1) From mycourses download this pdf and the other three TI Wiki pdfs.
2) The prototyping board we will use throughout the semester is the MSP430-LaunchPad. You will get a board and a touch pad. The latter we will use later in the semester.
3) The following two web locations will be useful throughout the semester:

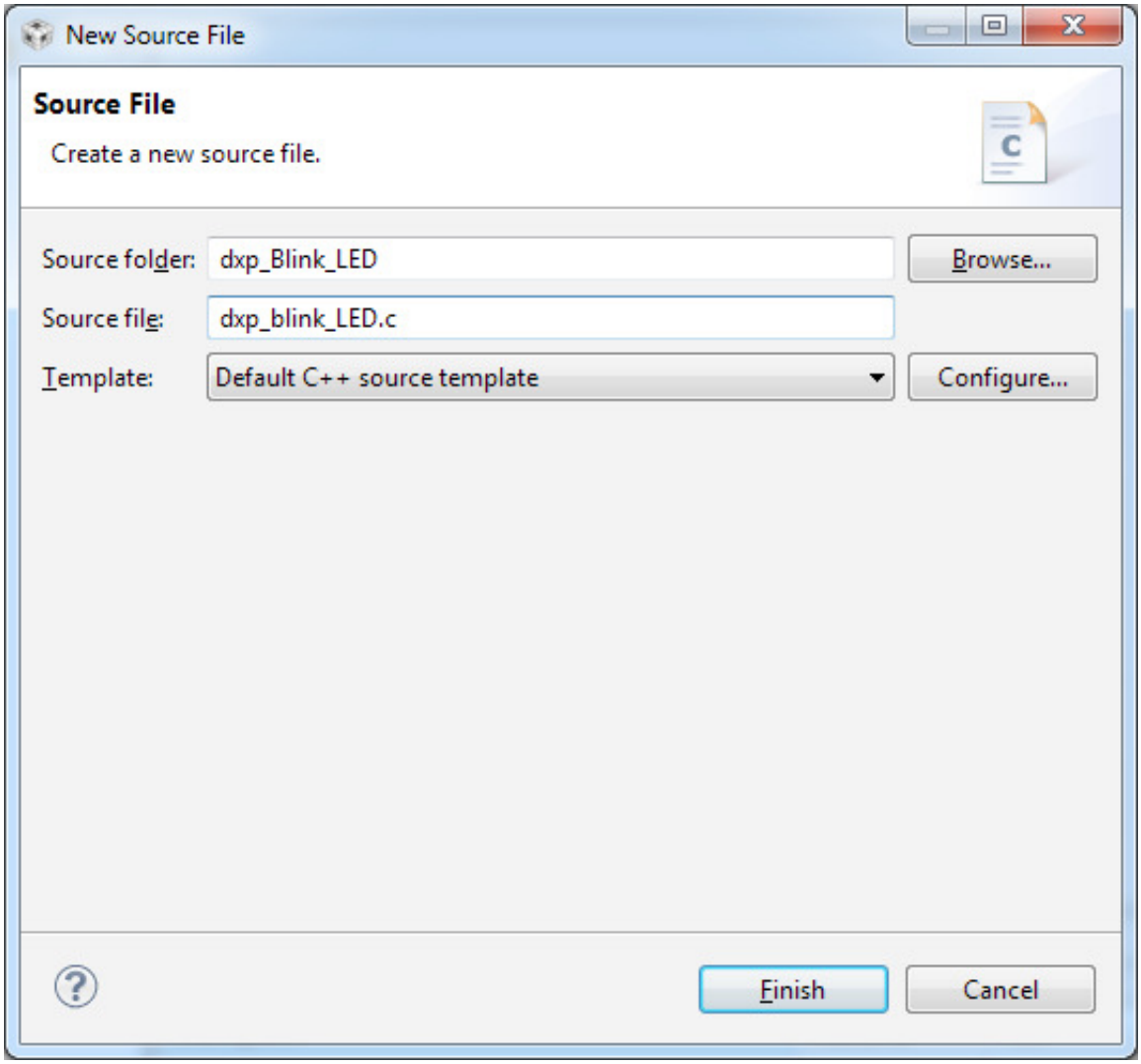
http://www.ti.com/ww/en/launchpad/msp430_head.html

http://processors.wiki.ti.com/index.php/Getting_Started_with_the_MSP430G2553_Value-Line_LaunchPad_Workshop

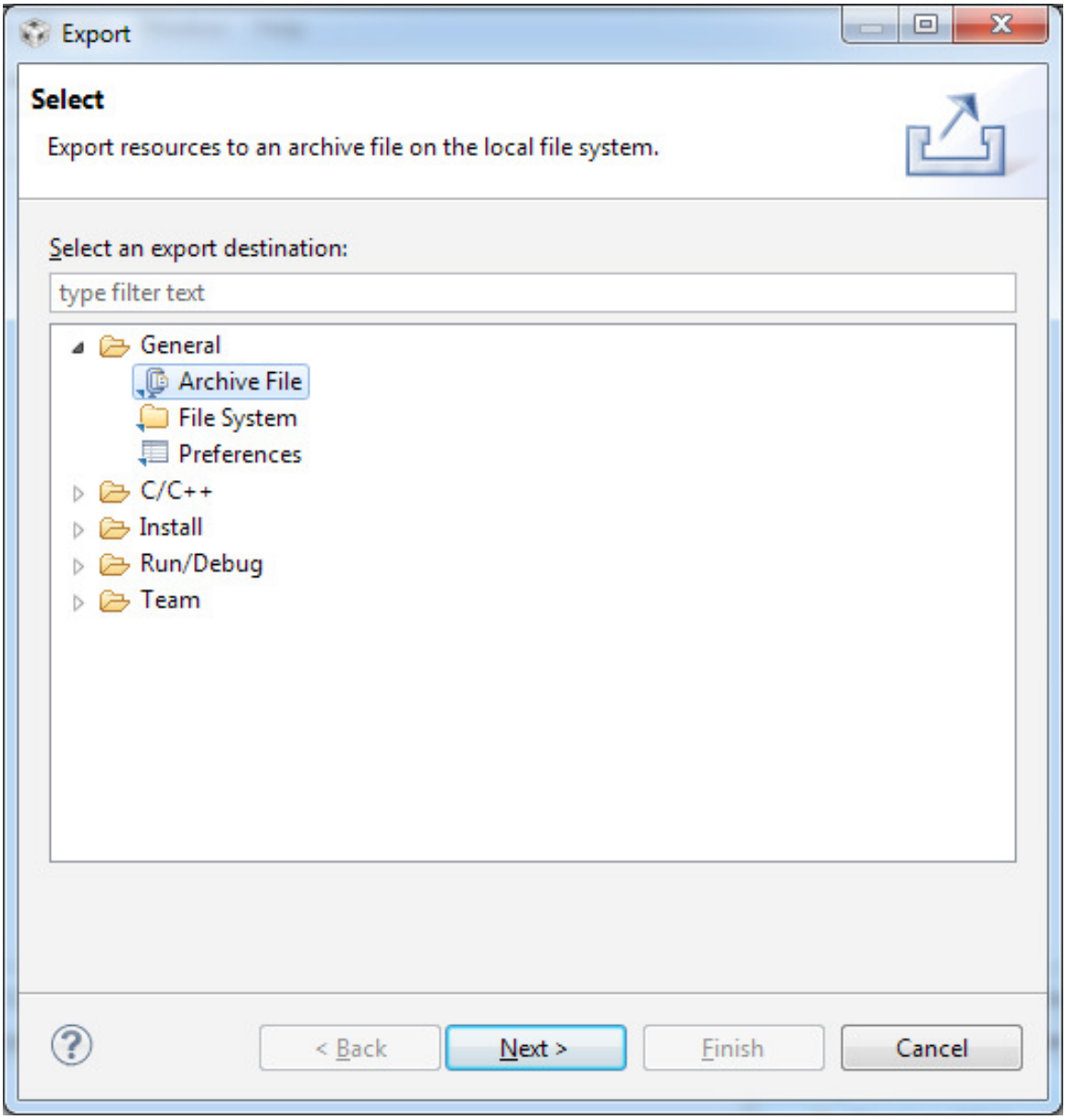
4) In this lab you'll get acquainted with the LaunchPad prototyping board and with Code Composer Studio (CCS) Integrated Development Environment (IDE).
5) Let's start by reading the information on the following web page:

http://processors.wiki.ti.com/index.php/Blink_your_first_LED

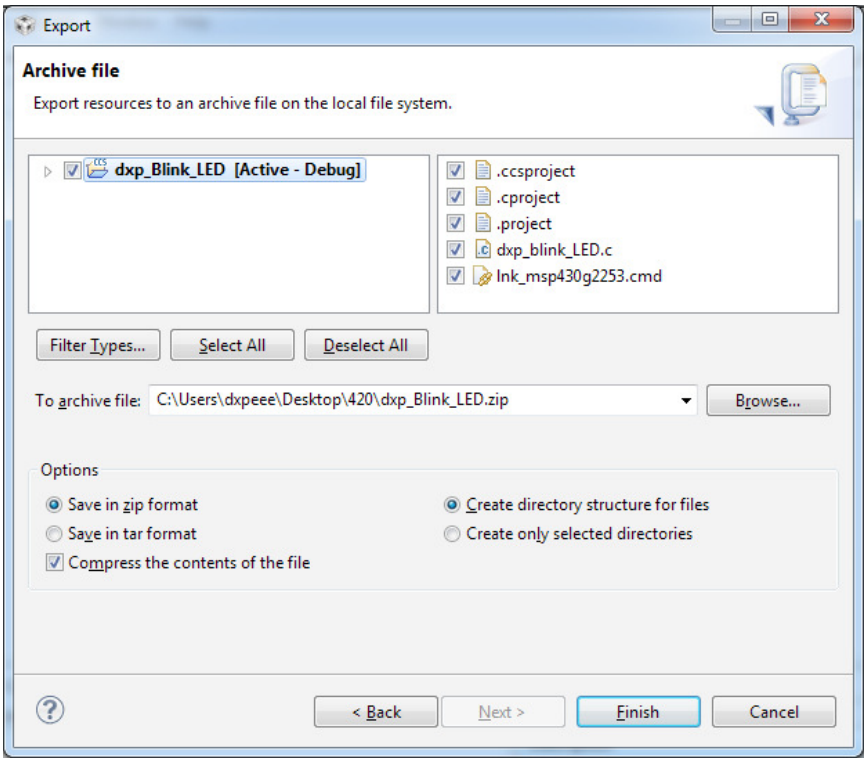
6) You can start directly in the section "Creating a new CCS project". For your convenience I have also saved the pertinent sections as a pdf.
7) Comments along the way:
    a. Your workspace for the remaining of the semester should be a directory on the Desktop called: fmlxxxx_EEEE-420 where fmlxxxx is your DCE account username. DO NOT work directly from a thumb drive. Make sure you always back up your workspace! (A thumb drive is OK for a backup, just not for direct access with CCS).
    b. All your projects AND FILES (source code) should have the prefix fml_, i.e. first, middle, last name initials – see lab policy.
    c. I HIGHLY suggest you don't use spaces for any directory names, or file names. Many industry tools don't support the use of spaces on file paths. You might as well get used to this now. You can use an underscore "_" instead of space.
    d. If you need to remove any JUMPERS from the board, do not remove them completely from both pins. Place them back on a single pin, so that they do not bridge to any other pins. This way, they will not get lost!
    e. Your project name should be fmlxxxx_Blink_LED. Make sure you choose "Empty Project".
    f. Go to File > New > New C Source Code File and create a file as below (using fmlxxxx instead of dxp):



8) Copy/Paste the code into this open file. Take some time to analyze what each line of code is doing. It is even more useful to type it line by line. Save.
9) Next, click on the hammer icon. This will build or compile this code. If you don't have errors, ignore the many warnings for now and proceed to clicking the debug button.
10) This action will download the program to the microcontroller flash memory, in which the program is stored, and will keep the microcontroller in RESET until you start running the program. On the GUI side it opens the DEBUG View, in which you can run one line at a time, you can set and run to breakpoints, or run the program free. The development process will revolve between the CCS Edit and Debug Views. More details in future labs.
11) Click on the green play button to let your program run free. At this point the red LED should blink at a frequency of ~ 2 Hz.
12) Stop the program by clicking the red stop button in the Debug View. This will close this view and return the GUI to the Editor View.
13) In the Project Explorer tab, right-click on the project name and choose to Export. Select to archive as below:



14)Click next and select a location and name to save the file. Remember: fmlxxxx_ …



15) Click finish.
16) In the Project Explorer tab, right-click on the project name and choose to Close Project. Close CCS.
17) In the final part of the lab please read from the following pages or associated pdf files posted on mycourses.

http://processors.wiki.ti.com/index.php/Reading_MSP430_Documentation

http://processors.wiki.ti.com/index.php/Importing_Projects_into_CCS

18) Both topics above are important because:
    a. We will use the User's Guide and Data Sheets extensively in the lectures and labs, and
    b. You will be allowed to reuse freely available code (not from your peers though) in your later projects. However, to meet the specific lab requirements you'll have to modify it.
19) This concludes this week's lab. Remember to write the brief report and upload it along with the project archive created above in the corresponding dropbox on mycourses.

One last thing:

Throughout the LAB handouts, text highlighted in RED means READ CAREFULLY,

Text highlighted in YELLOW means this should be INCLUDED in the REPORT.