<Ex5>:

Objective: Plotting Graph to the CCS Graph window for the read data from the PC to the buffer.

Workflows you learned in the **previous lab**

- Connecting your DSP kit EPB_C5515 to CCS5.3
- Creating a new project or copying an existing project into the workspace
- Configuring the linker options and file-search paths
- Building/Compiling and running/Executing a project on the kit EPB_C5515
- Making use of breakpoints for debugging the code and using watch window to track variable values.
- Storing the data read from PC to the buffer in the CCS5.3 and view buffer data runtime.

The above workflows will be frequently required in this and all the other lab-sessions.
If you get stuck somewhere while performing them, go back to Lab 1 manual. (Chapter 5.1 to chapter 5.3) and Lab 2 manual (Chapter 5.4)

After reading **this section** you will be able to,

- Plot the graph in Graph window of CCS5.3 using TMS320C5515 and PC.

Hardware Part List:

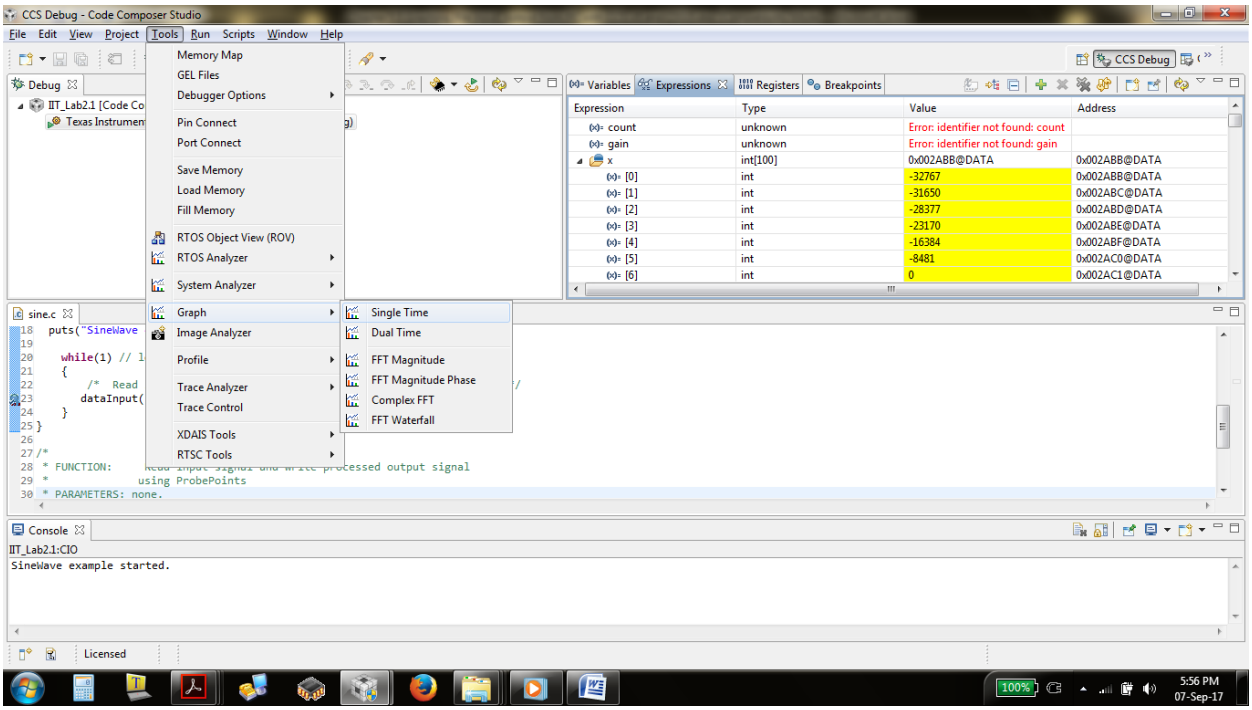
- PC
- Code Composer Studio v5.3
- +5v DC Power supply
- EPB_C5515
- Emulator + Emulator cable (USB A to Mini-A Cable, 14 pin FRC Flat cable)

List of Files Required:

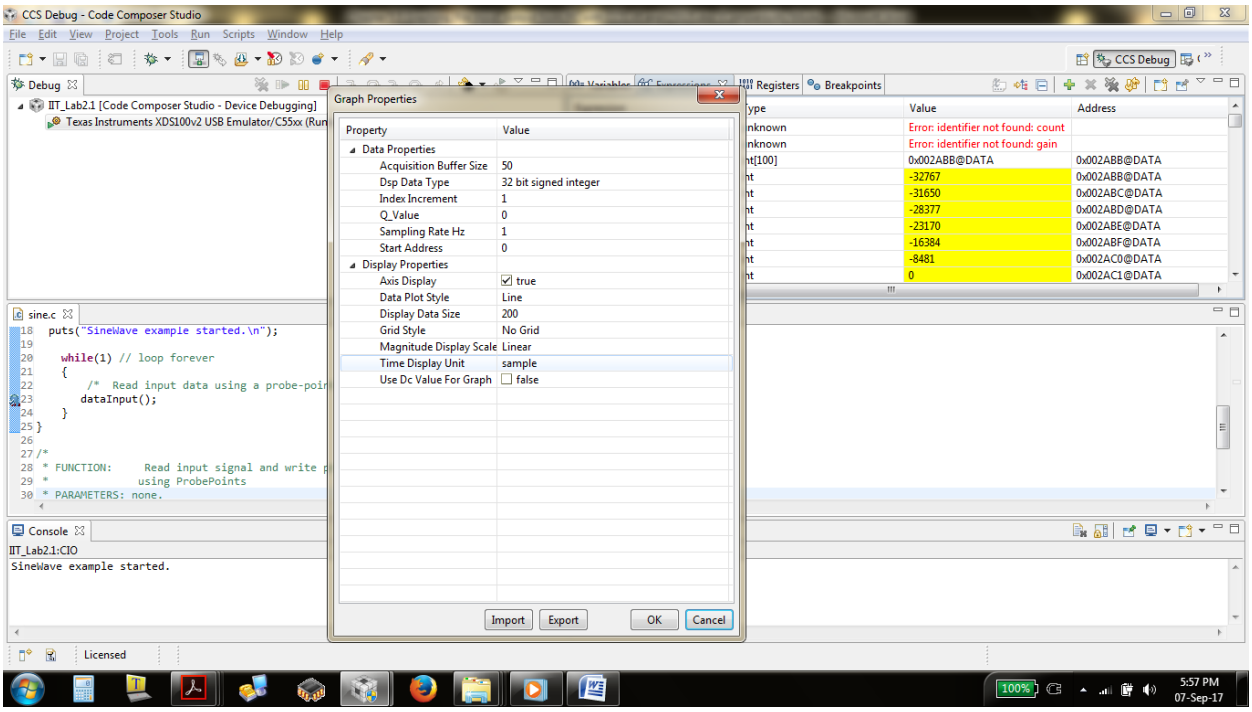
- sine.c (Program application file)
- sine_int16.dat (sine database file to take input from PC)
- lnkx.cmd (Command file)
- usbstk5515bsl.lib (Library file)

Steps for Plotting Graph:

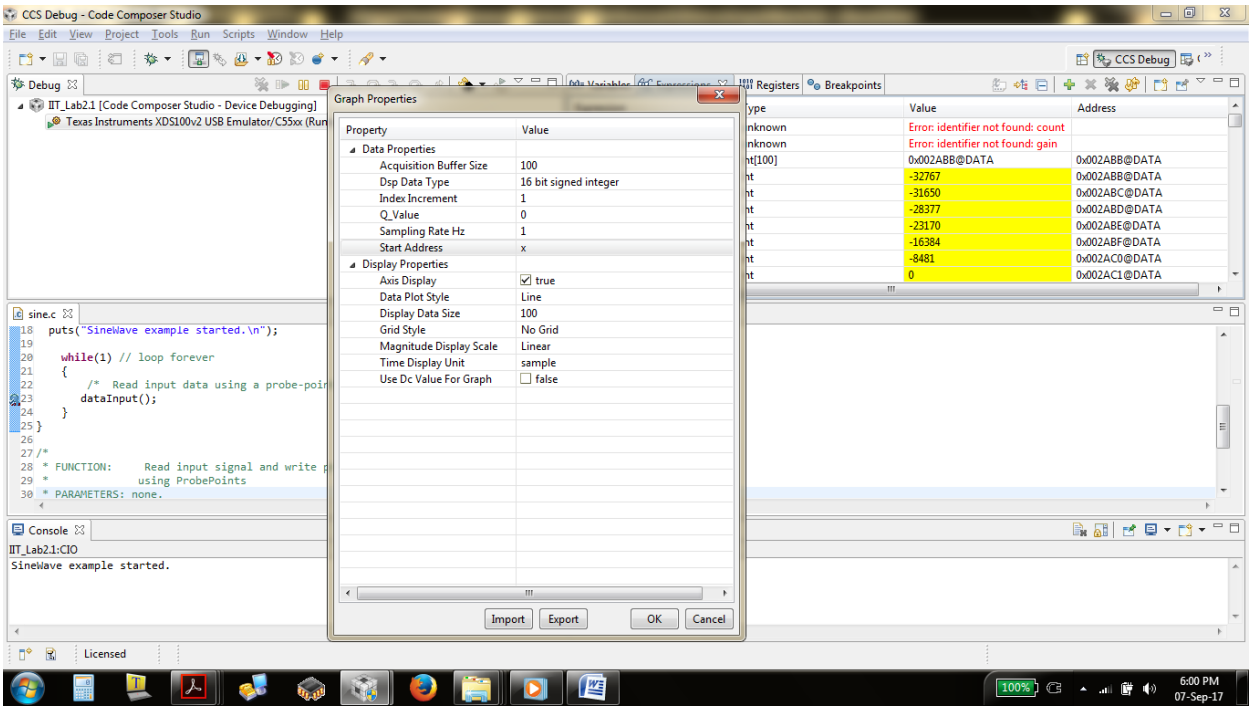
- Perform “chapter 5.4” and **don’t terminate program**
- Open graph window in debugging mode by **“Tools->Graph->Single time”**



- It will open Graph window's property
- You will get a Graph Properties dialog box.

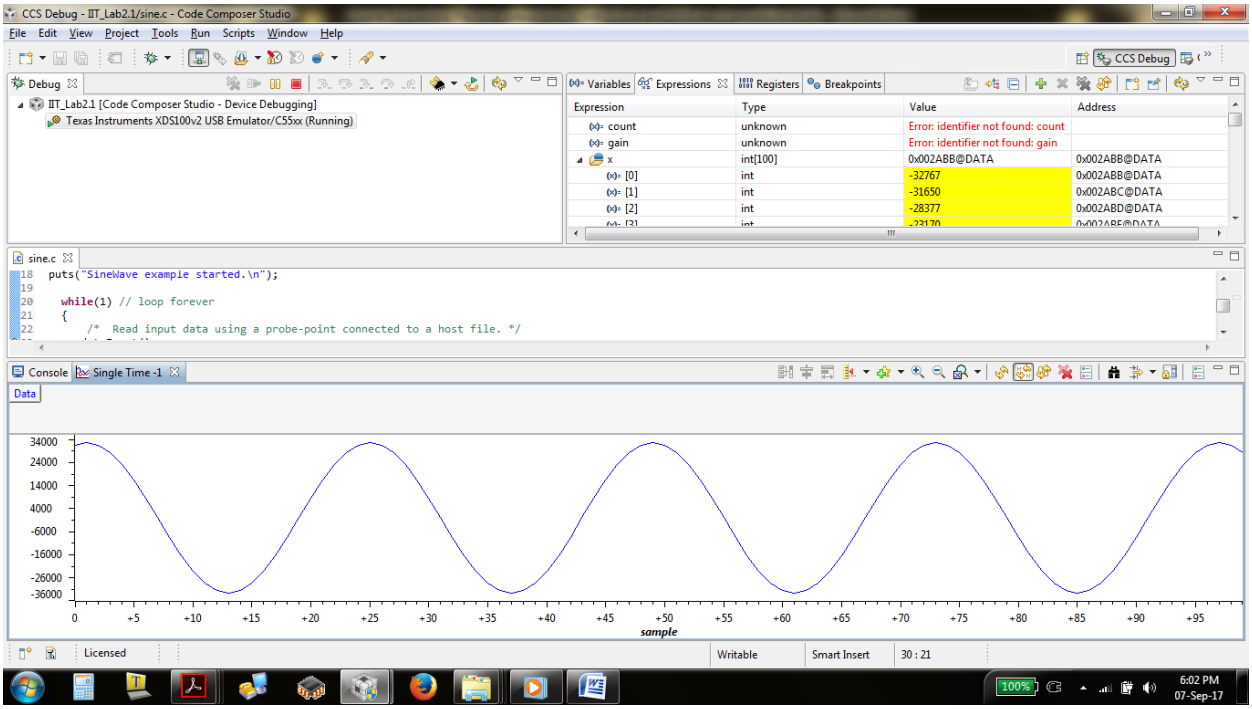


- In the Start address field give the variable name (in this case x) that is to be viewed.
- Acquisition Buffer Size (It is the maximum data that can be read and stored at any instance) and Display Data size (It should always be lesser than the buffer size) should be set to 100 in this case.
- Specify correct DSP Data Type (16 bit signed).
- In the graph, observe the effect of changing the Acquisition Buffer Size and the Display Data size.
- Settings are as shown here



- Once done, click “**OK**”

- Once clicked OK, it will open “**Single time** “ Graph window which shows sine wave generated from the Buffer “**x**”



Enjoy...!

Note:

- If the sine wave is not observed properly in the graph, then check the header of the .dat file. The header should be consistent with the type of data in the file. The file has 16 bit signed integer data.