<Ex2>:

Objective: Write a program to Blink single XF LED on EPB_C5515 target board

After reading this section you will be able to,

- Create new project for TMS320C5515 in Code Compose Studio V5.3 IDE
- Set-up supported JTAG for your DSP Kit and CCSv5.3
- Configuring Linker option to the project
- Add File search path to the project
- Build/ Compile your project
- Run/Execute your project and observer the output
- Know hardware connection to the CPU
- Configure your system to get ready to work with EPB_C5515

Part List:

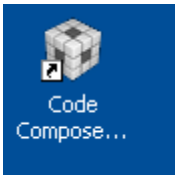
- PC
- Code Composer Studio
- +5v DC Power supply
- EPB_C5515
- Emulator + Emulator cable (USB A to Mini-A Cable, 14 pin FRC Flat cable)

List of Files Required:

- led_test.c (LED routine file)
- main.c (Program application main.c file)
- lnkx.cmd (Command file)
- usbstk5515bsl.lib (Library file)

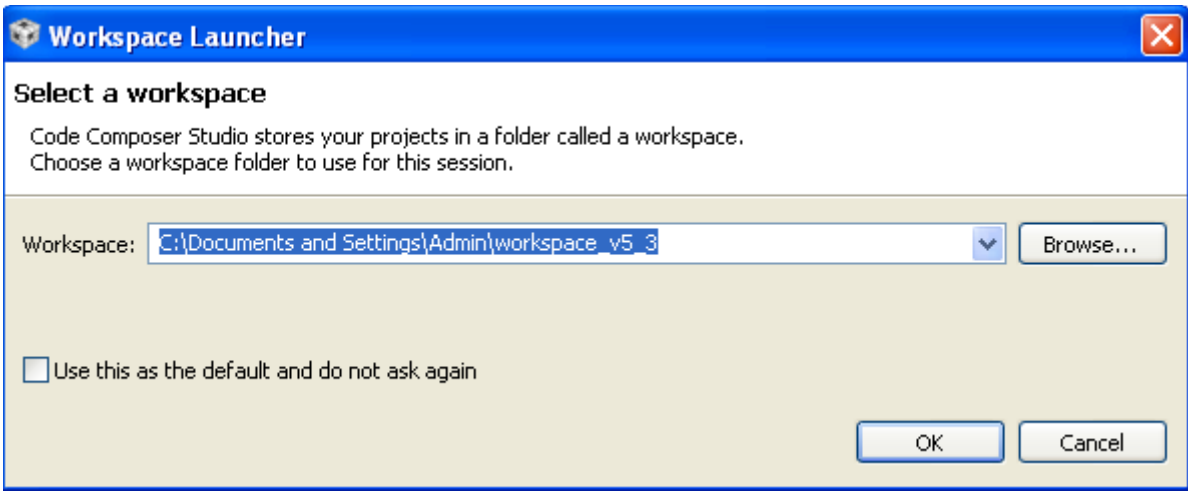
Steps to Create new LED project:

Open *CCS V5.3* from desktop shortcut

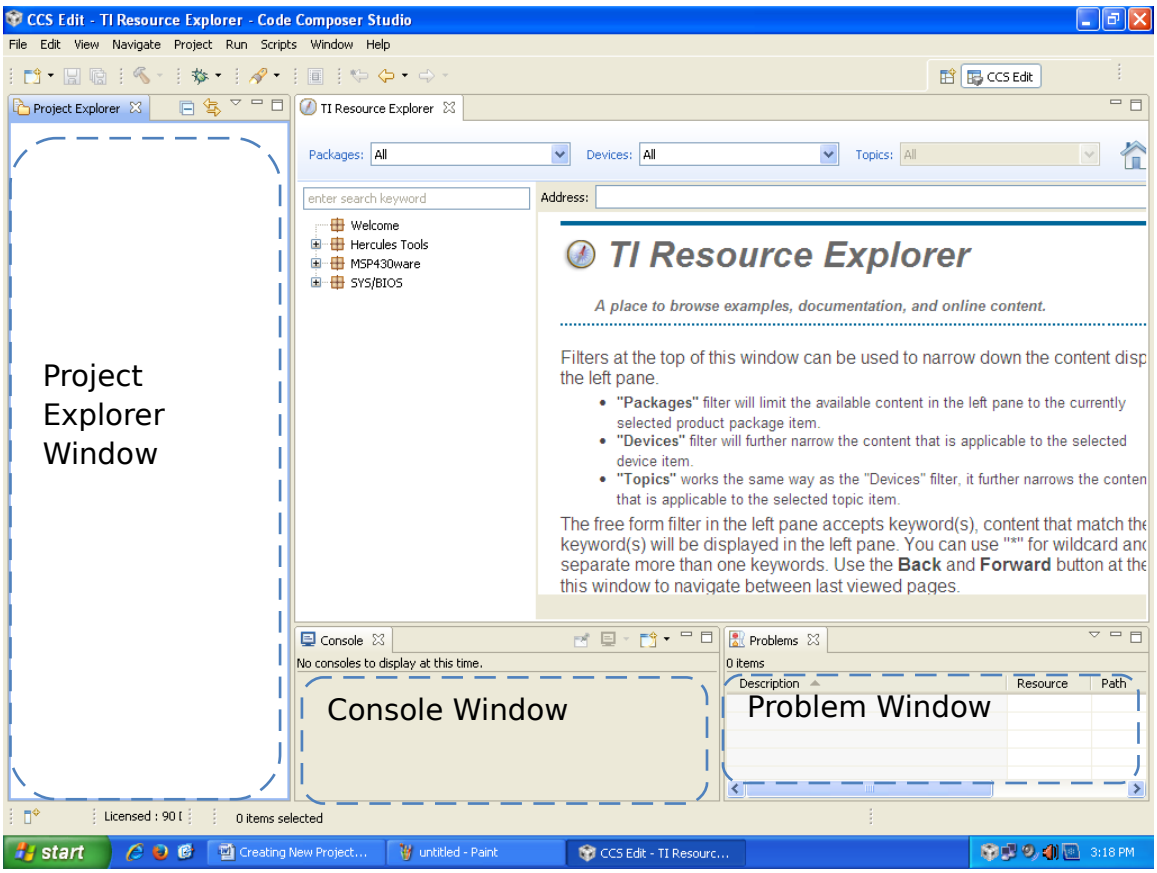


It will open default *CCS V5* screen.

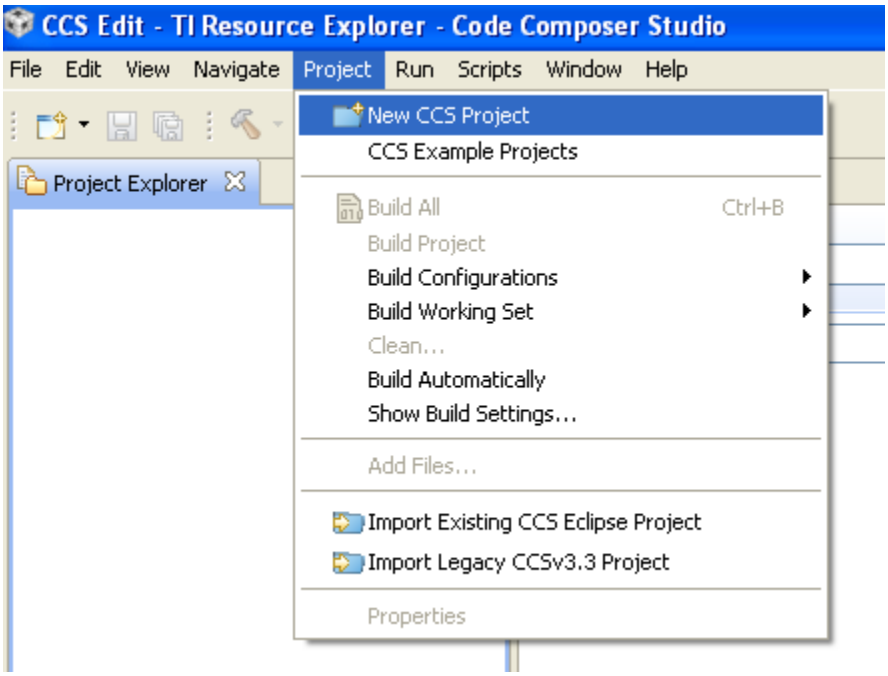
Then it will ask for workspace path
Select path “*C:\Documents and Settings\<User Name>\workspace_v5_3*” for windows XP OS
Select path “*C:\Users\<User Name>\workspace_v5_3*” for windows7 OS



Then it will open Default CCS5 screen as shown below



Click “*Project -> New CCS Project*” menu.

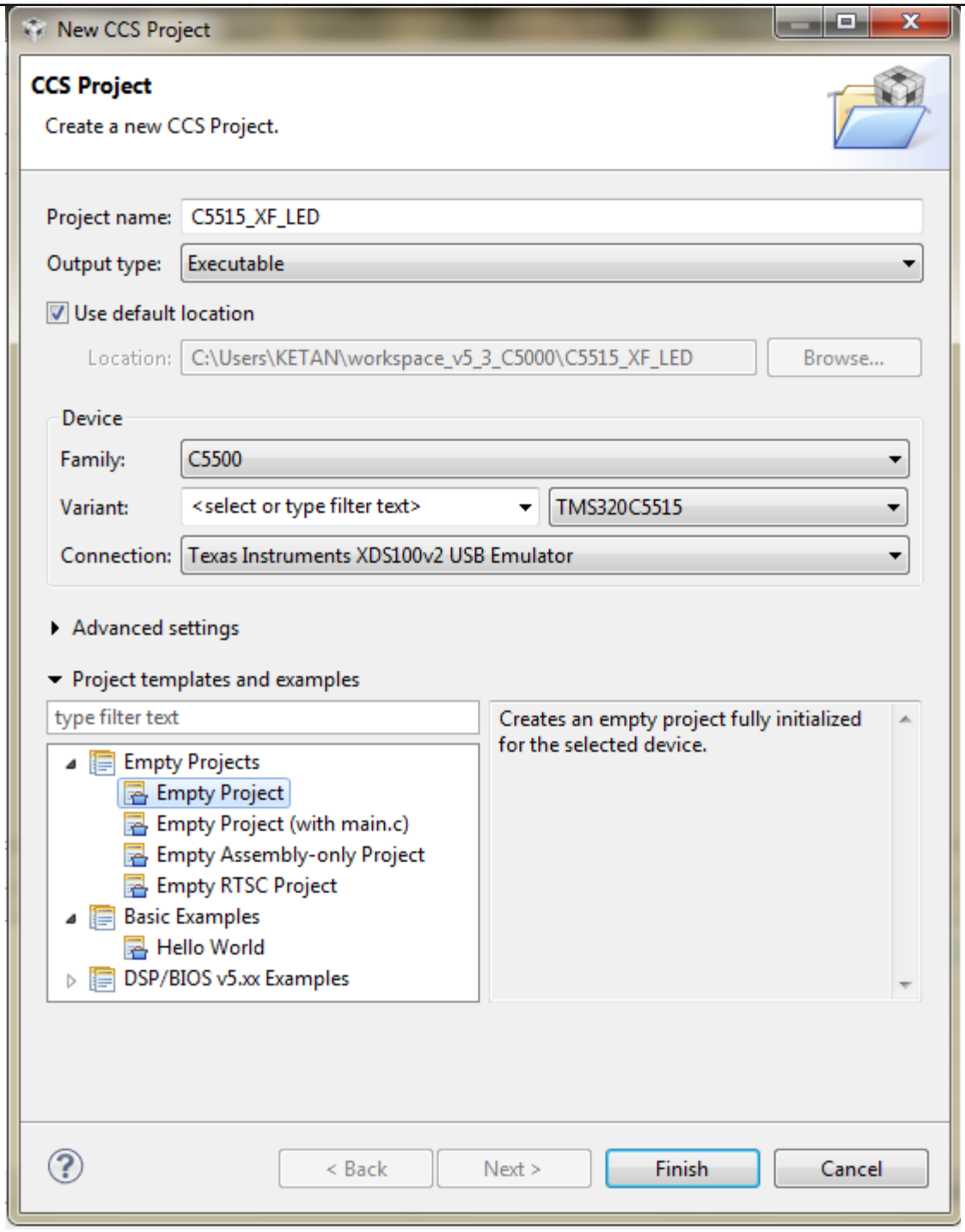


It will open Following screen

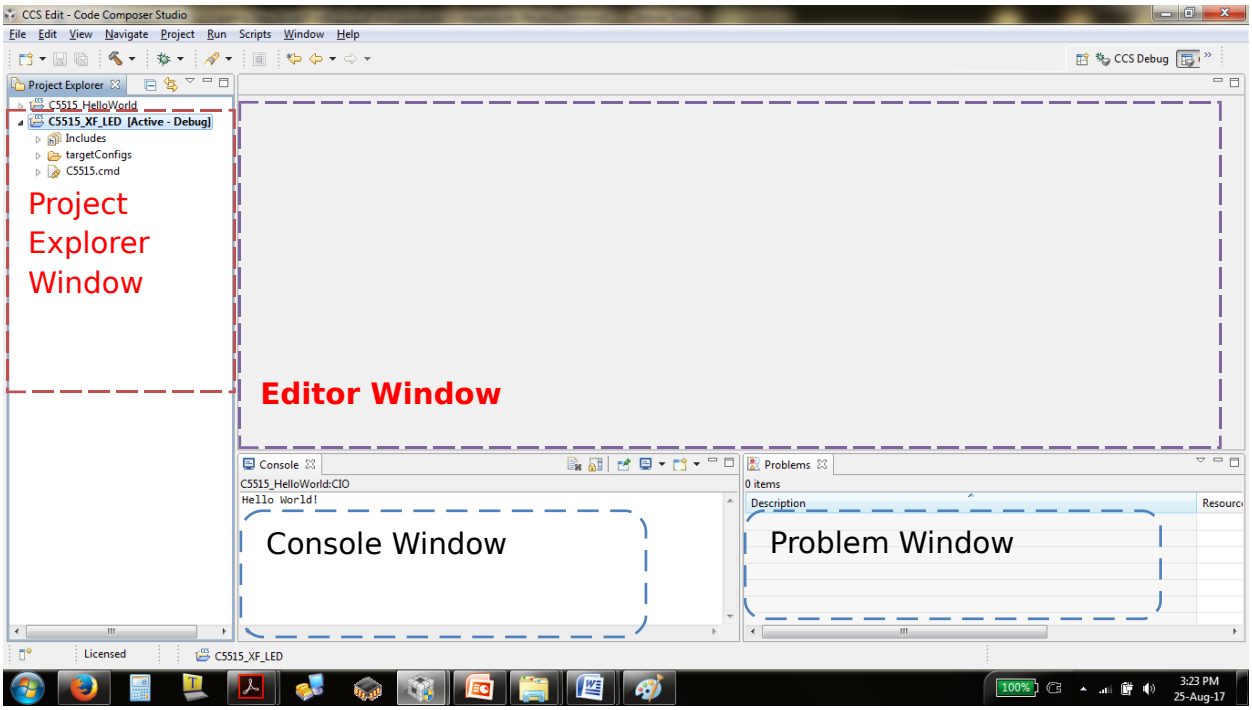
Project name as desired: e.g. “C5515_XF_LED”
Output type: “*Executable”* as in figure.
And keep selected “***use default location***“, so that project will be created in workspace with project name typed

Select family: *C5500*,
Variant: *C551x*
Processor *TMS320C5515*
And use **connection** type as *Texas Instruments XDS100V2 USB Emulator.*

Then at last select “*Hello World*” example from “*Basic Examples*” location in **Project Templates and example** tab. And **Finish**

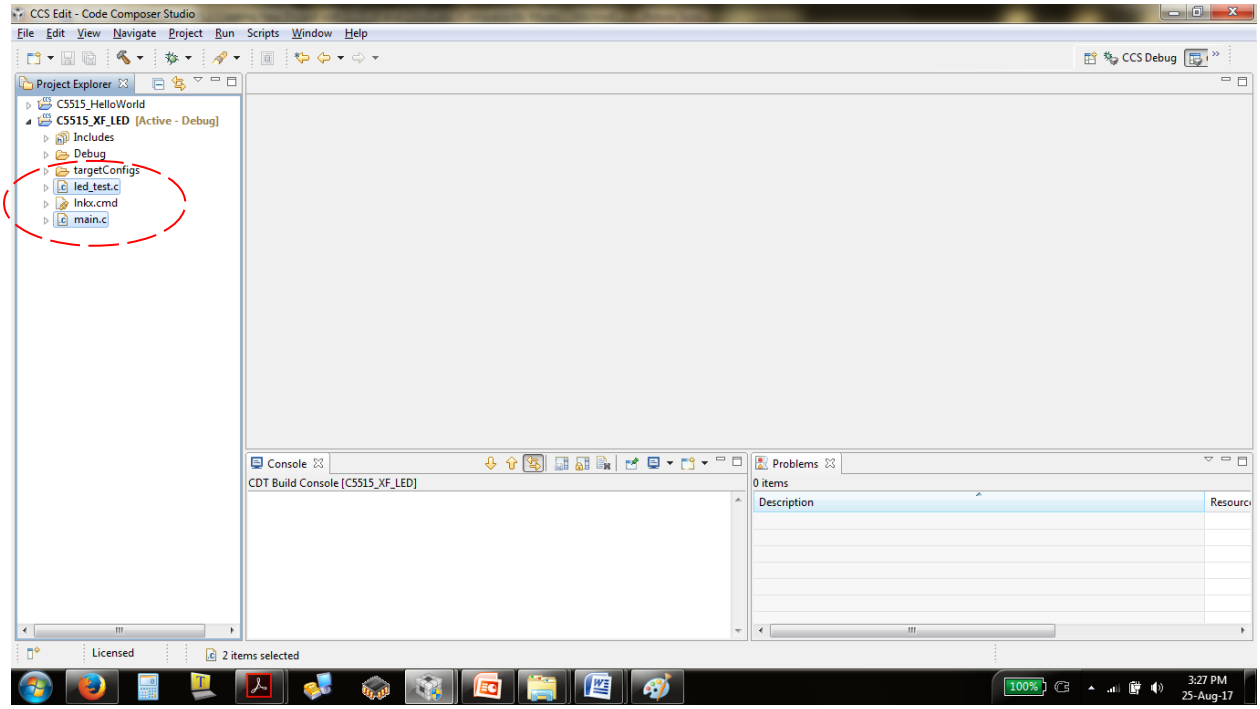

New CCS Project
CCS Project
Create a new CCS Project.
Project name: C5515_XF_LED
Output type: Executable
Use default location
Location: C:\Users\KETAN\workspace_v5_3_C5000\C5515_XF_LED
Browse...
Device
Family: C5500
Variant: <select or type filter text>
TMS320C5515
Connection: Texas Instruments XDS100v2 USB Emulator
Advanced settings
Project templates and examples
type filter text
Empty Projects
Empty Project
Empty Project (with main.c)
Empty Assembly-only Project
Empty RTSC Project
Basic Examples
Hello World
DSP/BIOS v5.xx Examples
Creates an empty project fully initialized for the selected device.
< Back
Next >
Finish
Cancel

It will open screen as shown here. Here project is already created and it can be seen from “**project explorer**”



Delete **C5515.cmd** file from the project explorer and copy-paste **lnkx.cmd** file from the CD content given or reference example given.

Copy **main.c** and **led_test.c** file from the reference project and paste to the current project in project explorer.

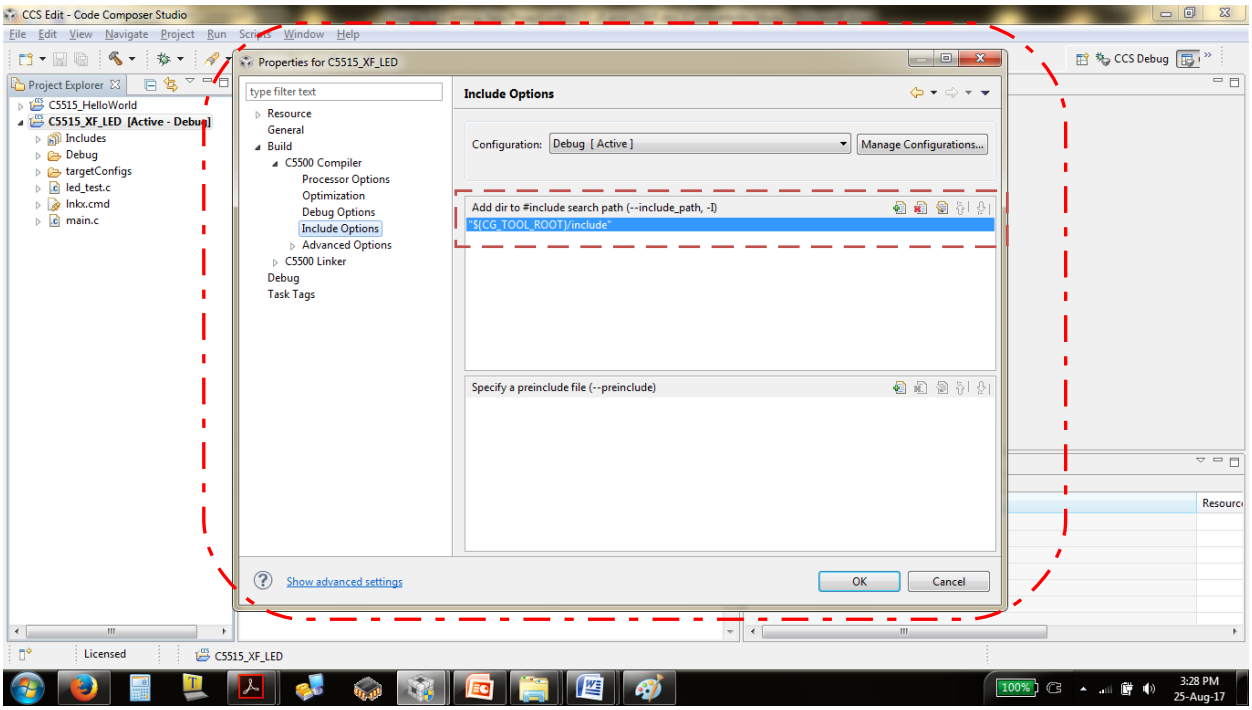


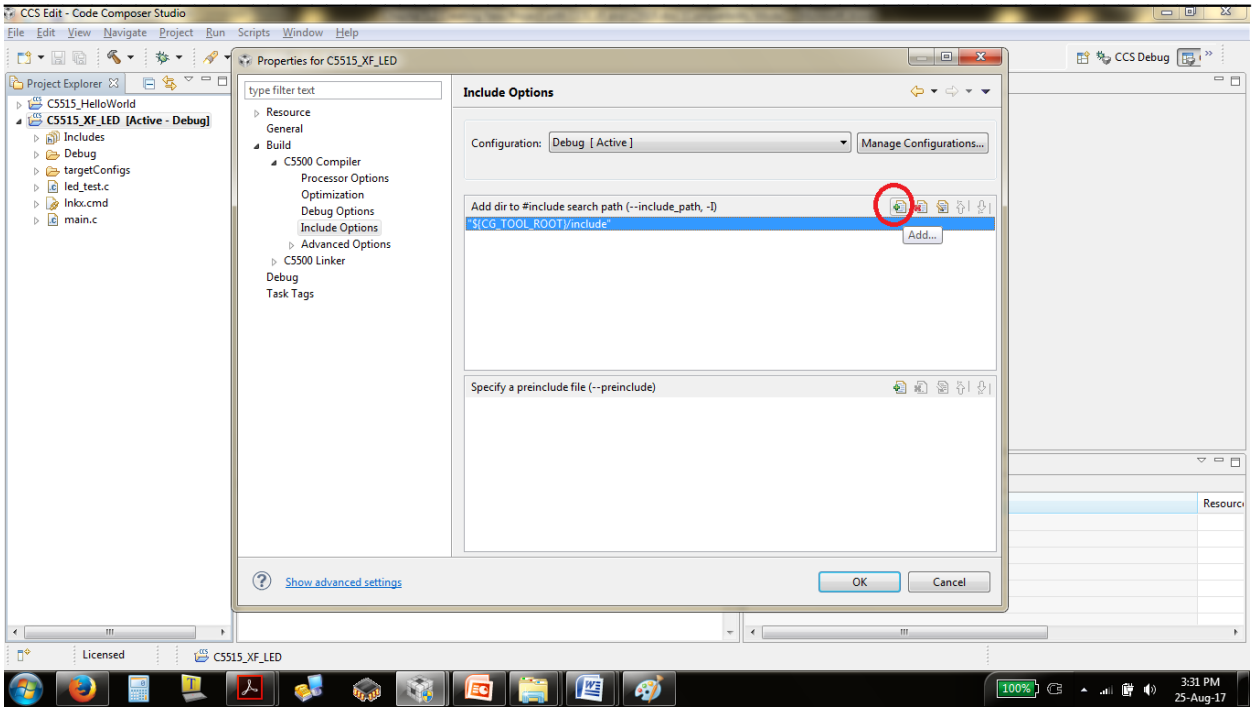
Steps to configure project to Add “File search path”:

Right click on the project and open “property” for that project

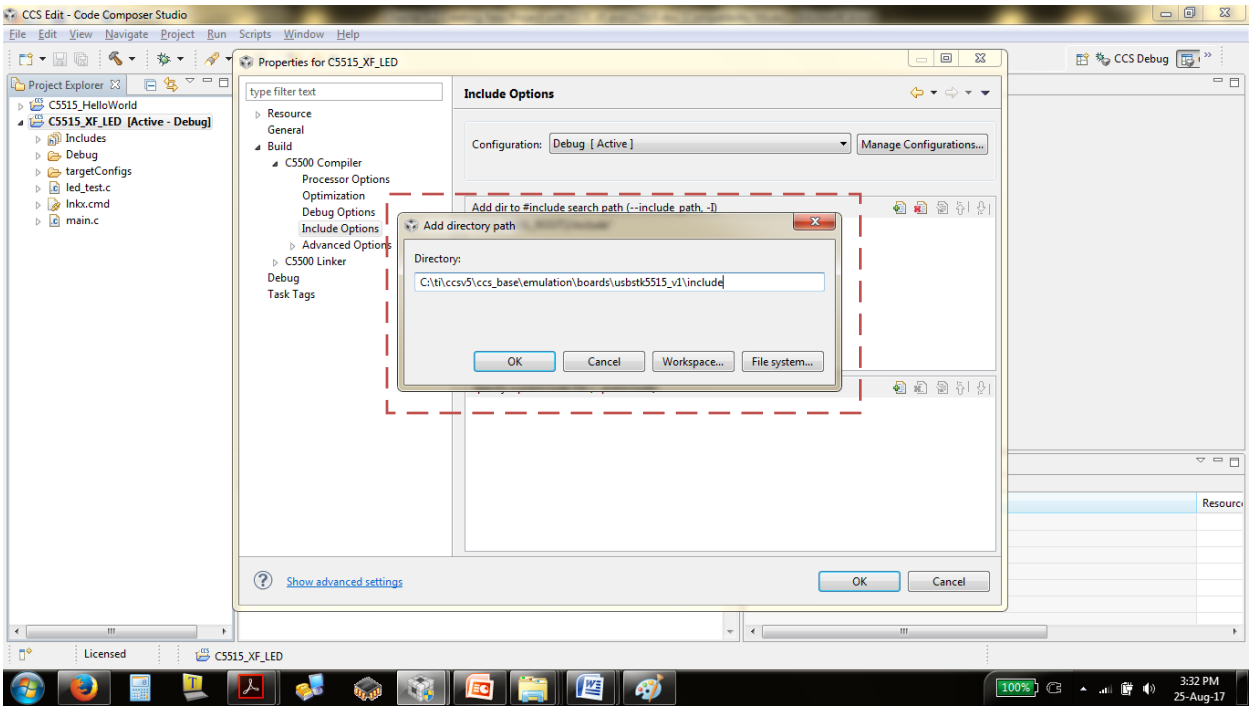
go to the **“Build->C5500 Compiler->Include option”**

Add new path for the include file location in the “Add dir to #include search path (--include_path, -I)”





Add ***"C:\ti\ccsv5\ccs_base\emulation\boards\usbstk5515_v1\include"*** path for the include file location in the "Add dir to #include search path (--include_path, -I)"



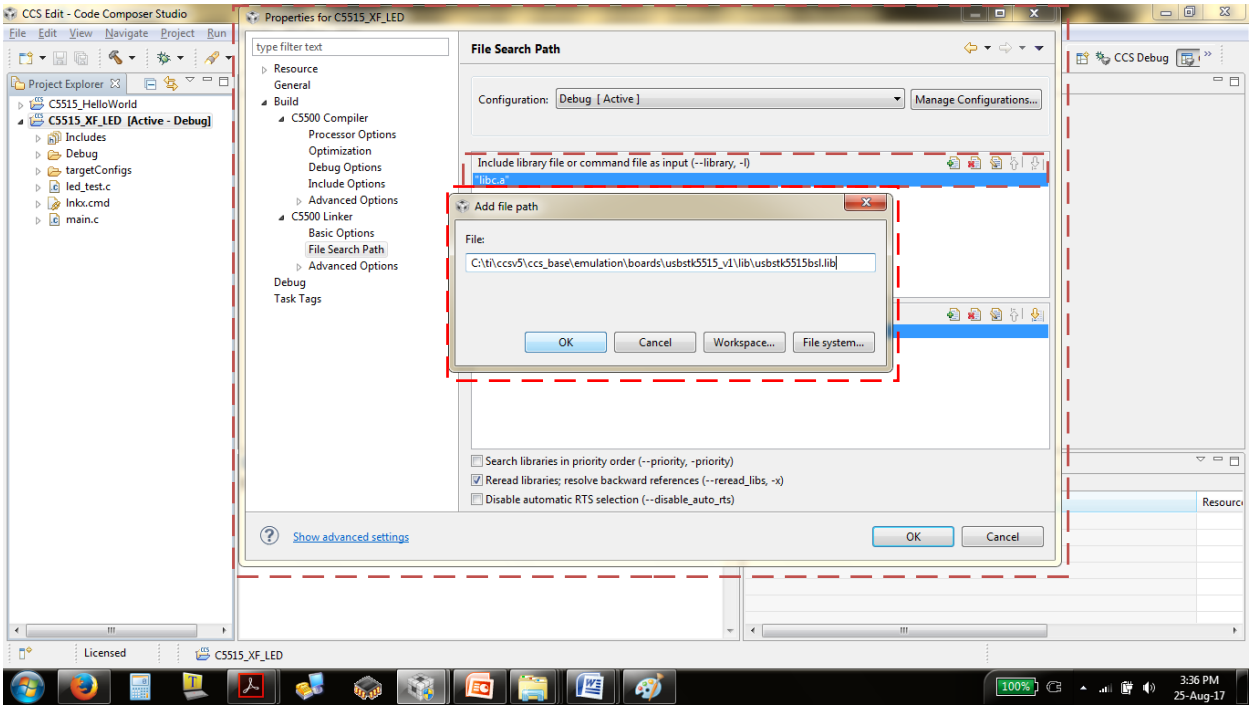
Steps to configure Linker Option for the project:

- **Right click** on the project and open "**property**" for that project
- go to the **"Build->C5500 Linker->File search path"**
- Add library

  "*C:\ti\ccsv5\ccs_base\emulation\boards\usbstk5515_v1\lib**usbstk5515bsl.lib***"

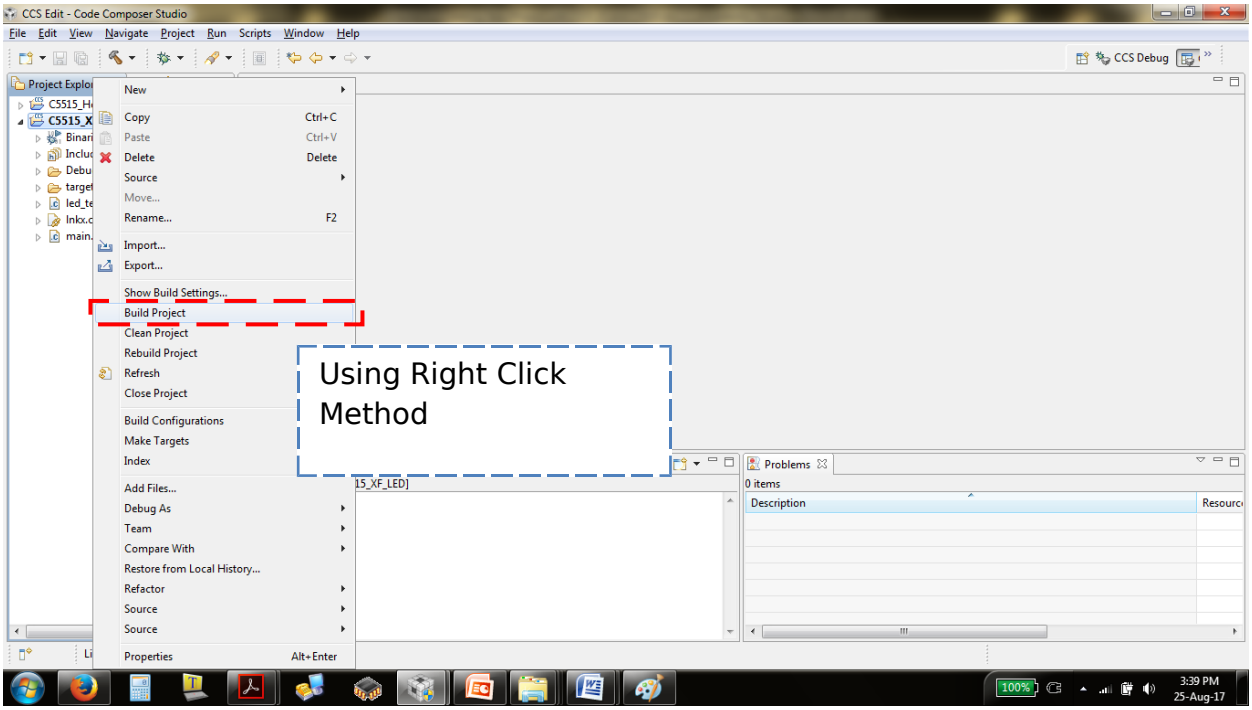
  To the

  "Include library file or command file as input(--library, -l)"

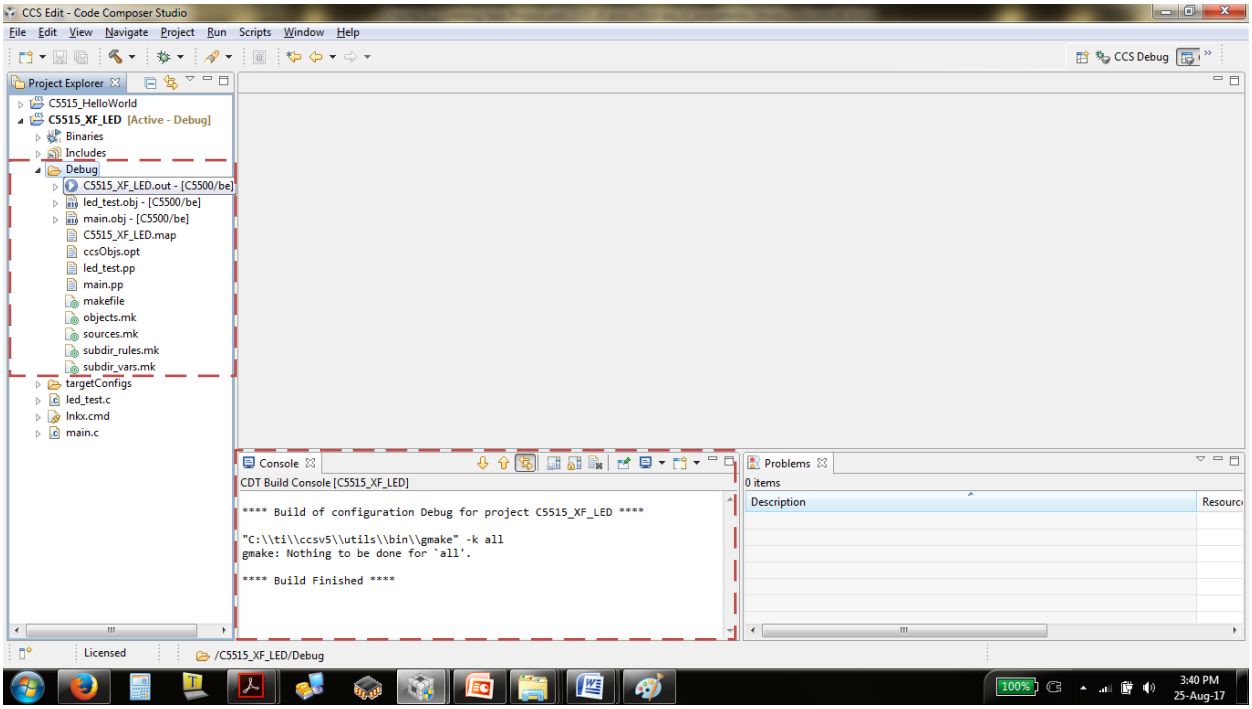


Steps to Build the project:

Compile the program by "*right click-> build project*" or "*right click-> rebuild project*" as shown. It will generate "C5515_XF_LED.*out*" file in "*debug*" folder.



It will generate *C5515_XF_LED.out* file in "*debug*" folder.



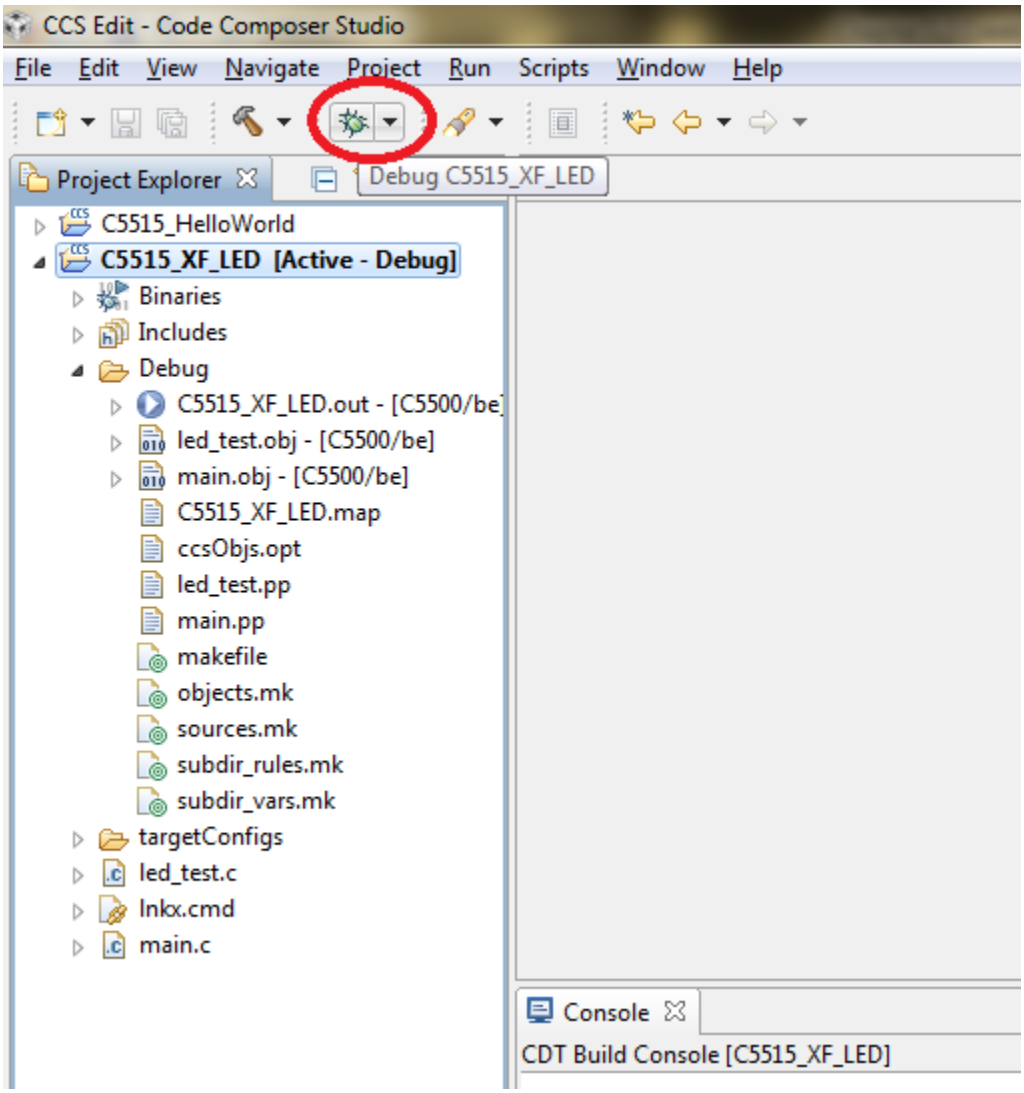
Steps to Run Program:

Hardware connection:

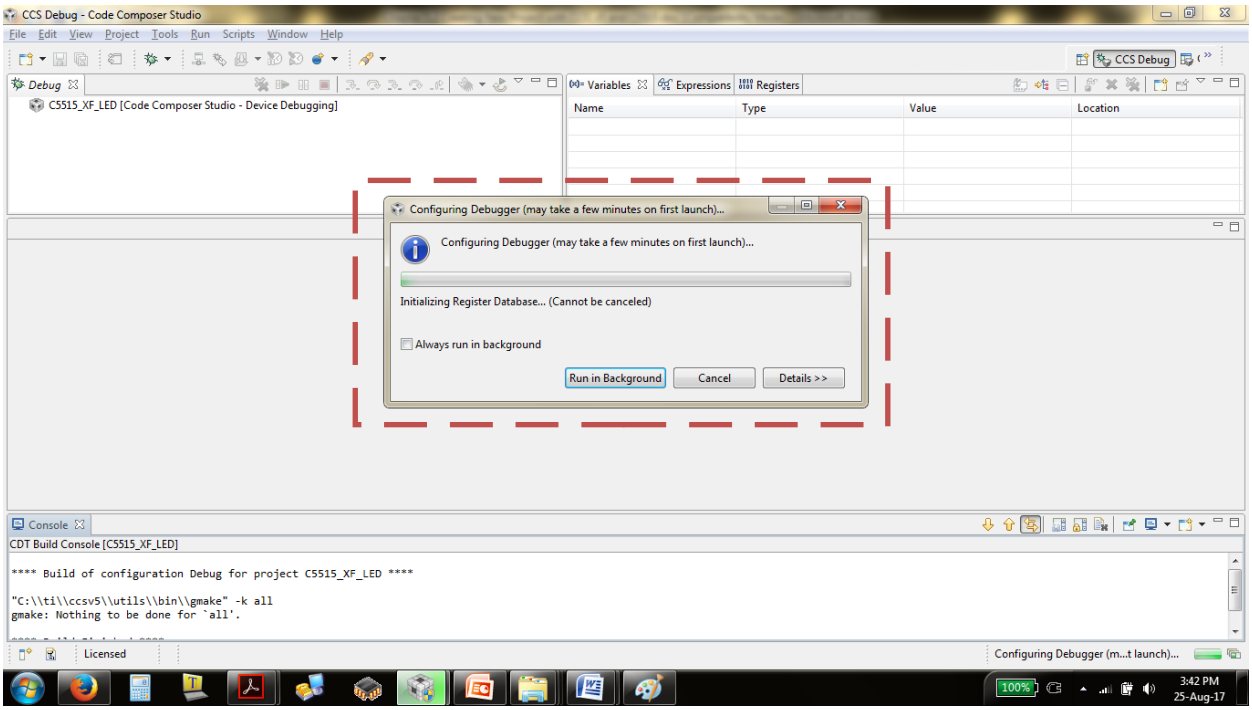
- Power on EPB_C5515 hardware using +5V Power supply or USB A-to-B cable
- Connect XDS100V2 with EPB_C5515 using USB A-to-miniA cable with CPU
- Reset CPU

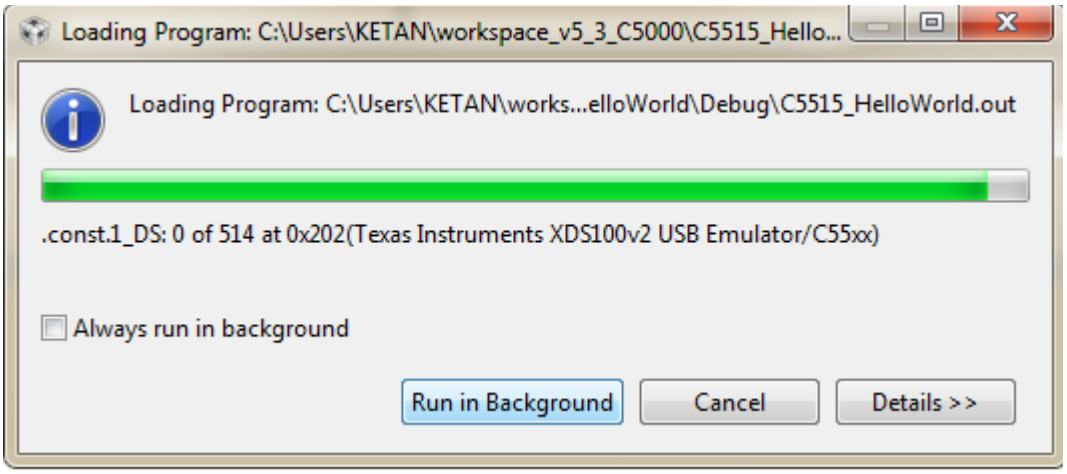
Steps to Debug/Run/Execute program:

Now to debug the program click "**debug**" as shown in the screen from home screen icon **OR** from "**run->debug**" menu.

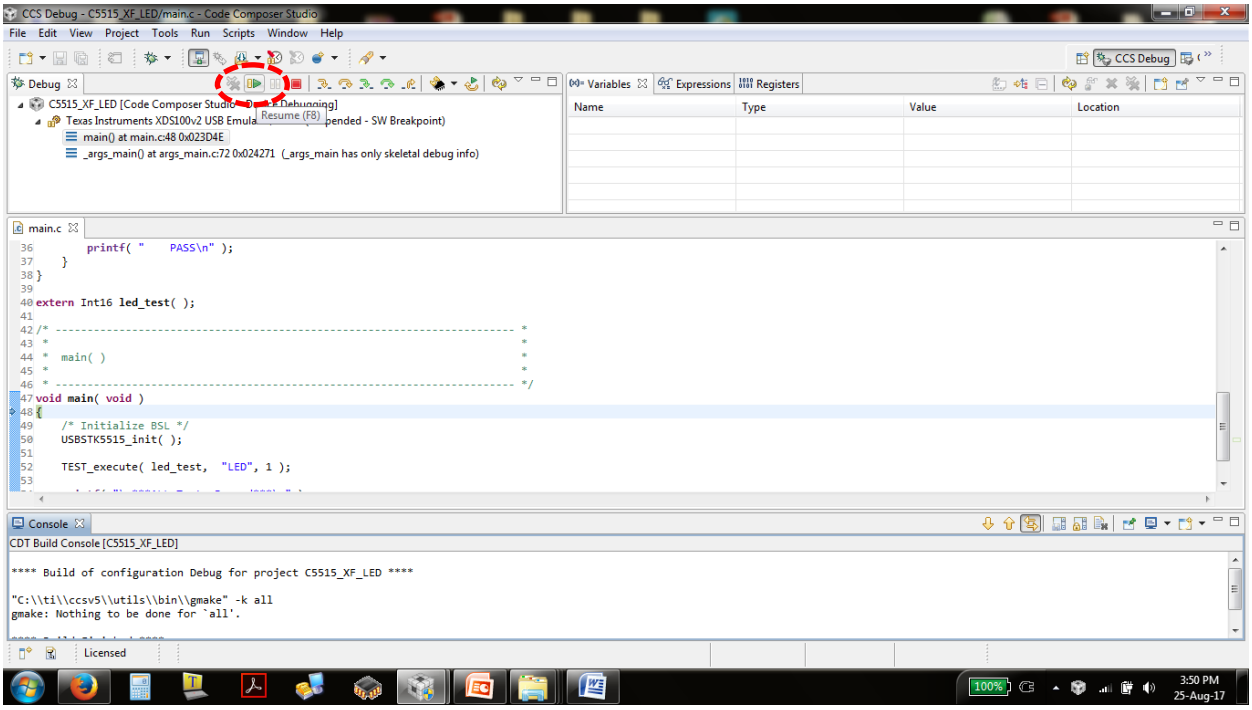


It will configure/connect EPB_C5515 kit with the CCSV5 using XDS100V2 and download the program in C5515 CPU. It will be automatically.





Once program is loaded click “*resume*”. It will execute the program and give output on consol window



Steps to view output:

Check output on EPB_C5515 Target board. XF LED (LED4) will start blinking

Enjoy…!