive to develop and debug code. Save the results at the end of lab to the U: drive.

N: Drive   This drive is a read only share where many of your files are located. There is a "scratch" directory on the N:\ drive that does give you write permissions. Use N:\scratch only to transfer files from one account to another and not to save work because it is flushed periodically.

U: Drive   When you login to the stations in 3075 ECEB, the computer will automatically map to your own personal drive labeled "U:". This directory is only accessible by your login name, and is your personal space to store your DSP projects and other files related to the class.

Laboratory Exercise 3

- For your lab assignments all the given code is stored in an SVN repository. You will be periodically "checking out" code from this repository. Your Instructor/TA will explain the check-out procedures. The repository is located at **n:\labs\ge420\GE420Repository**.

- **GE420ProjCreator.exe** is found in the "trunk\ GE420ProjCreator" directory of the repository. Your instructor/TA will step you through creating and running your first project.

Help Getting Started

- Library function documentation is found in the file
  http://coecsl.ece.illinois.edu/ge420/DaughterCard_LibFuncs.pdf .

Lab Check Off:

1. Demonstrate to your TA that you have successfully created and built your first DSP project.

2. Download and run your project and demonstrate that it works.

3. Explain to your TA the given source code in the main C file. The DaughterCard_LibFuncs.pdf file will help you explain the different function calls. We are not asking for a lot of detail here, we just mainly want you to find and read the function documentation. It also may be helpful to look at the actual source code in the include directory.