UNIVERSITY OF CALIFORNIA, SANTA CRUZ
BOARD OF STUDIES IN COMPUTER ENGINEERING

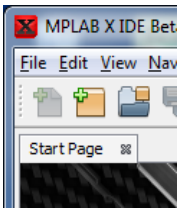
CMPE12/L:

INSTRUCTIONS FOR SETTING UP MPLAB X AND STARTING PROJECTS

These instructions are provided to help you set up the MBLAB X IDE. Note that the pictures are provided for reference, they are not exactly the same screens you will see.

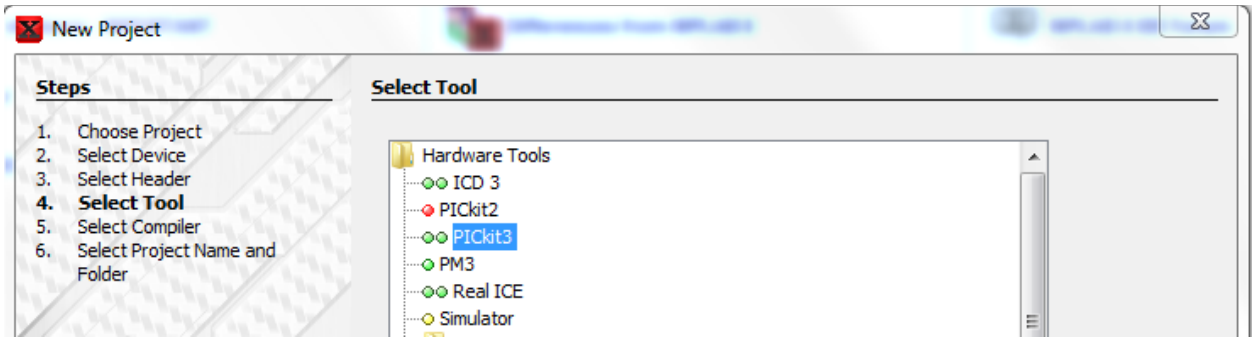
New Project instructions

1. Create a new project. A project is a collection of files and settings that you need to build an application (such as the code for a mobile robot's microcontroller).
    a. Click on create new project (the icon with the green + sign in the toolbar ). This will open the new project dialog window.



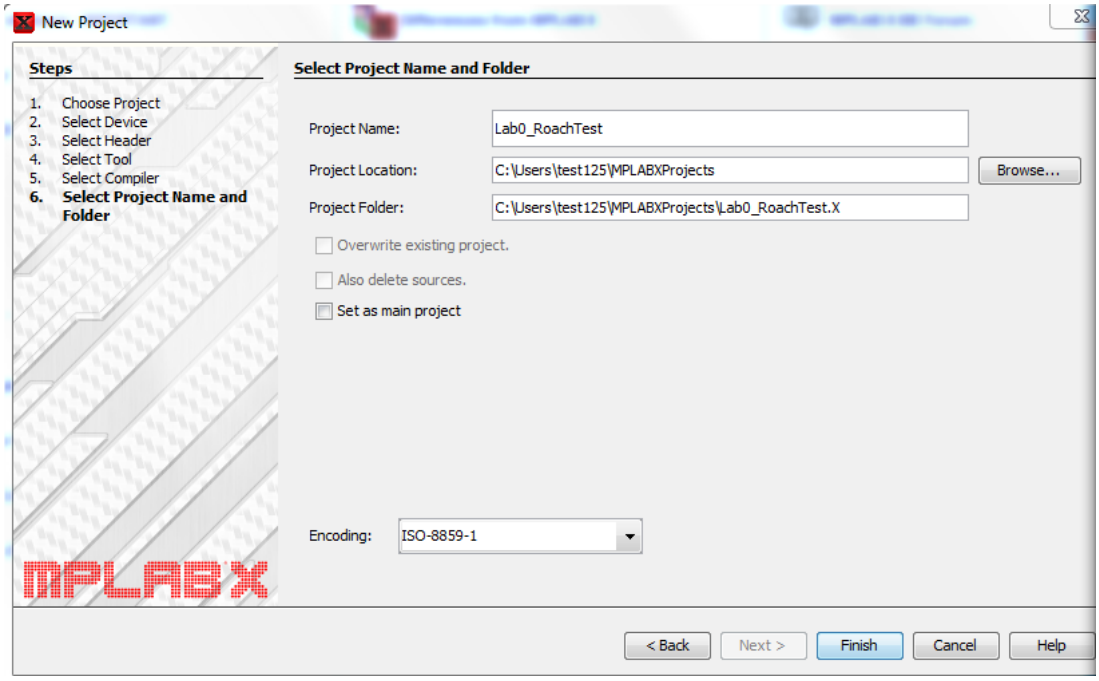
    b. Now we choose the type of project. Select a Microchip Embedded -> Standalone Project. Click "Next."

    c. In this screen, we select the microcontroller that we want to run our code on. We want the PIC32MX320F128H or PIC32MX340F512H, which is the chip that the Uno32 boards use. Click "Next."
        i. To identify which one you have look at the bottom of the Uno32.
            1. 320: Under Digilent has the line: "BEYOND THEORY"
            2. 340: Under Digilent has the line: "www.digilentinc.com"
    d. We now pick the hardware tool for loading code and debugging. For this class we will use the PICkit3. Click "next".



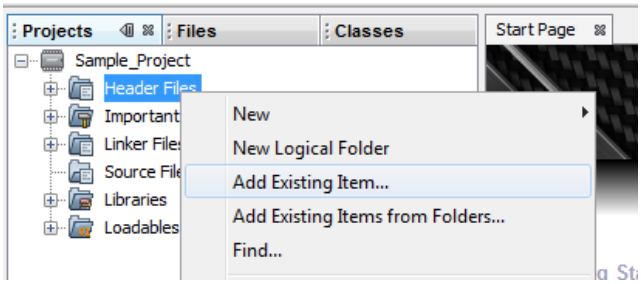
e. Select the XC32 compiler. If the XC32 compiler isn't an option, than you most likely failed to install the XC32 compiler if this is your own computer, so go and install that now. Otherwise, if it's a lab computer, alert the TA/tutor and switch computers. Click "Next".

f. Give your project a name that aptly describes what you are doing (such CE13Lab1) and choose a location for the project. Click "Finish."

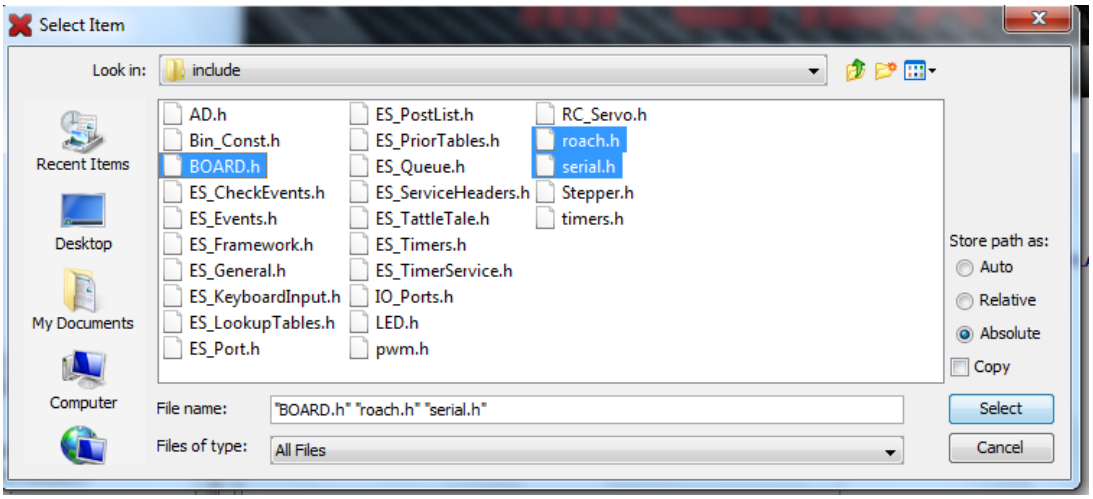


g. You should now see your empty project in the "Projects."

2. You now should have a new project. Before any work begins we need to add the starter file.
   a. Open up the folder for the project just created and copy BaseFile.s into that directory
   b. While the file is now in the project directory MPLAB X will not find the files by default. Do this by right clicking on the source files folder and selecting "add existing item."



c. Select the BaseFile.s file from your project directory.



d. You should now see the files you added in the “Project” window.

3. At this point the project can be run on the Uno32 by hitting either  or  on the main toolbar. If nothing has gone wrong it should display a message in the serial window once it has finished loading the code. This can take a while the first time so be patient. Please refer to the serial communications document to set that up.