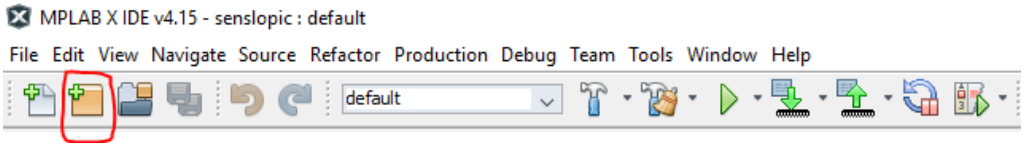
Instruction:

1. Installing MPLAB X and XC8 compiler

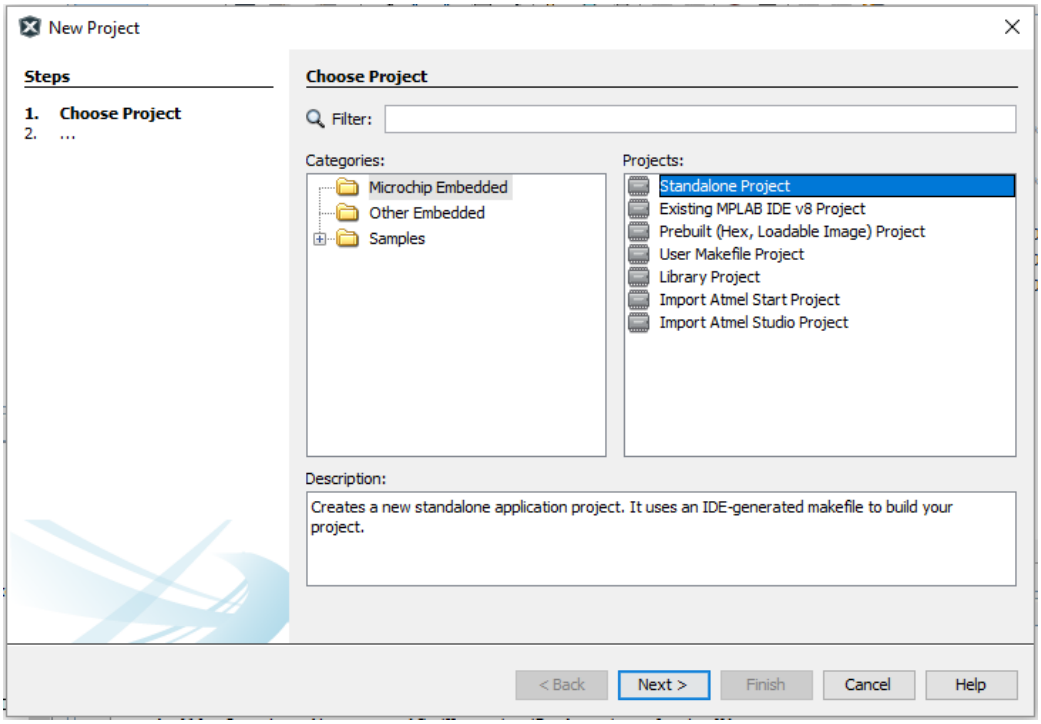
a. Download and Install *MPLAB® X IDE v4.15* (or latest version)
http://www.microchip.com/mplabx-ide-windows-installer
b. Download and Install *MPLAB® XC8 Compiler v1.45* (or latest version)
https://www.microchip.com/mplabxc8windows
c. Download and Install *PIC18F Legacy Peripheral Libraries v2.0* (or latest version)
https://www.microchip.com/mymicrochip/filehandler.aspx?ddocname=en574973

2. Creating New Project

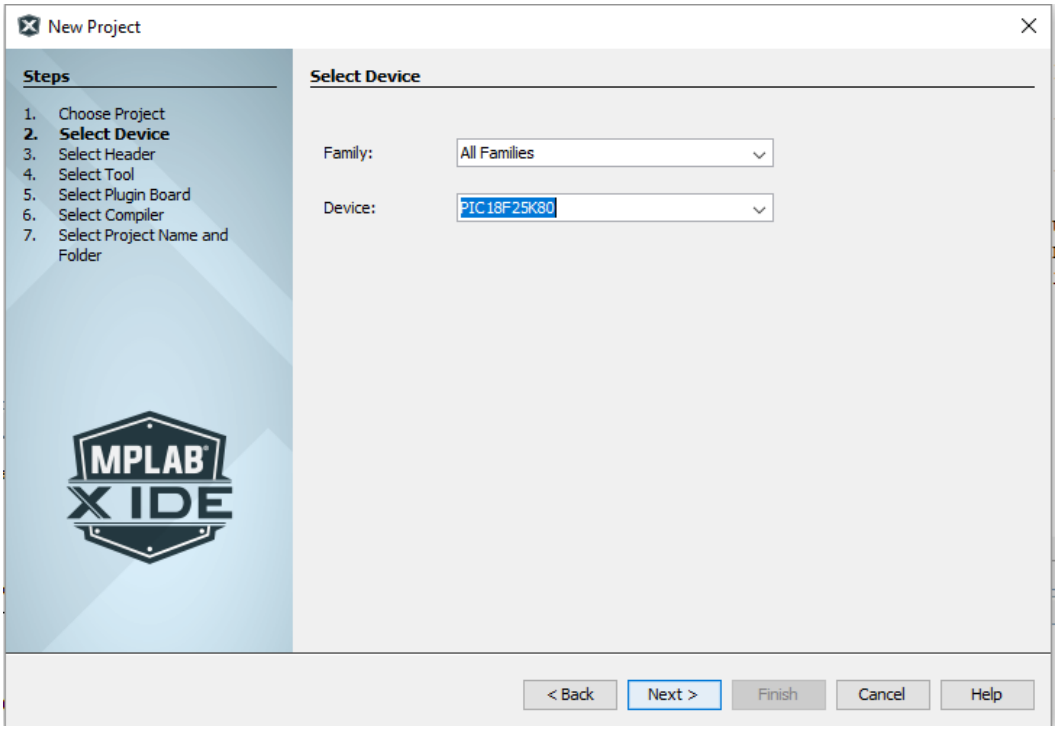
a. Open *MPLAB® X IDE*
b. To create a new project, click *File*, then *New Project*. Or just click the *New Project* icon (encircled on the figure below)



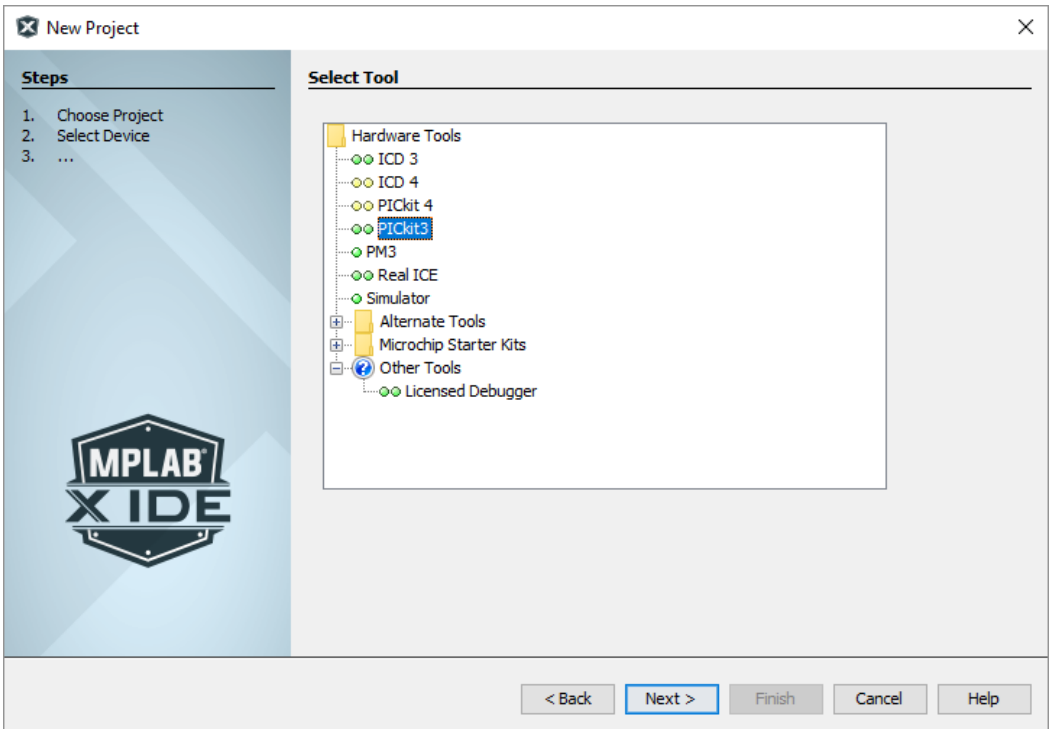
c. Click *Microchip Embedded*, then click *Standalone Project.* Then click *Next*.



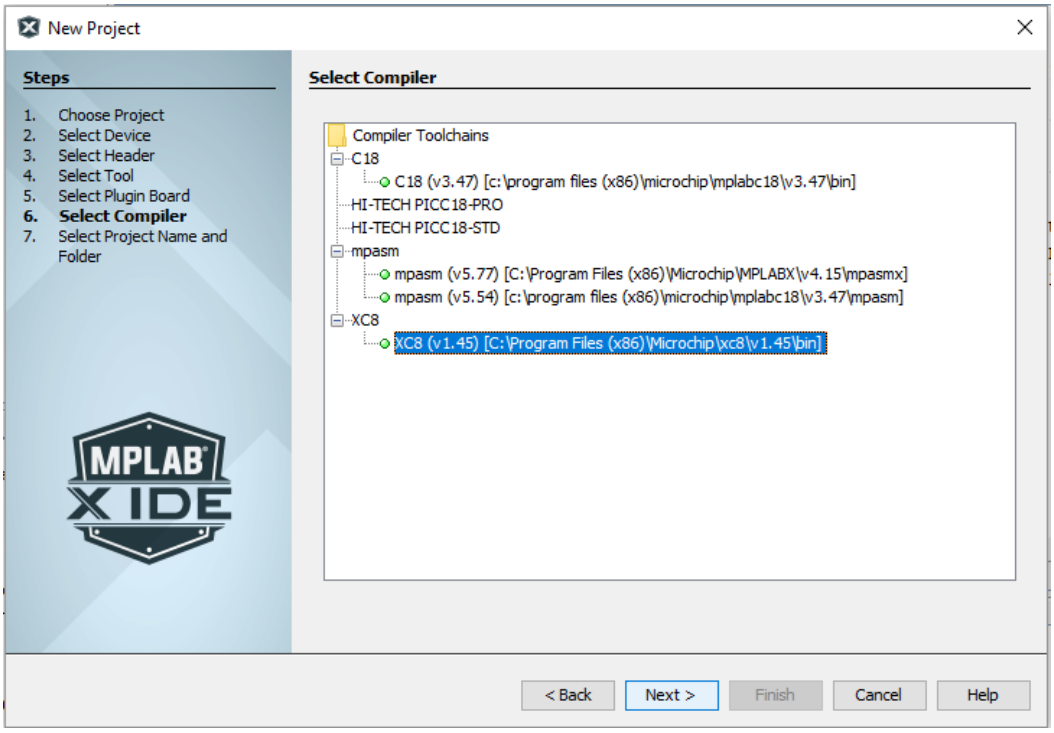
d. Under the *Device*, look for *PIC18F25K80* (since this is the PIC we are using). Then click *Next*.



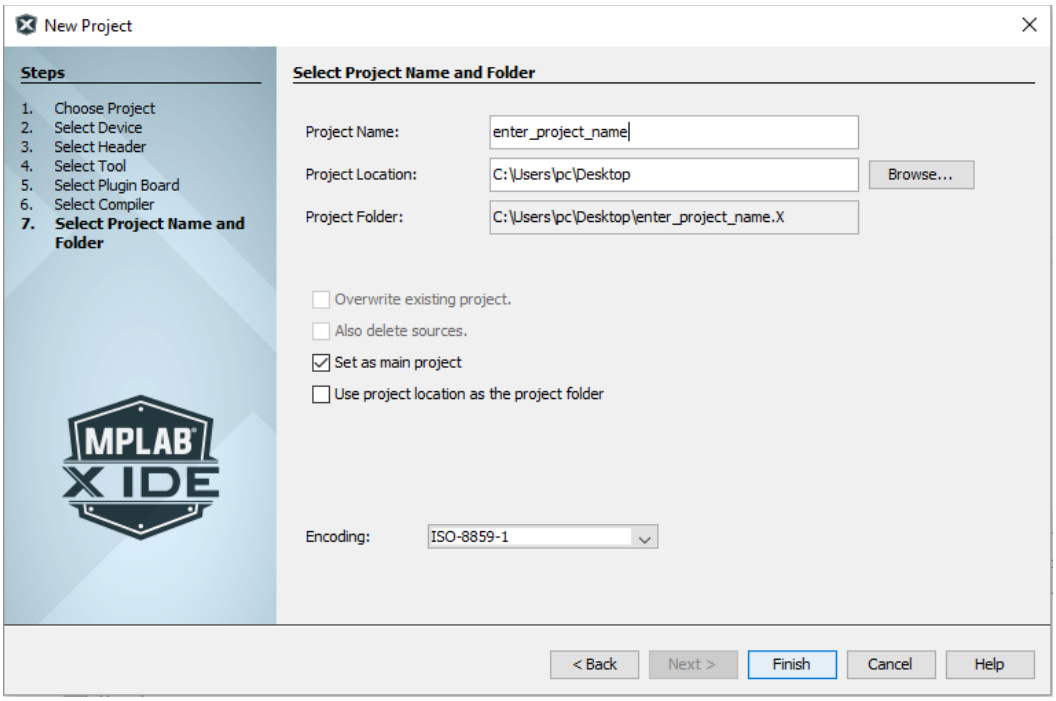
e. Under *Hardware Tools*, choose *Pickit3* (since this is our available programmer). Then click *Next*.



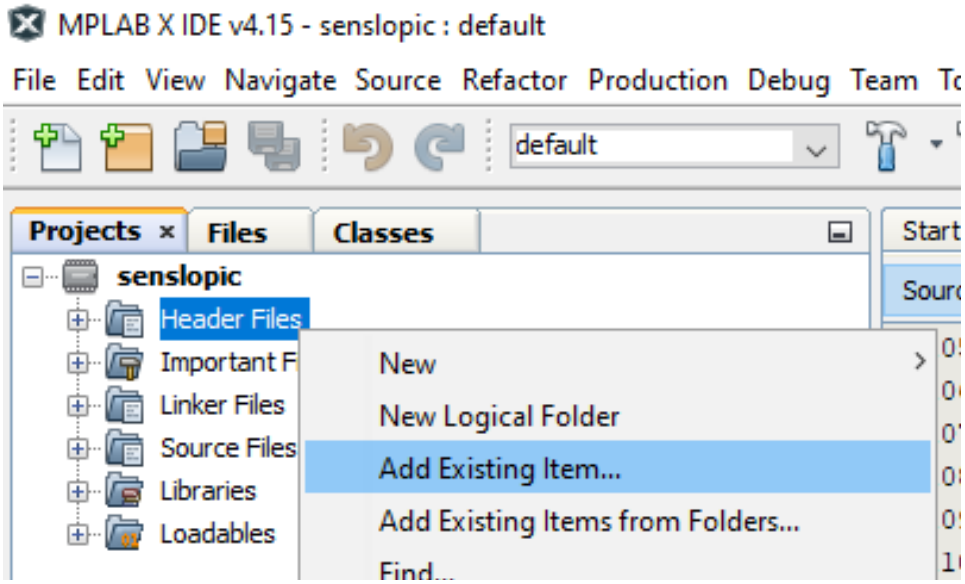
f. Under the *Compiler Toolchains*, select *XC8 (v1.45)*. Then click *Next.*



g. Enter your desired *Project Name* (DO NOT put any <space>), then choose your desired *Project Location* (file directory). Finally, click *Finish*.



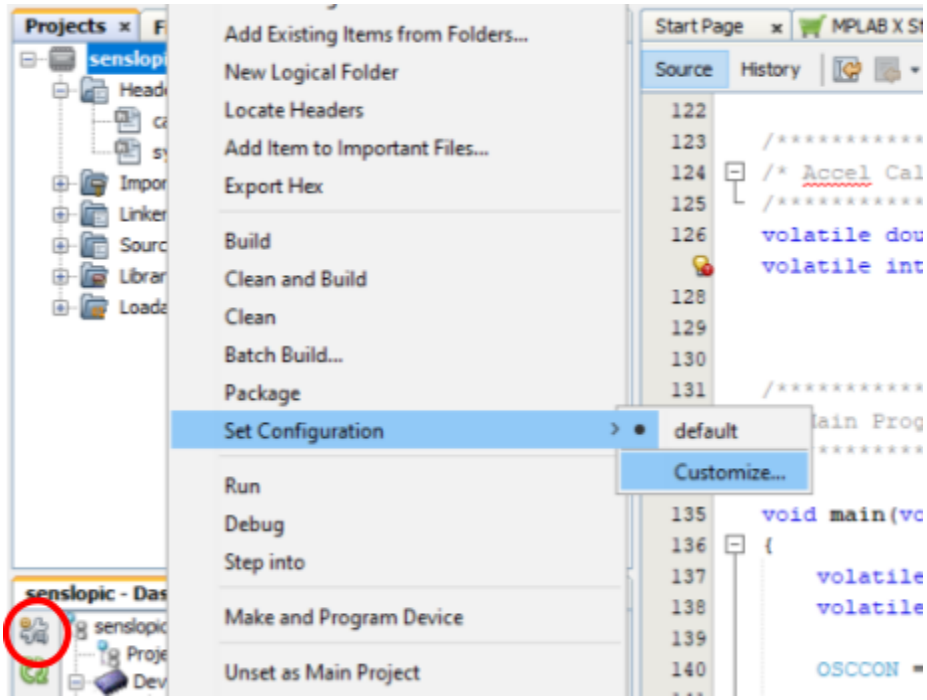
h. Right Click *Header Files* under the *Projects Section*. Select *Add Existing Item…*, then find the header files *"system.h"* and *"can.h"*.



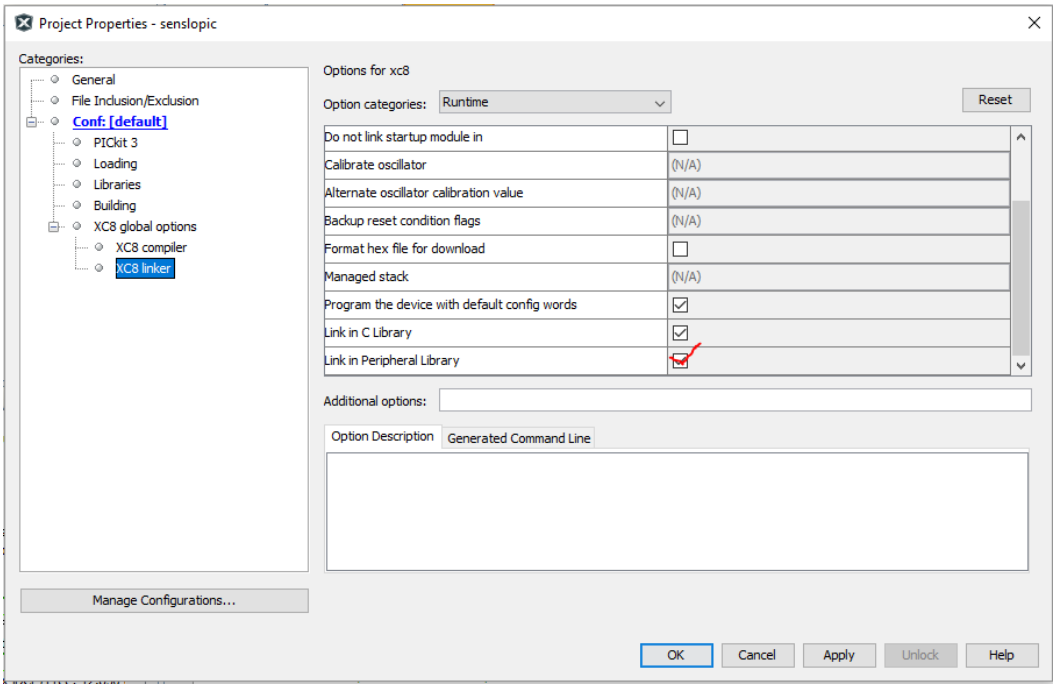
i. Right Click *Source Files* under the *Projects Section*. Select *Add Existing Item…*, then find the C files *"can.c"* and *"main.c"*.

3. Compiling Project

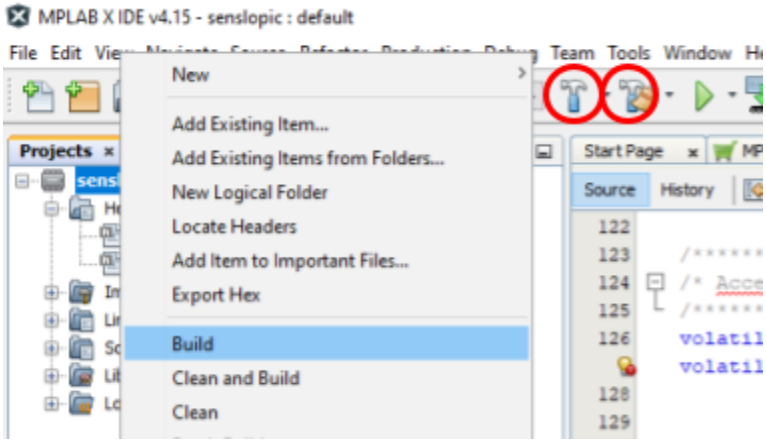
a. Right Click the Project Name, select *Set Configuration*, then *Customize…* Or simply click the Project Properties icon (shown in the picture below)



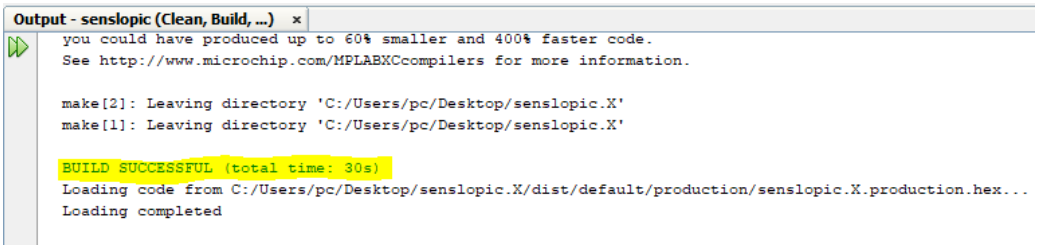
b. Under the *XC8 Linker*, tick the *Link in Peripheral Library*, then click *OK*.



c. To build the project, right click the project name, then select *Build* or *Clean and Build*. Or click the *Build* or *Clean and Build* icon encircled on the figure below.

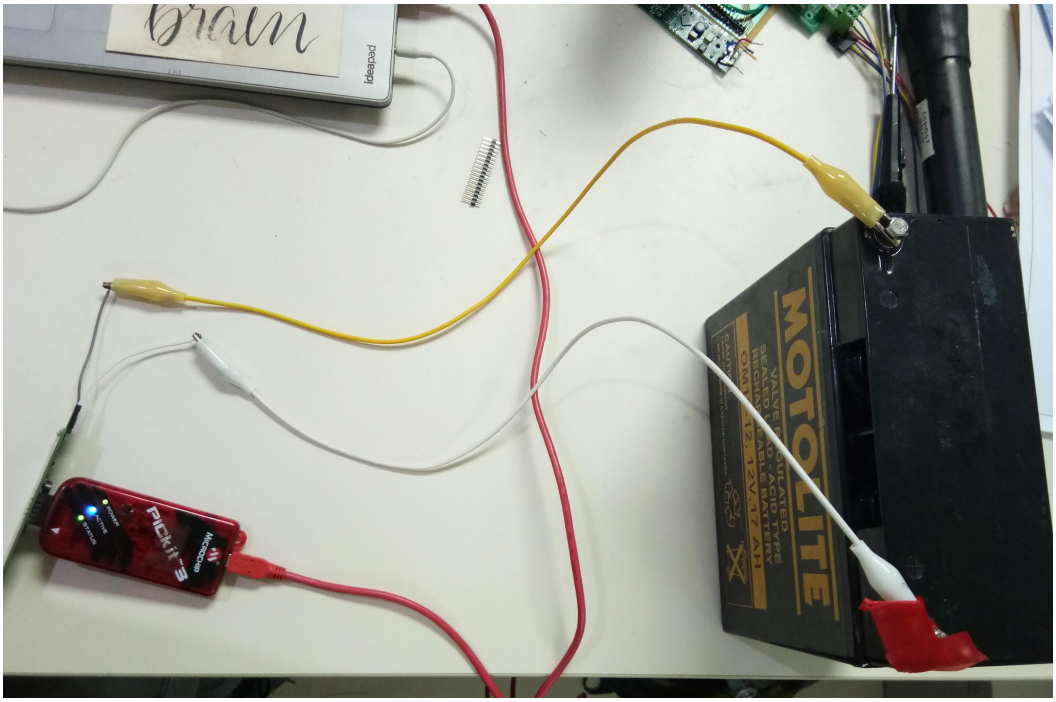


d. Wait until the Output shows BUILD SUCCESSFUL

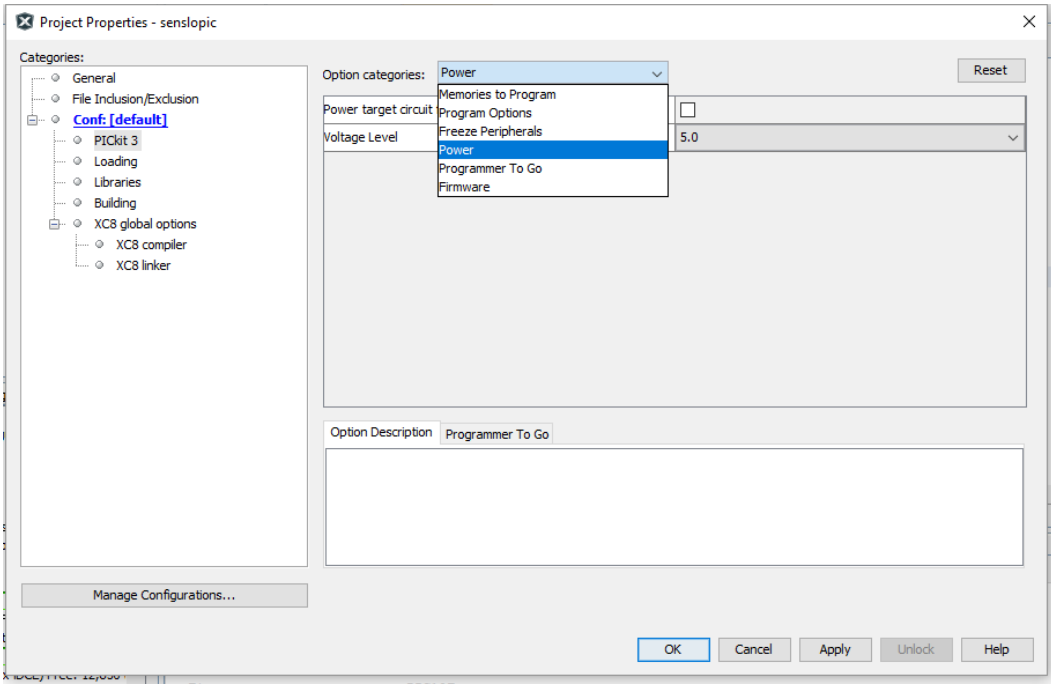


4. Programming to PIC

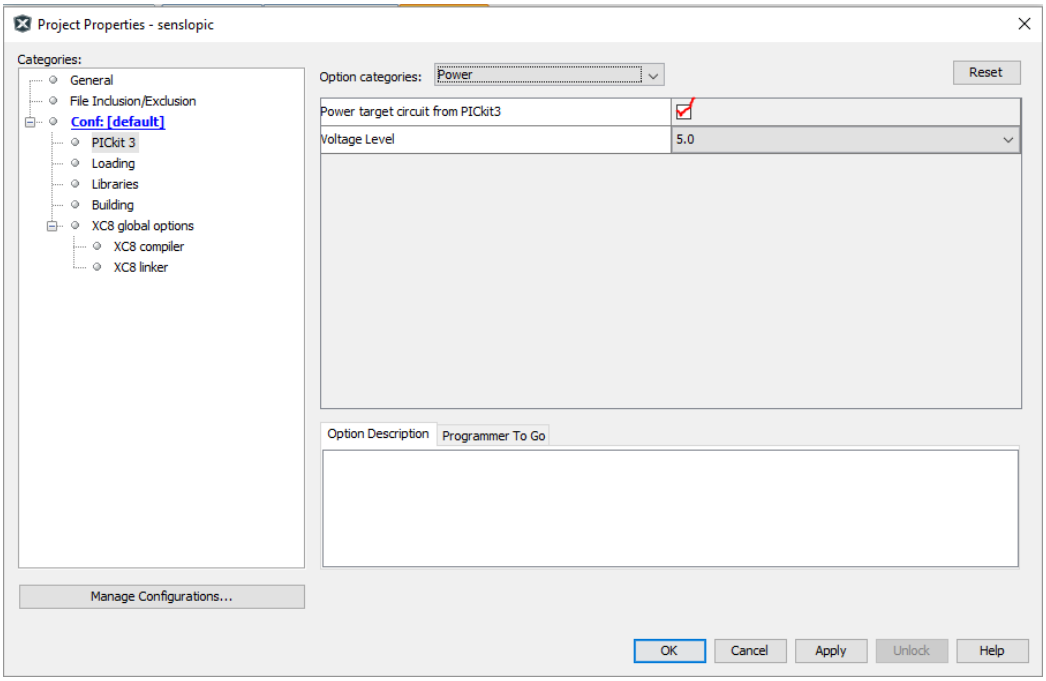
a. Connect the PIC (or the sensor board) to PICKit3. Make sure that the sensor board is powered by 12V power supply.



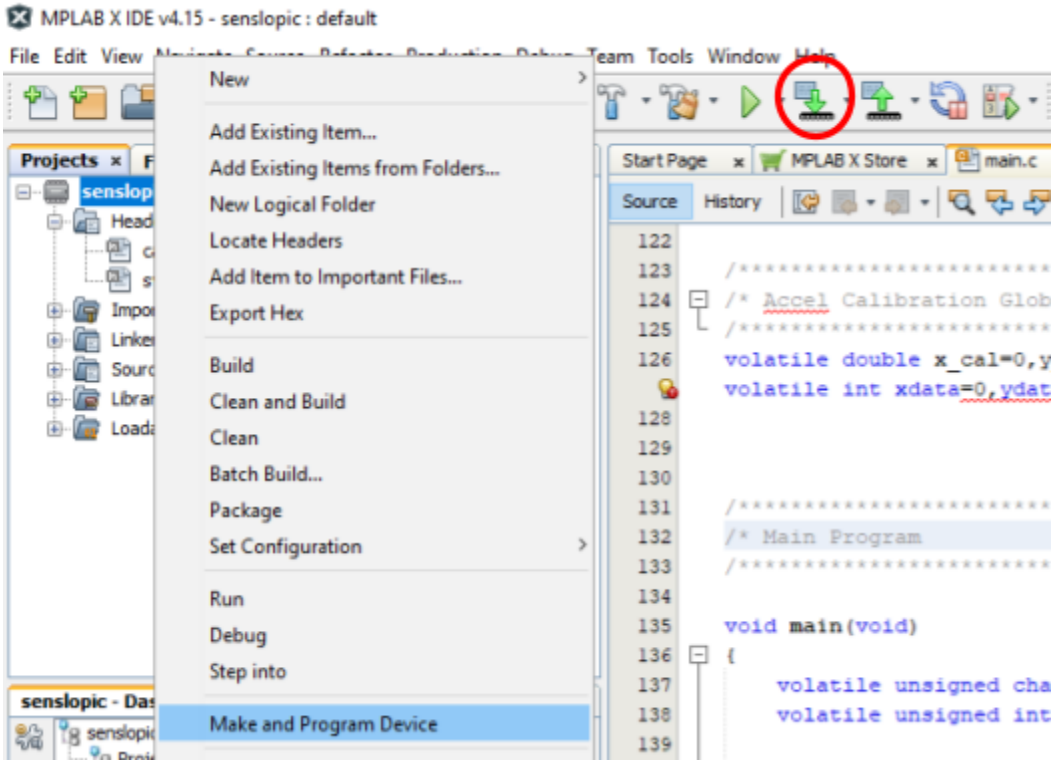
b. Customize configuration (see 3a). Click PICKit 3, then select *Power* under the *Option Categories*.



c. Tick the *Power target circuit from PICKit 3*, then click *OK*



d. Right Click the Project Name, then click *Make and Program Device*. Or just click the *Make and Program Device* encircled on the figure below



e. Wait until it shows *"Programming/Verify complete"*, which means programming to PIC is finally completed.