Installing Code Composer Studio V5.5 and building projects

1. Installing CCSV5.5 on Windows 7

Choose the following options for a minimal installation for DSK6713 board (spectrum Digital)
CCS install folder E:\ti *(or any other drive , we have used E: drive)*
Setup Type: Custom
Processor Support: C6000 Single Core DSPs
Select Components :Select all options (Base installation)
Select Emulators:Spectrum Digital Emulators

2. Install Board support libraries

Download the board support library (BSL), available at
http://c6000.spectrumdigital.com/dsk6713/
Under the option Board Supprt Library and code examples.
extract the zip file dsk6713revc_files and copy the folder CCStudio to E:\DSK6713

3. Install chip support libraries

Download the board support library (BSL), available at http://www.ti.com/tool/sprc090
Extract the file sprc090 and install the CSL at E:\C6xCSL

4. Download the Support files

Download the updated Support files provided with the text *Digital Signal Processing and Applications with the TMS320C6713 and TMS320C6416 DSK (second edition) by Rulph Chassaing and Donald Reay* from this location
Support files (The files are the property of the above book authors) TI forum post Link 2
Extract the Support files to E:\DSK6713\C6713

5. Plug in the DSK and start up CCS v5

Connect the DSK6713 to the PC using USB cable and power up the board
you will see "Spectrum Digital TMS320C6713 DSK" listed as an installed device

6. Target Configuration

Double click the CCS icon from the desktop to launch CCS
In CCS v5, go to Window > Show View >Target Configurations
Right click on the "User Defined" folder in the target configurations panel and select New Configuration
Name the configuration DSK6713.ccxml and click Finish.A new screen launches.
In the connection pulldown menu, select Spectrum Digital DSK-EVM-eZdsp onboard USB Emulator. In the device selector, select DSK6713. Click Save.

Now expand the User Defined" target configurations folder by clicking on the little triangle next to the folder. You should see the new DSK6713.ccxml target configuration in there. Right click on it and select "Launch Selected Configuration".

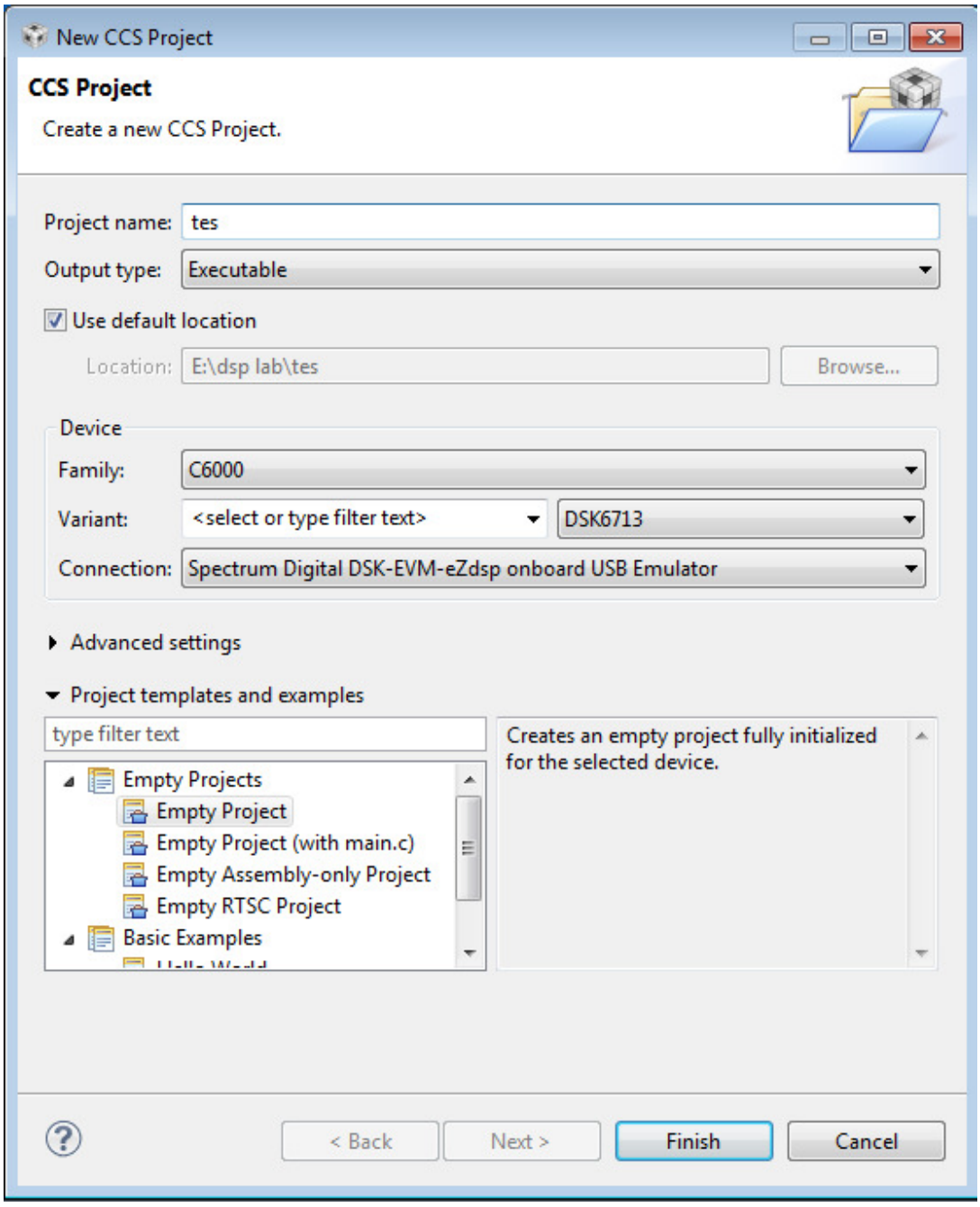
If you get an error, then either CCS v5 wasn't installed correctly or you haven't set up the target configuration correctly.
Now click on "Run->Connect Target"
The message "GEL StartUp Complete" in the Console means that CCS v5 is successfully talking with the DSK.
You are now ready to build your project using CCS V5.5

Steps to Build a project in Code Composer Studio version 5.5

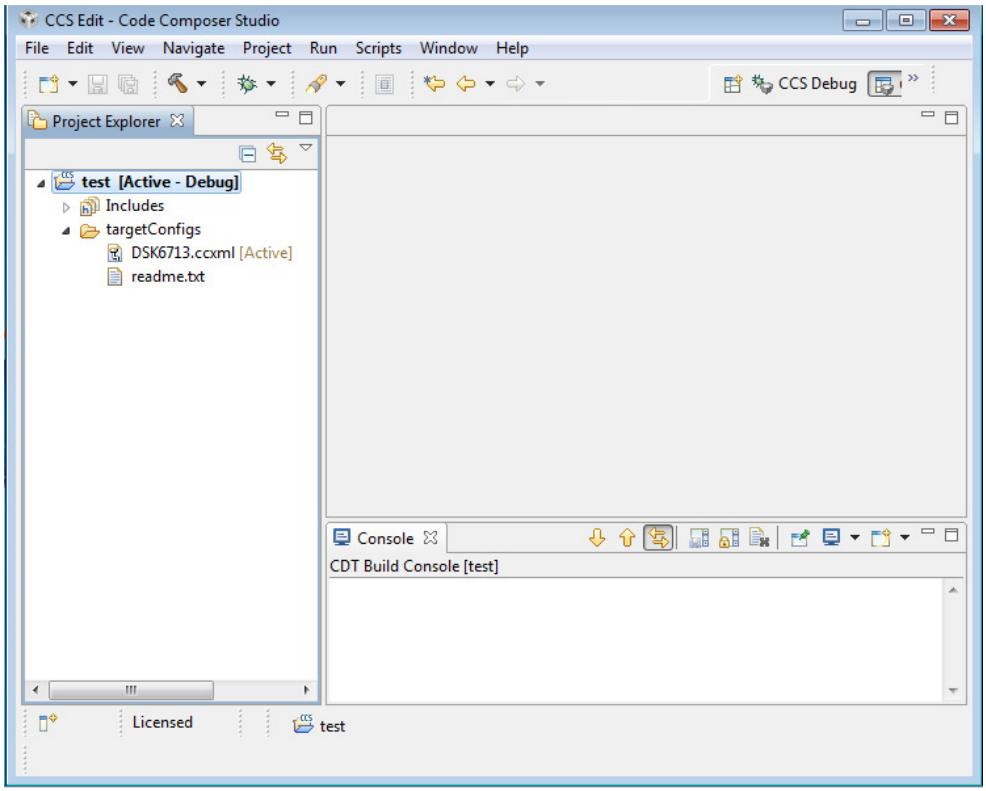
Launch CCC >Click on "File->New->CCS Project

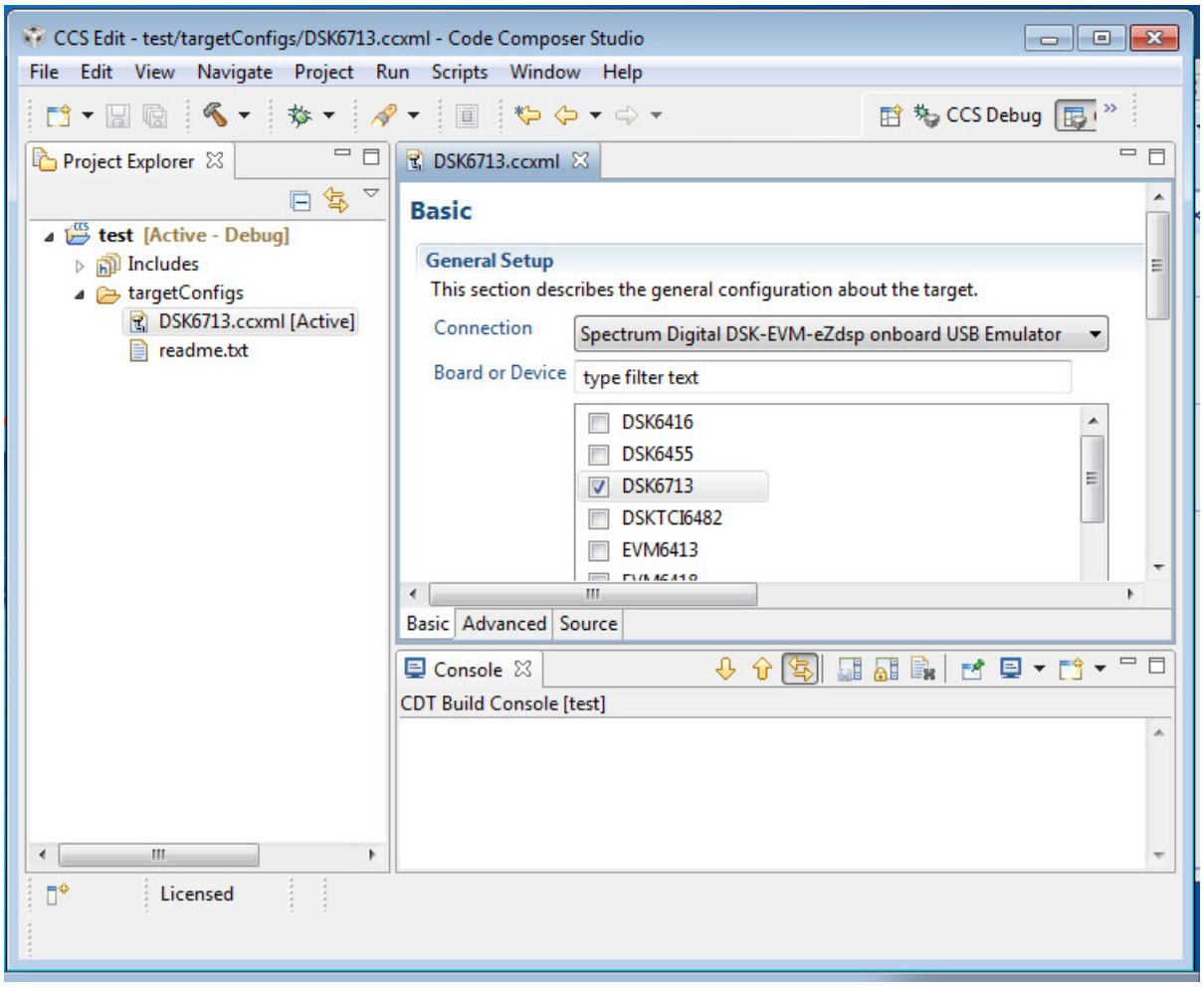
2. CCS Project

Type in a project name
Output type : Executable
Device : Family : C6000
Variant : DSK6713
Connection: Spectrum Digital DSK-EVM eZDSP onboard USB emulator
Project templates and examples, select "Empty Project" and then click "Finish".



The project window launches and will look as shown in the figures below



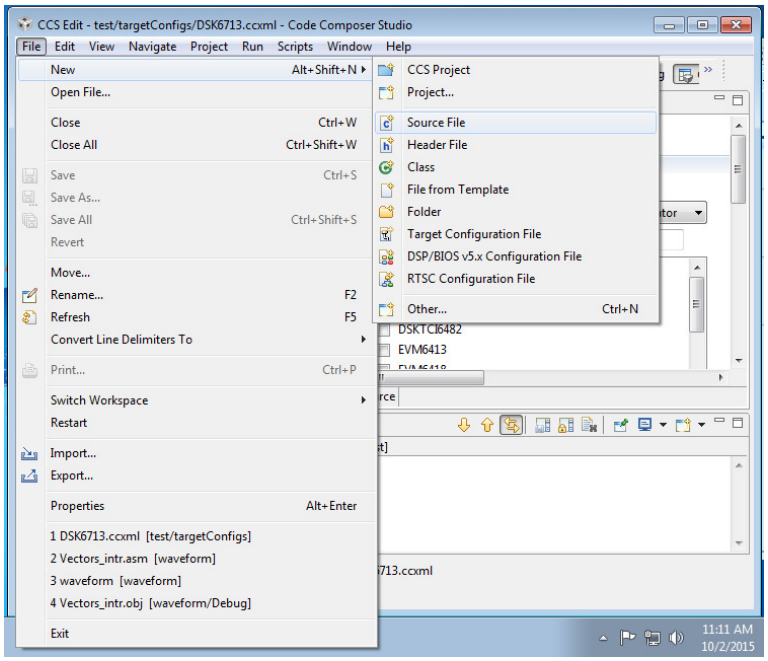


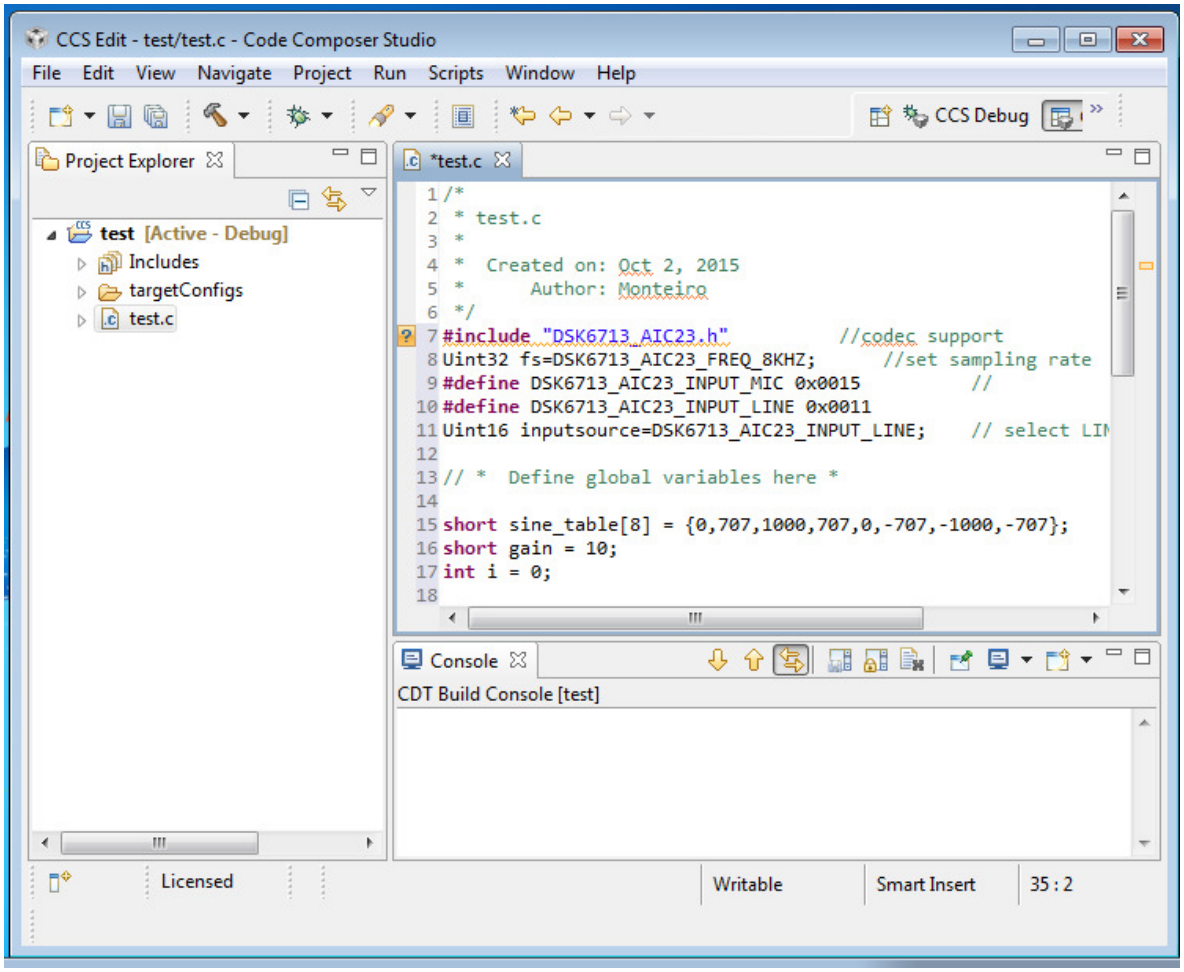
4.Add source program to the project

File> New > Source file

Source file: Give the name of the source file as “myprog.c” (Don’t forget the extension .c)

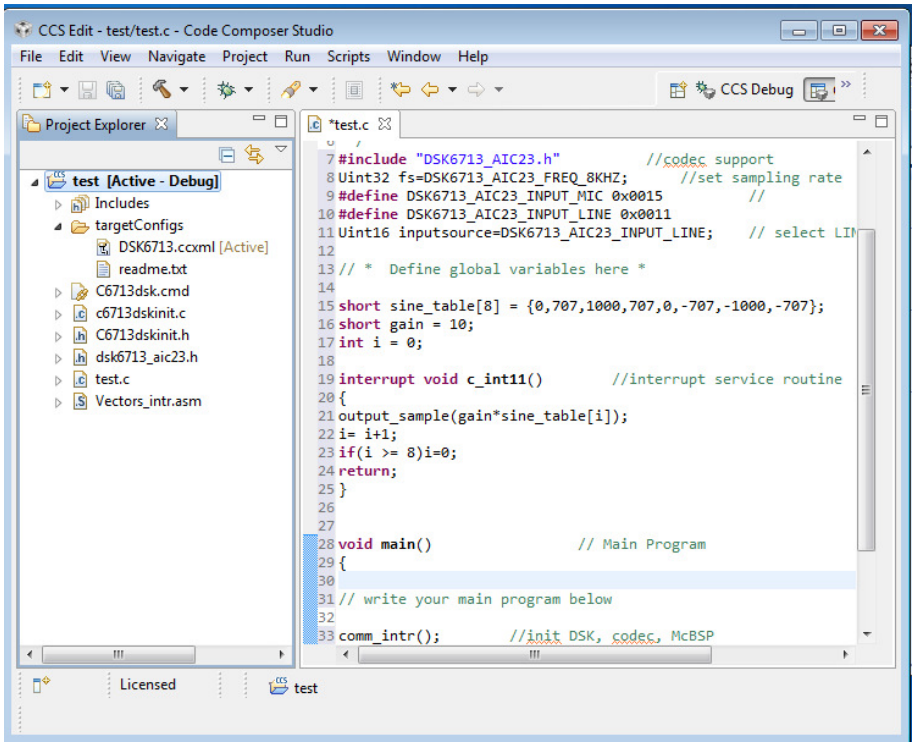
Template : Default C++ source template



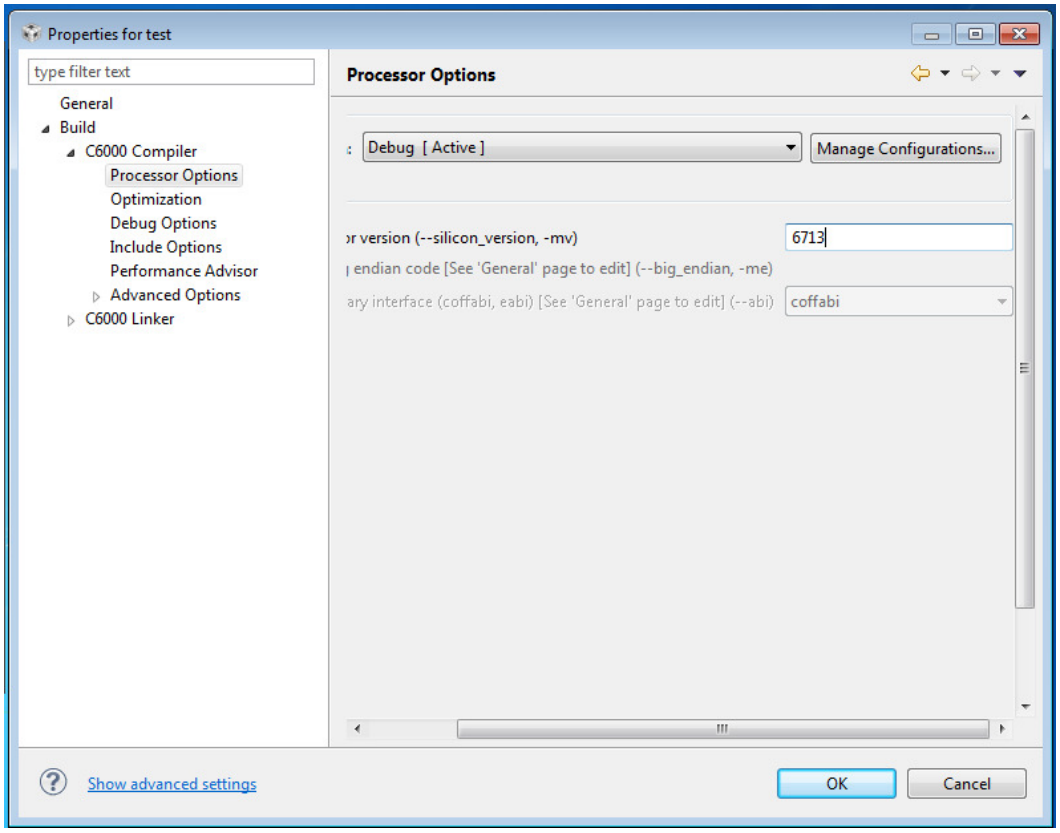


Add the required support files from E:\DSK6713\C6713\Support

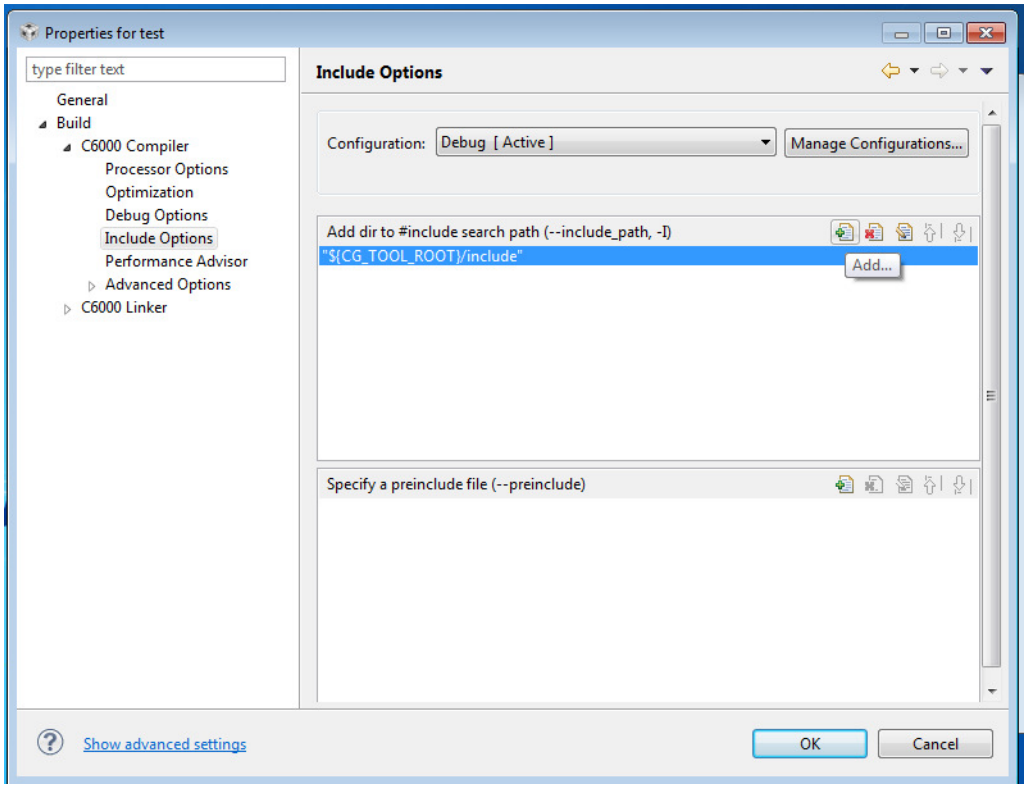
Add the files : C6713dsk.cmd c6713dskinit.c c6713dskinit.h dsk6713_aic23.h Vectors_intr.asm or Vectors_poll.asm



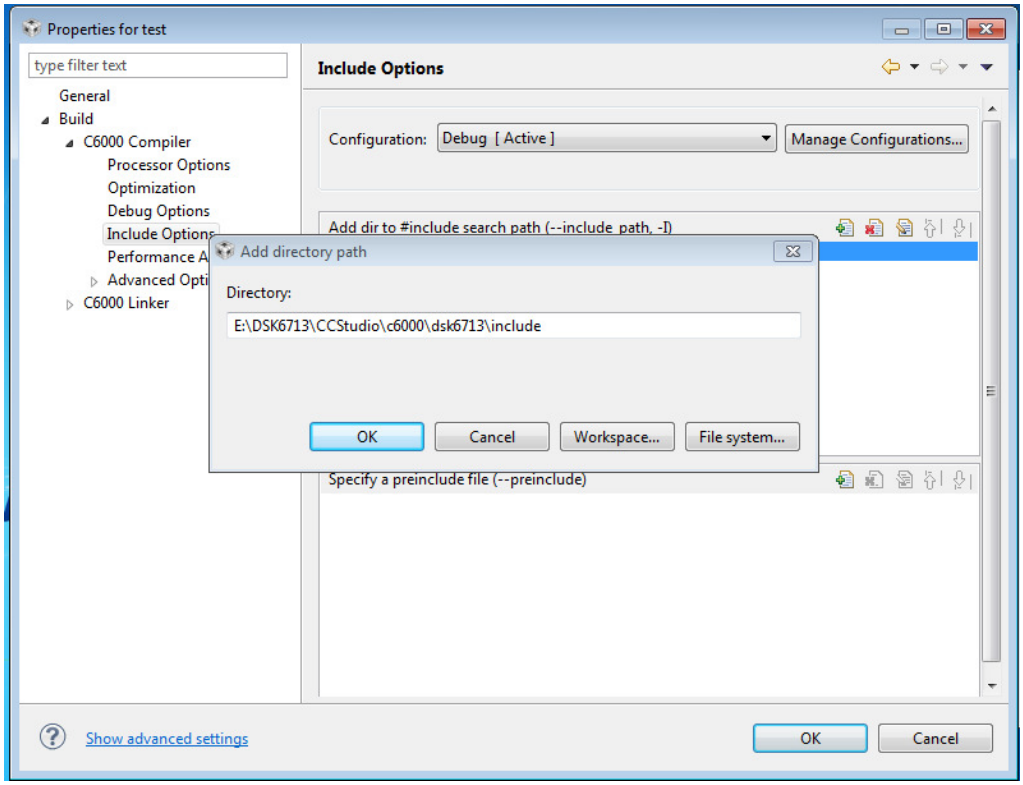
Right click on Project name in the Project Explorer > Show Build Settings > Build > C6000 Compiler > Processor Options >Target processor version and set its value to "6713" (no quotes)

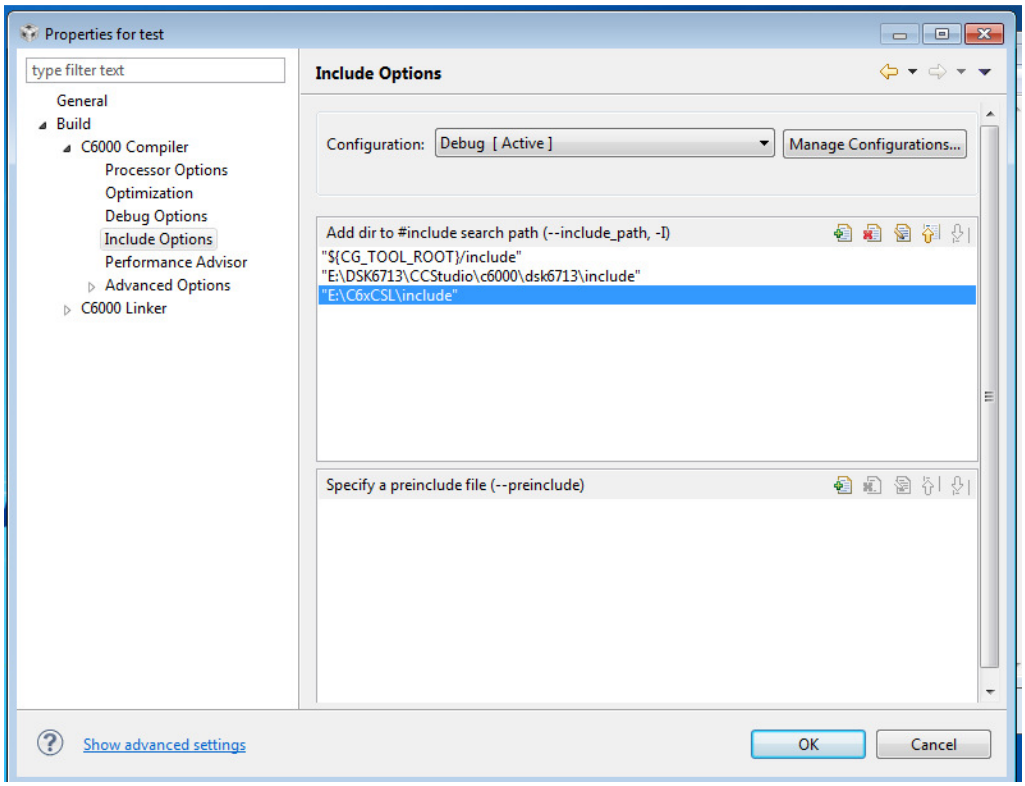


Include required header files and libraries in the project
Build > C6000 Compiler >Include options / Add dir to # include search and path click Add file

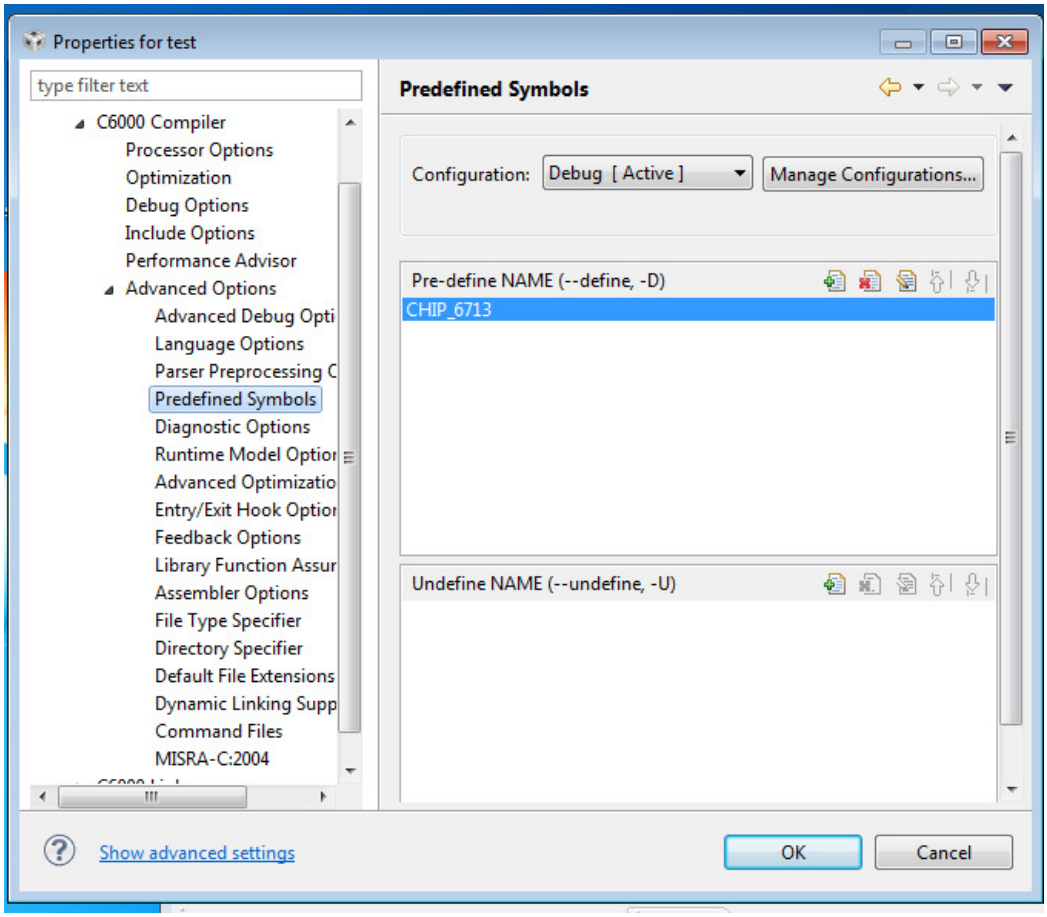


Add the following paths or browse and locate using the file system option
E:\DSK6713\CCStudio\c6000\dsk6713\include
E:\C6xCSL\include
(Make the necessary changes in the path depending on where you have the above folders)





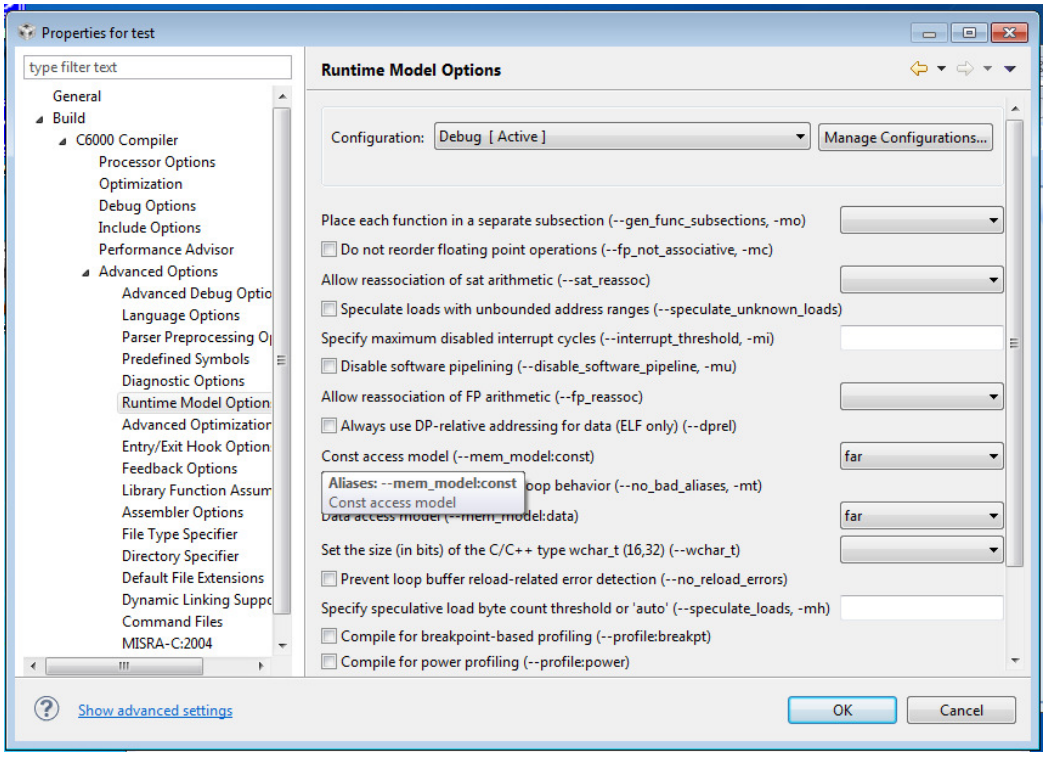
Go to Build > C6000 Compiler >Advanced Options>Predefined Symbols\Pre-define NAME and add CHIP_6713



Go to Build > C6000 Compiler > Advanced Options > Runtime Model Options

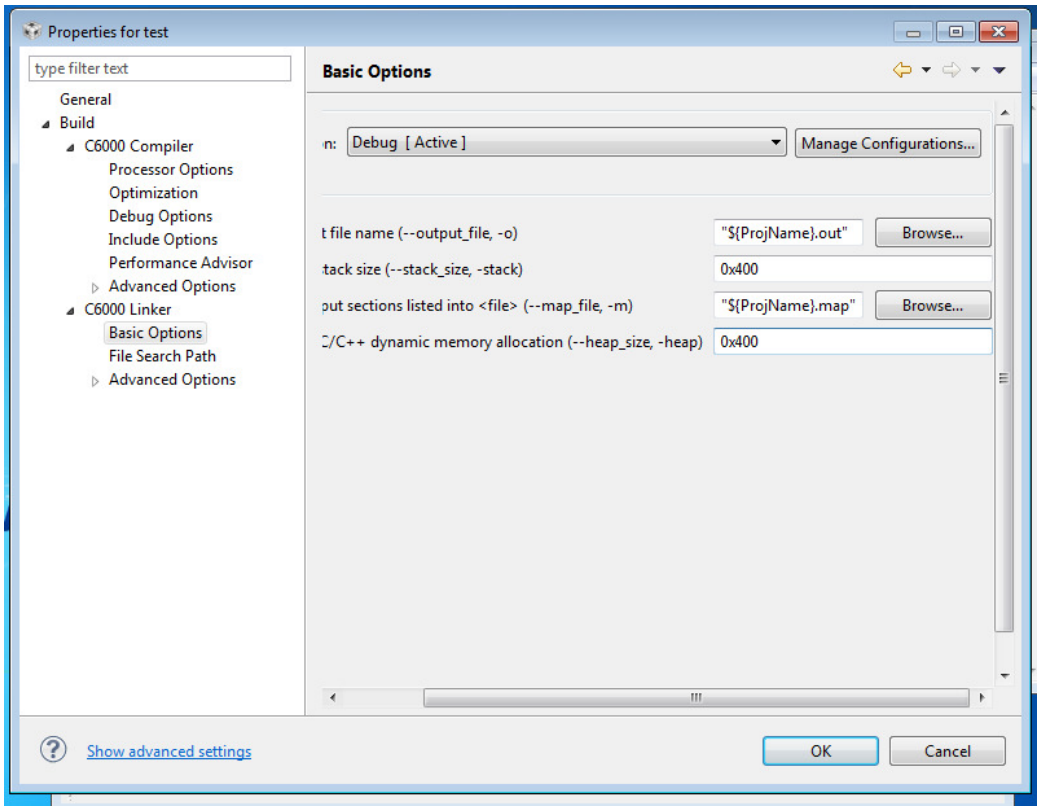
Const access model select far

Data access model select far



Go to Build > C6000 Linker > Basic Options

Type in values of 0x400 for stack size and 0x400 for heap size

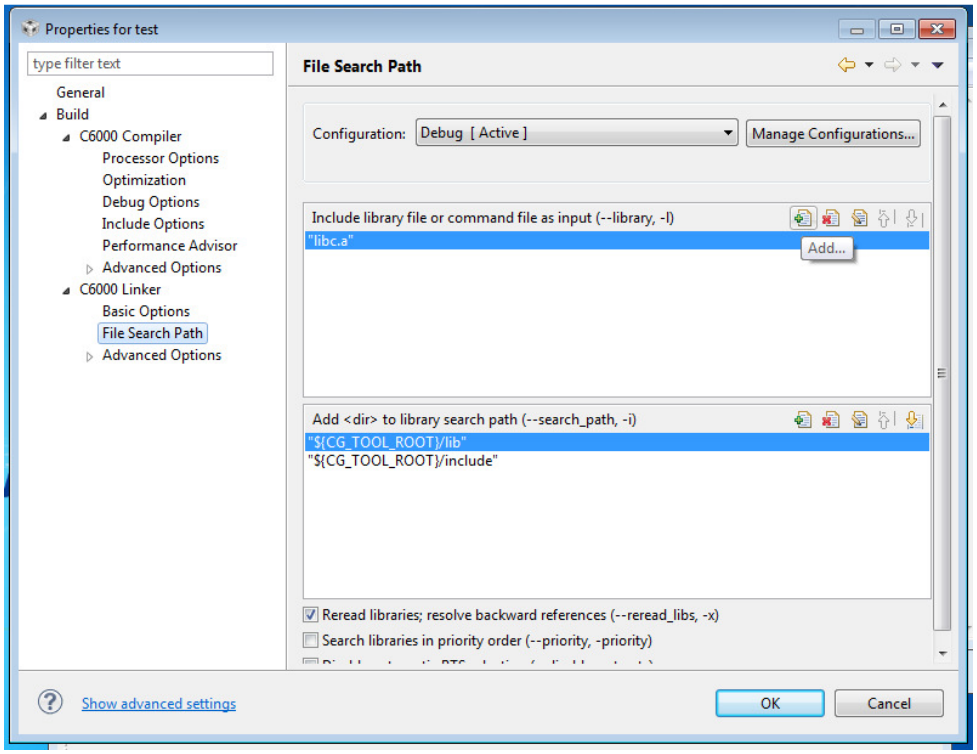


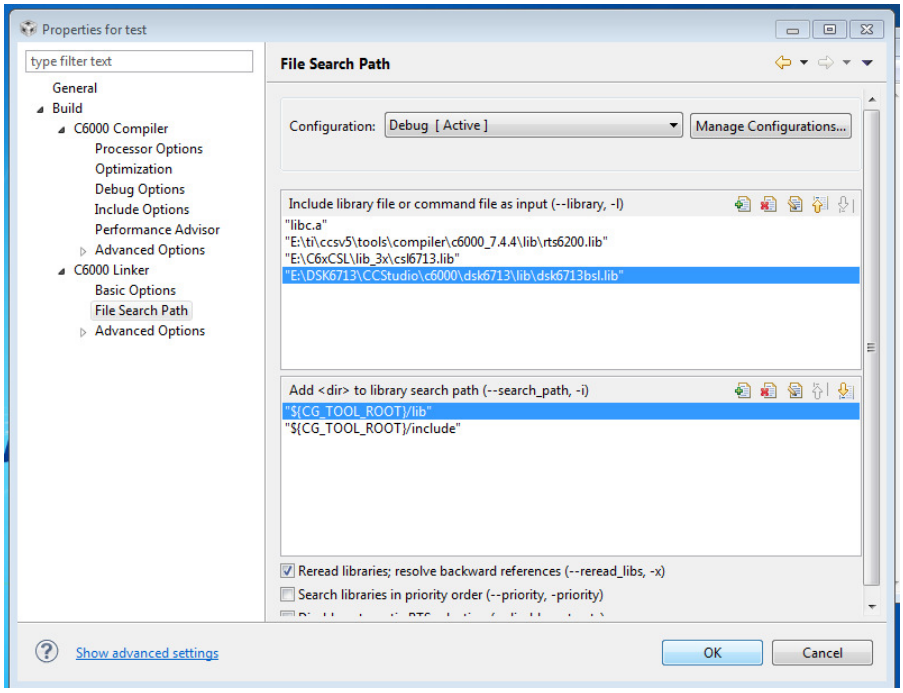
Go to Build> C6000 Linker > File Search Path

Add the path of the run time support (rts), chip support libraries (csl) and board support libraries as follows:

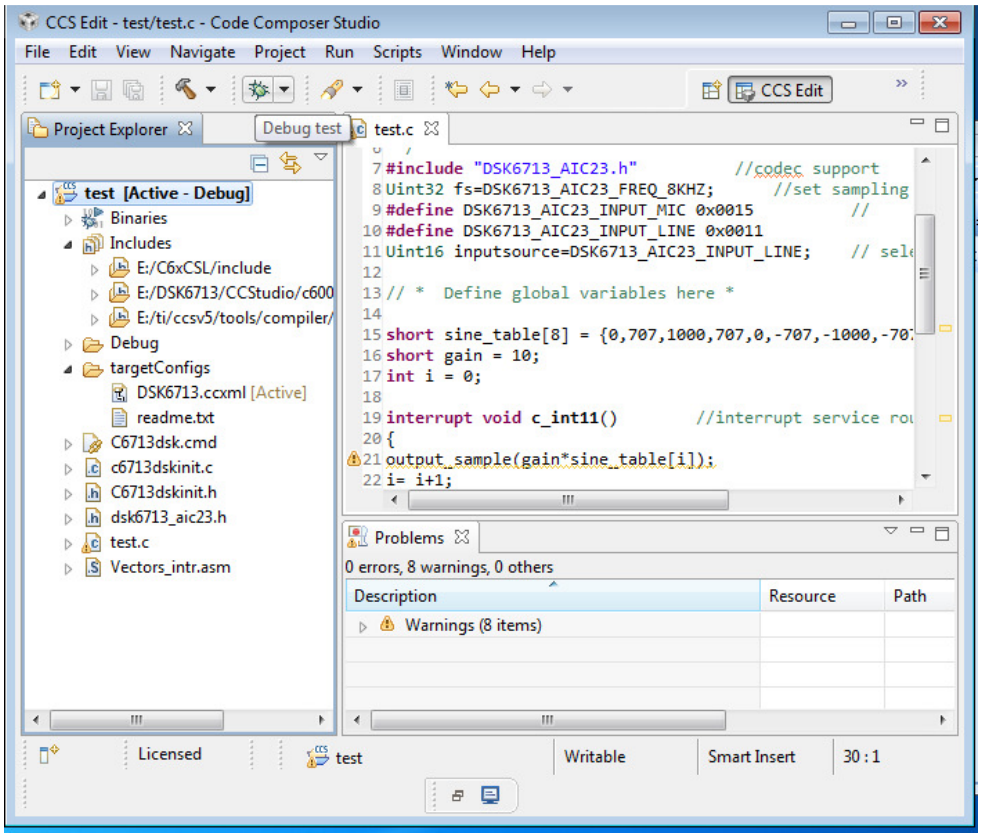
E:\ti\ccsv5\tools\compiler\c6000_7.4.4\lib\rts6200.lib
E:\C6xCSL\lib_3x\csl6713.lib
E:\DSK6713\CCStudio\c6000\dsk6713\lib\dsk6713bsl.lib
(Make the necessary changes in the path depending on where you have the above folders)

Click OK

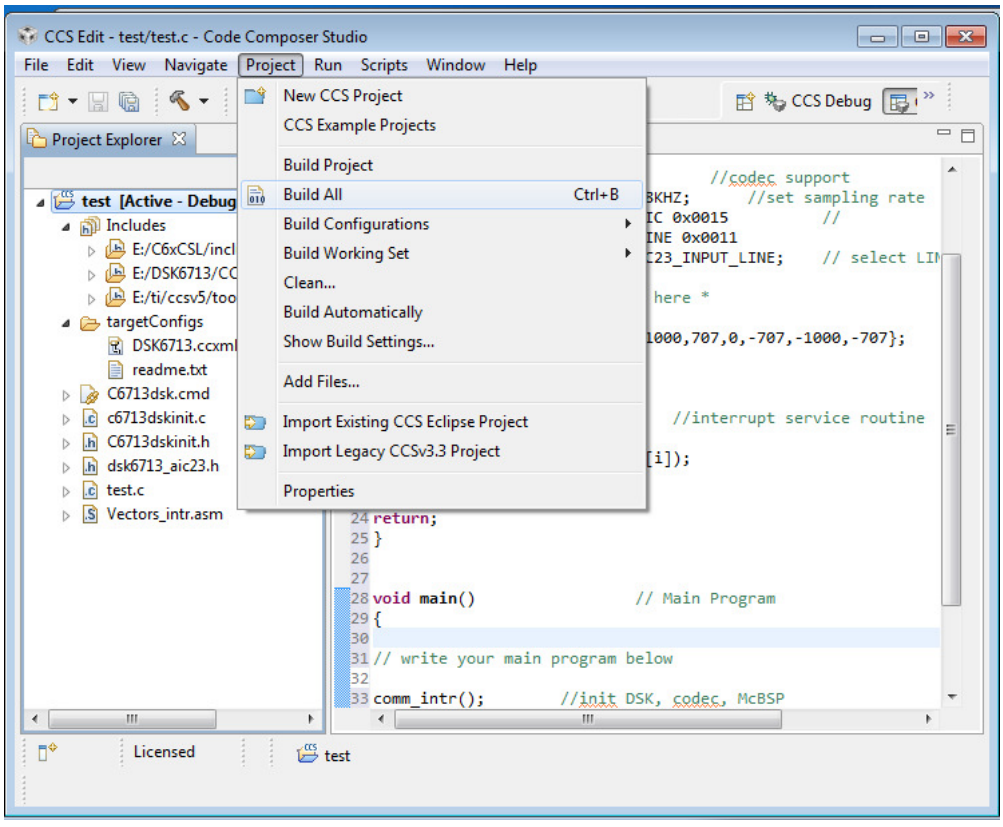




The project window appears as follows after this step

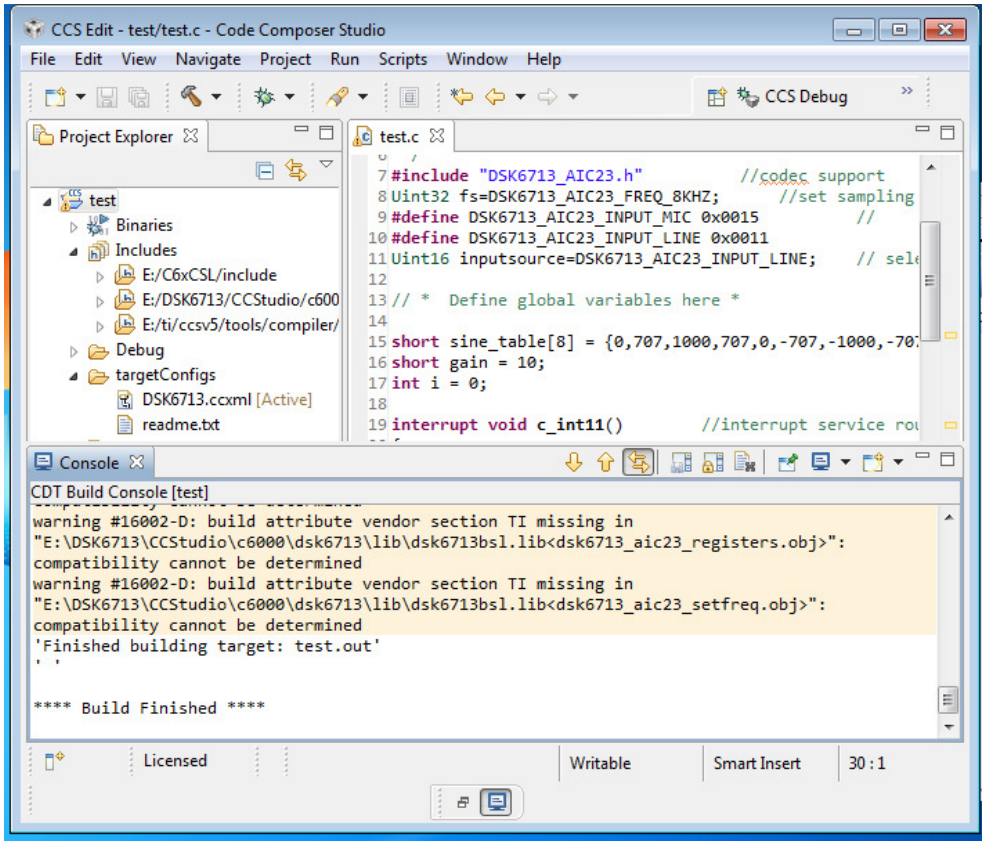


Go to Project > Build project and click

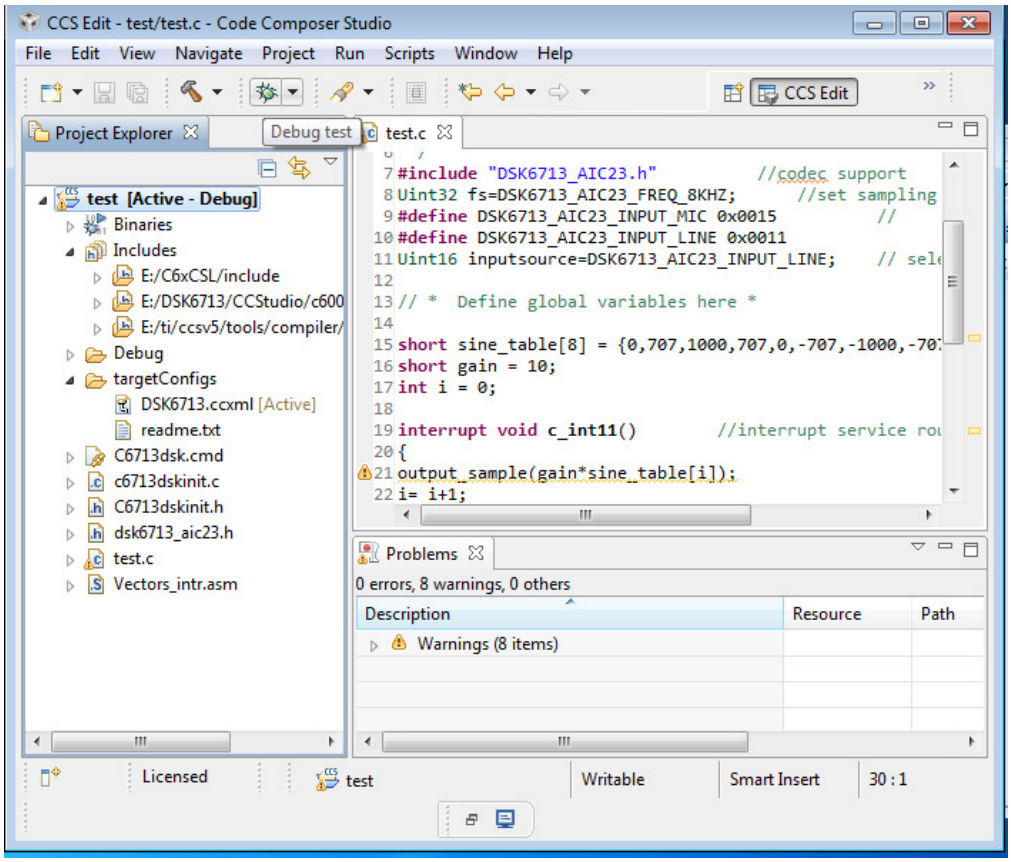


Build finished .out file generated

If any build errors correct them.Warnings may be ignored



Click the Green Debug button in the project window



This will load the .out file (ie executable code) to be loaded into the DSK.

Now click Run/Resume in the Debug window to Run the code.

To stop execution click Halt .

You can use the above project as a template for further projects. The easiest way would be to add new source file to the project after removing the existing source file. Another option would be to start a new project and replicate the steps in this write up which would be a better and elegant way.

References:

https://e2e.ti.com/cfs-file/__key/telligent-evolution-components-attachments/00-776-00-00-00-22-39-96/Using_5F00_C6713_5F00_with_5F00_CCSv5_5F00_revised20Oct.pdf