

**Documentation**

**on Live**

**Demonstration**

**Topic: MODELING AND PROTOTYPING  
WITH SIMULINK AND CODE  
COMPOSER STUDIO WITH DSK**

**Prepared by**

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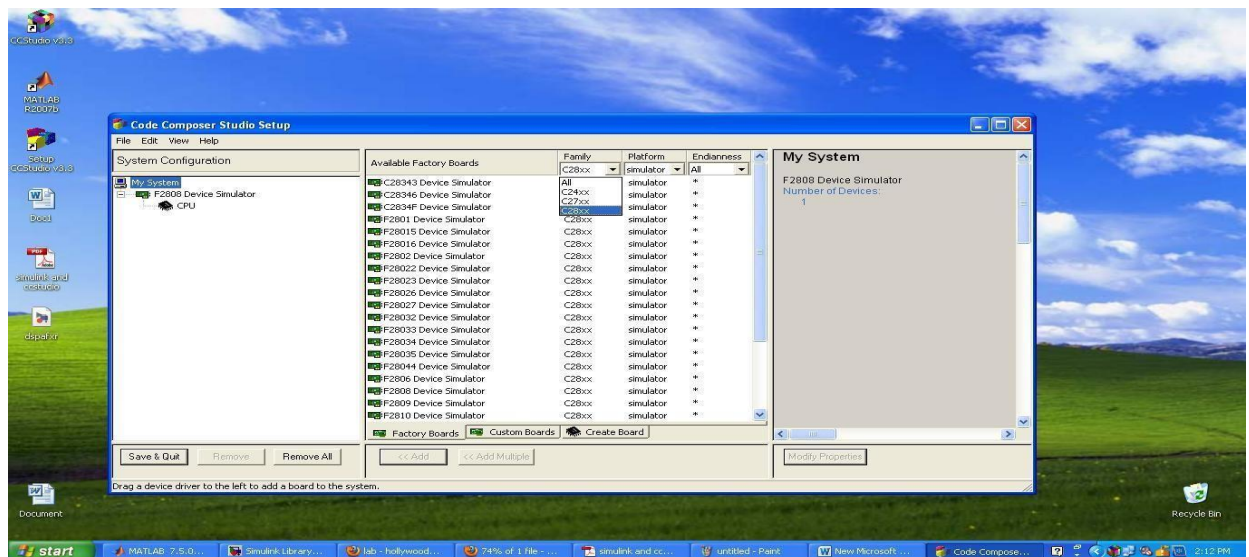
# MODELING AND PROTOTYPING WITH SIMULINK AND CODE COMPOSER STUDIO WITH DSK

## Step1:



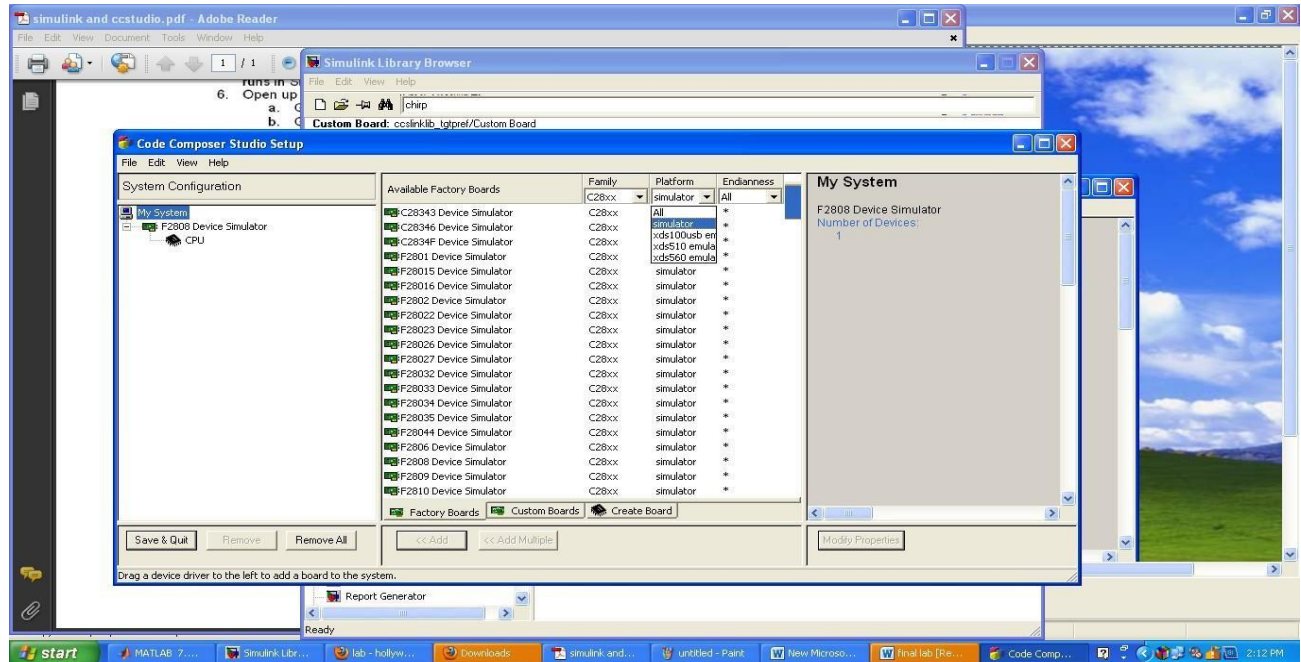
(open setup ccstudio v3.3)

## Step2:



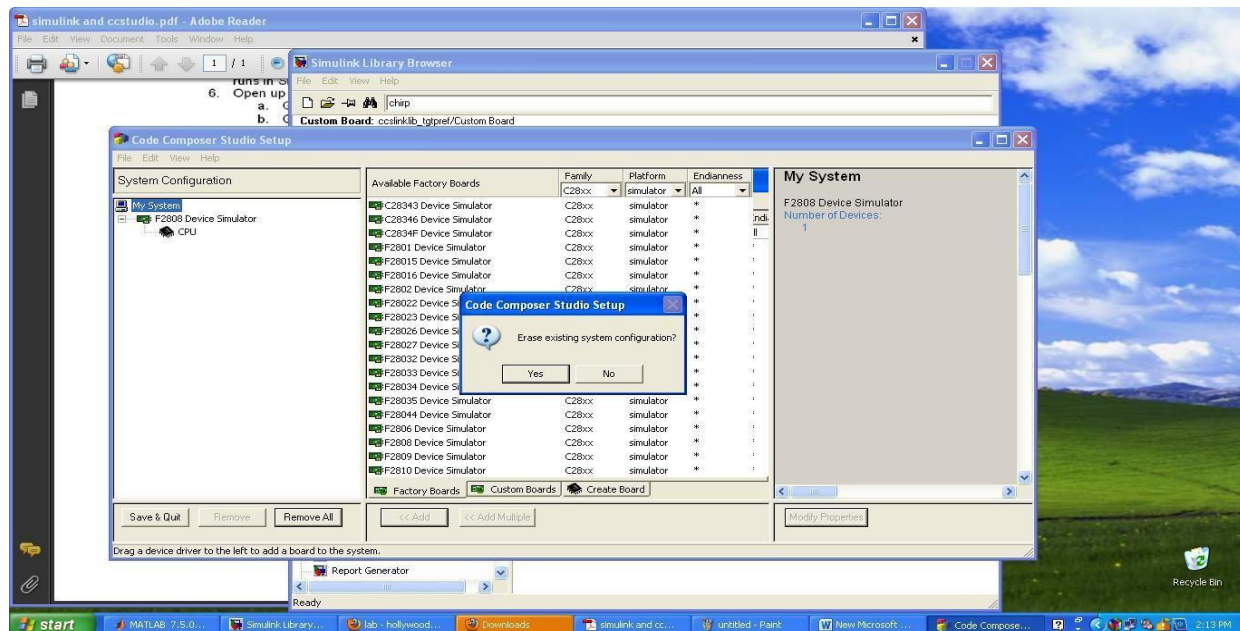
(in family choose c28XX )

**Step3:**

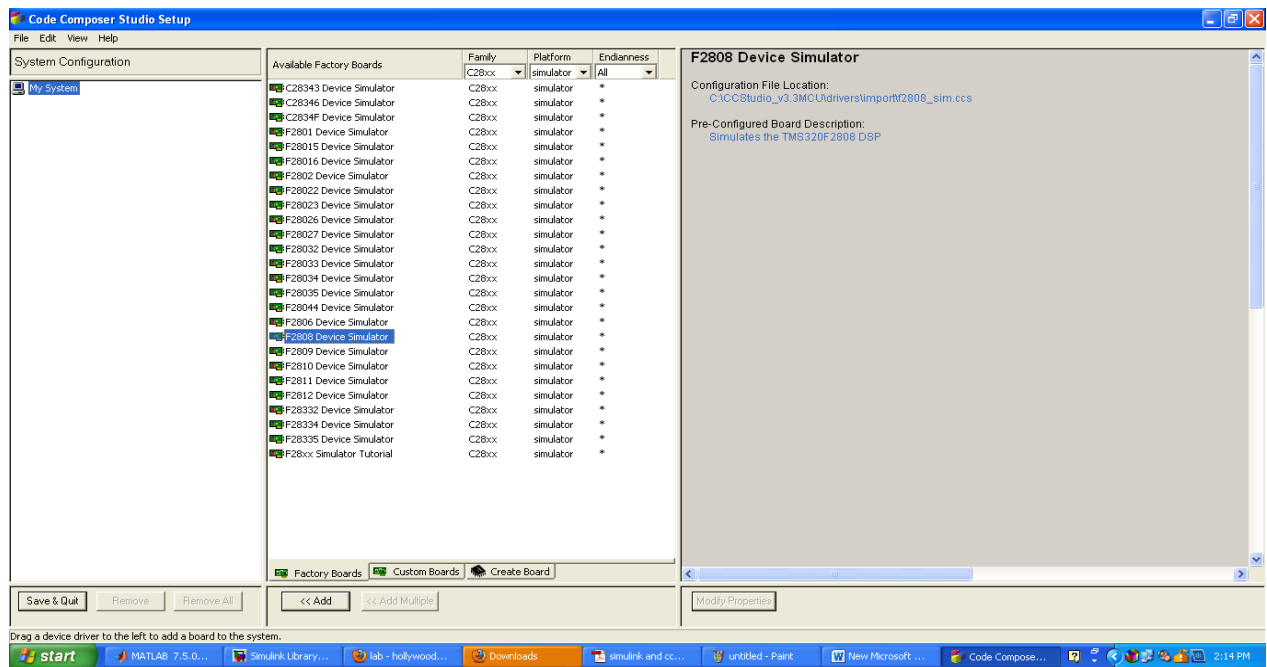


( platform choose simulator)

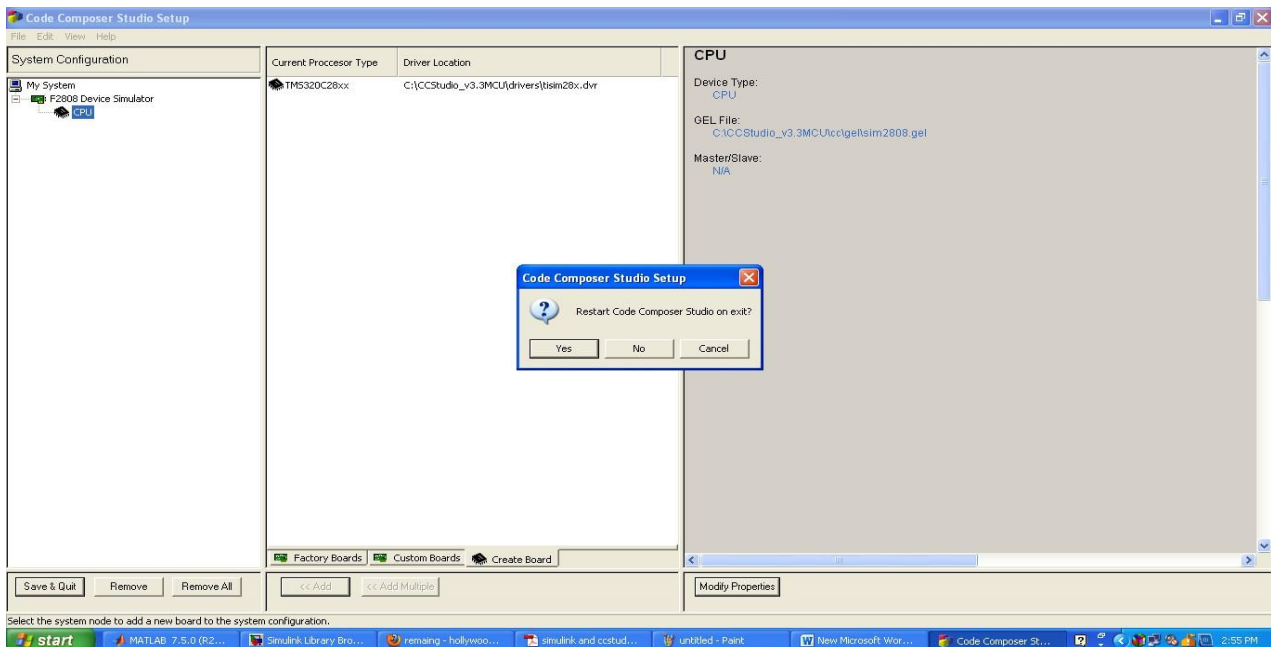
**Step4:**



(in the system configuration click remove all and click yes)

**Step5:**

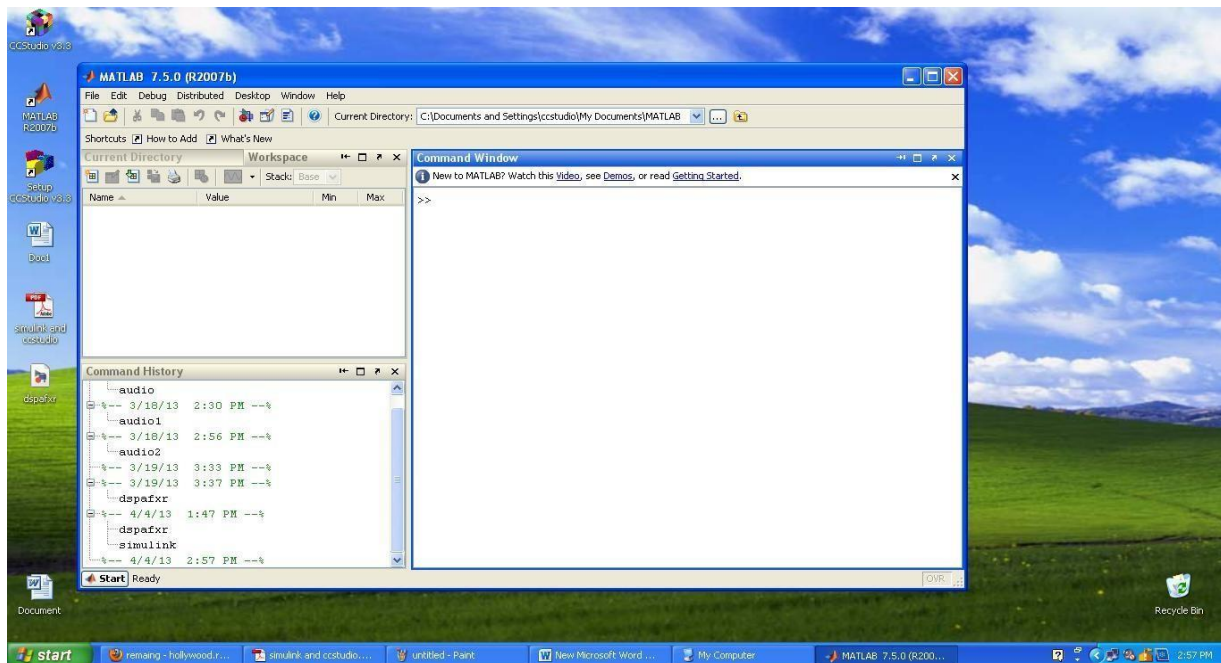
(in the availability factory board /f2808 device simulator and drag to system config)

**Step6:**

(click save and quit)

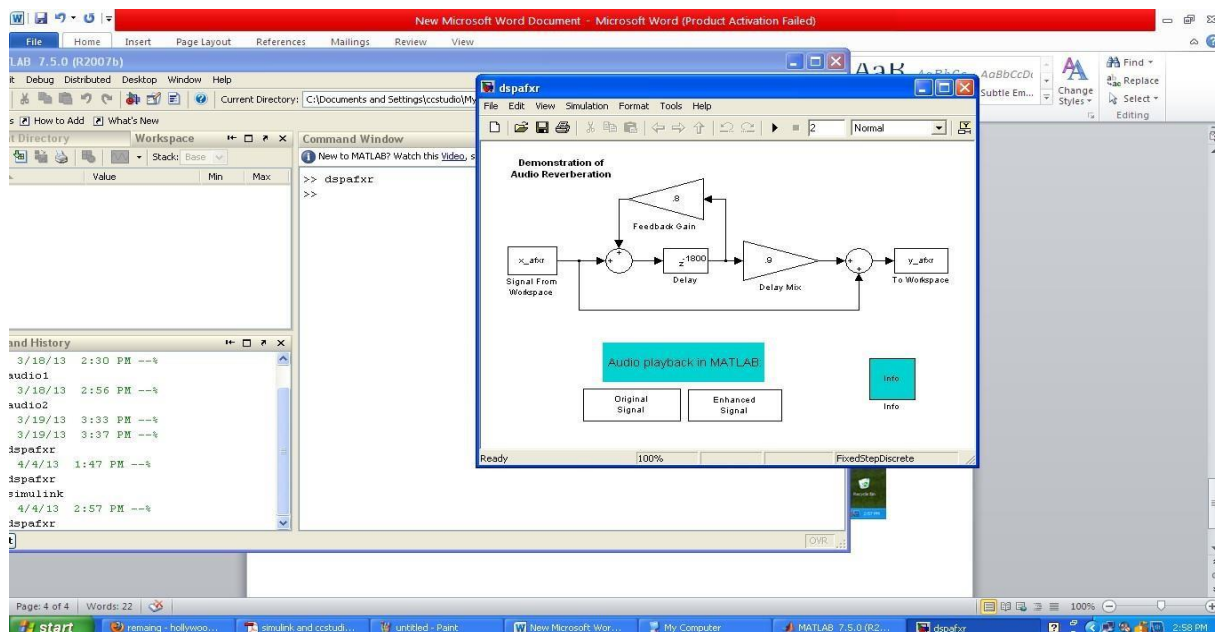


**Step7:**



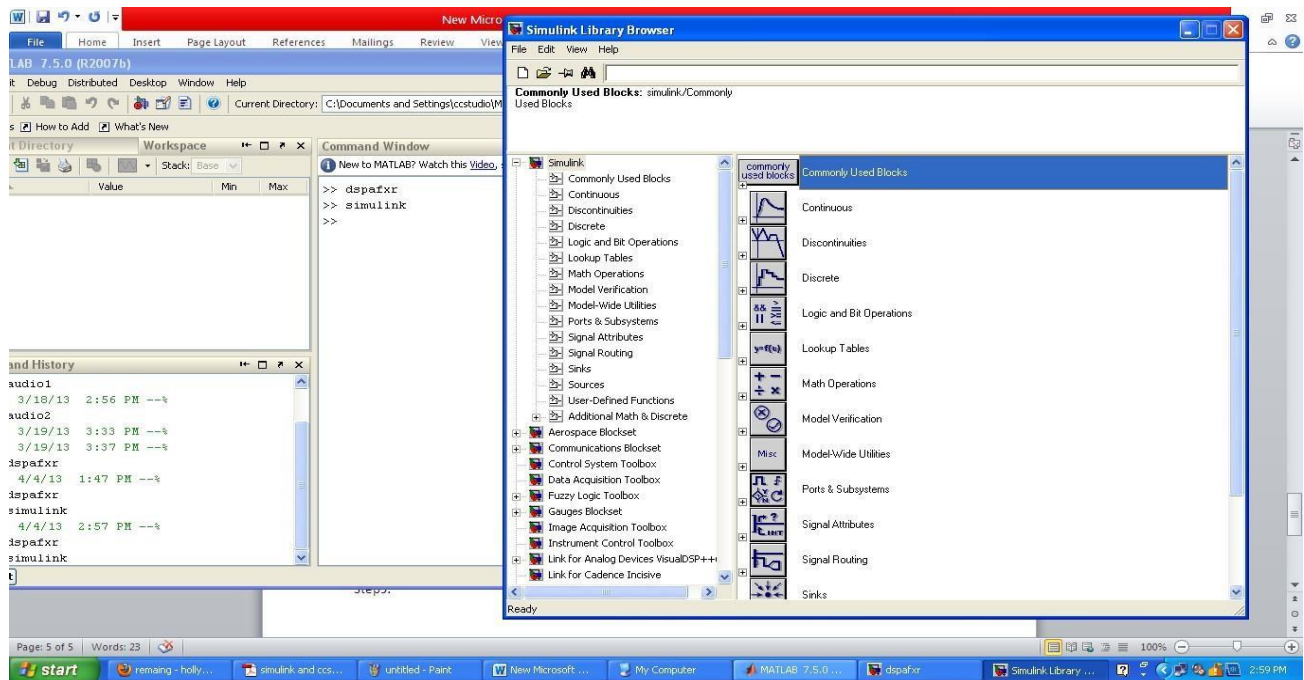
(openmatlab 2007 software)

**Step8:**



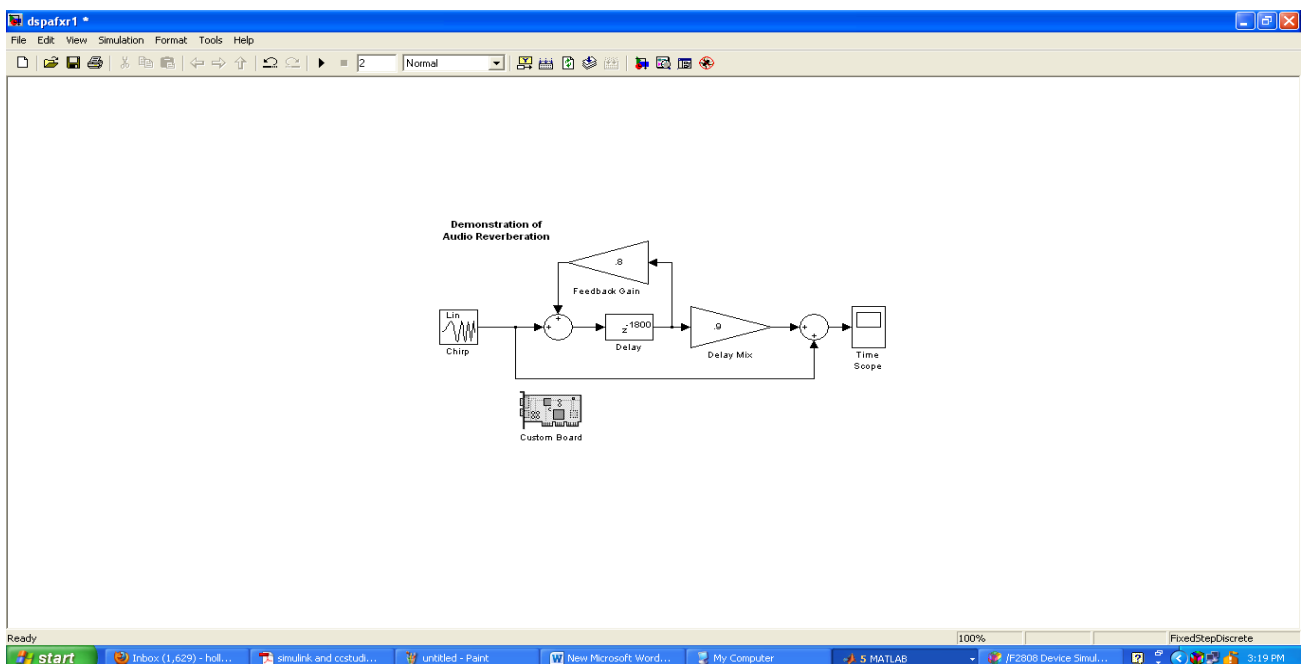
(in the command window click dspafxr)

**Step9:**



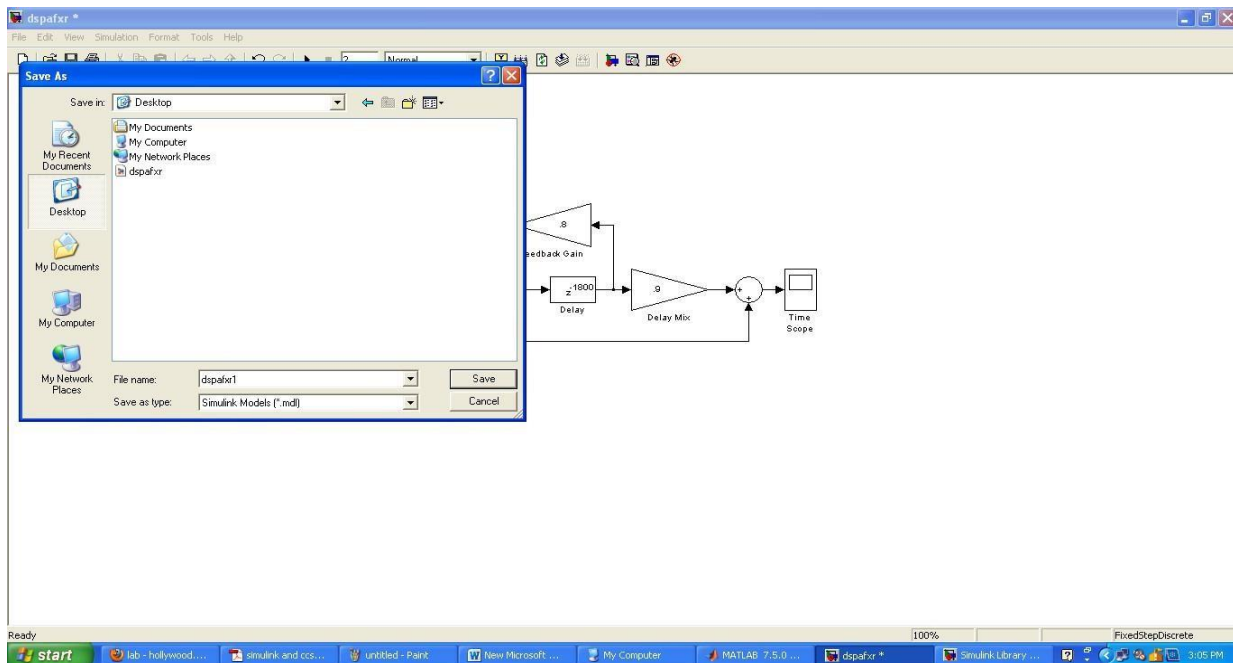
(in the command window type Simulink )

**Step10:**



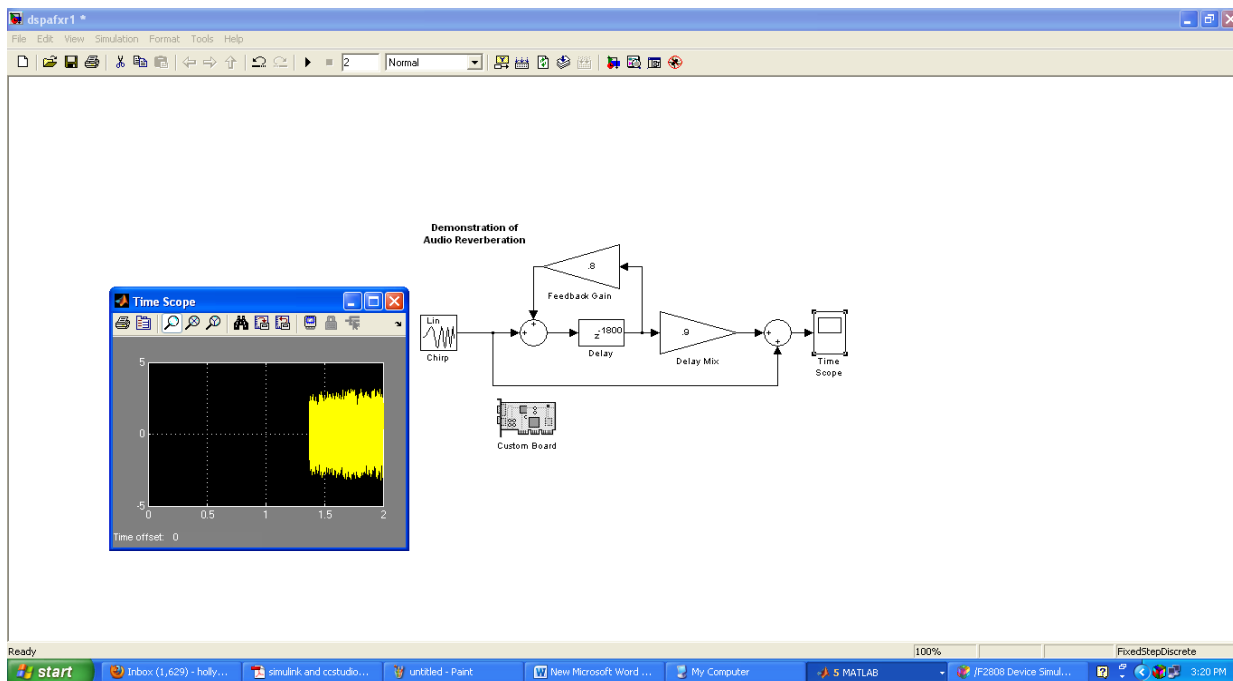
(here changes of the blocks are made as per the blocks given using Simulink browser)

**Step11:**

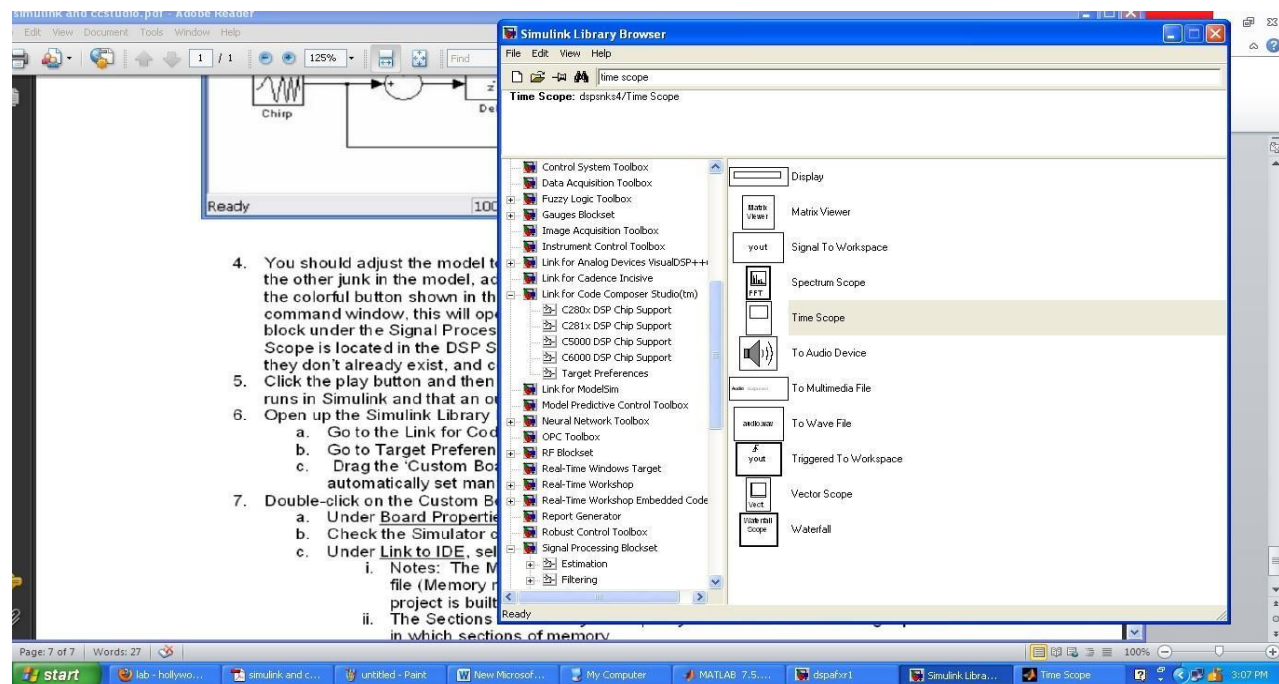


(file /save it)

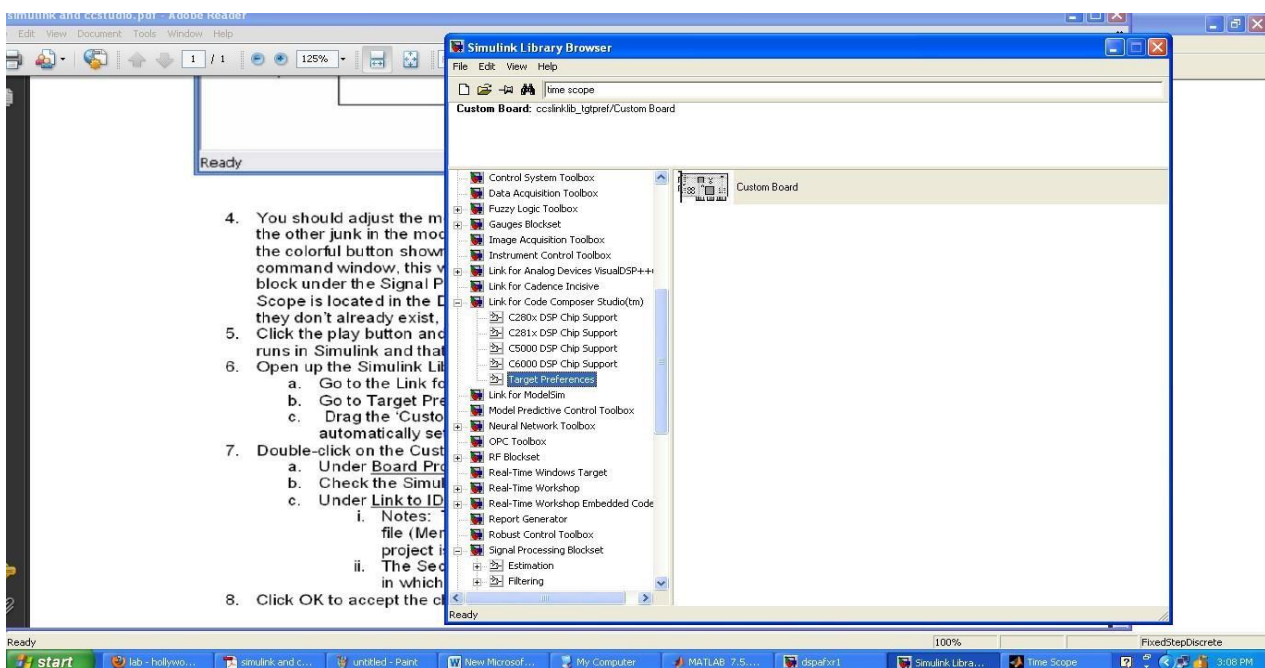
**Step12:**



(Run it for the required waveform)

**Step13:**

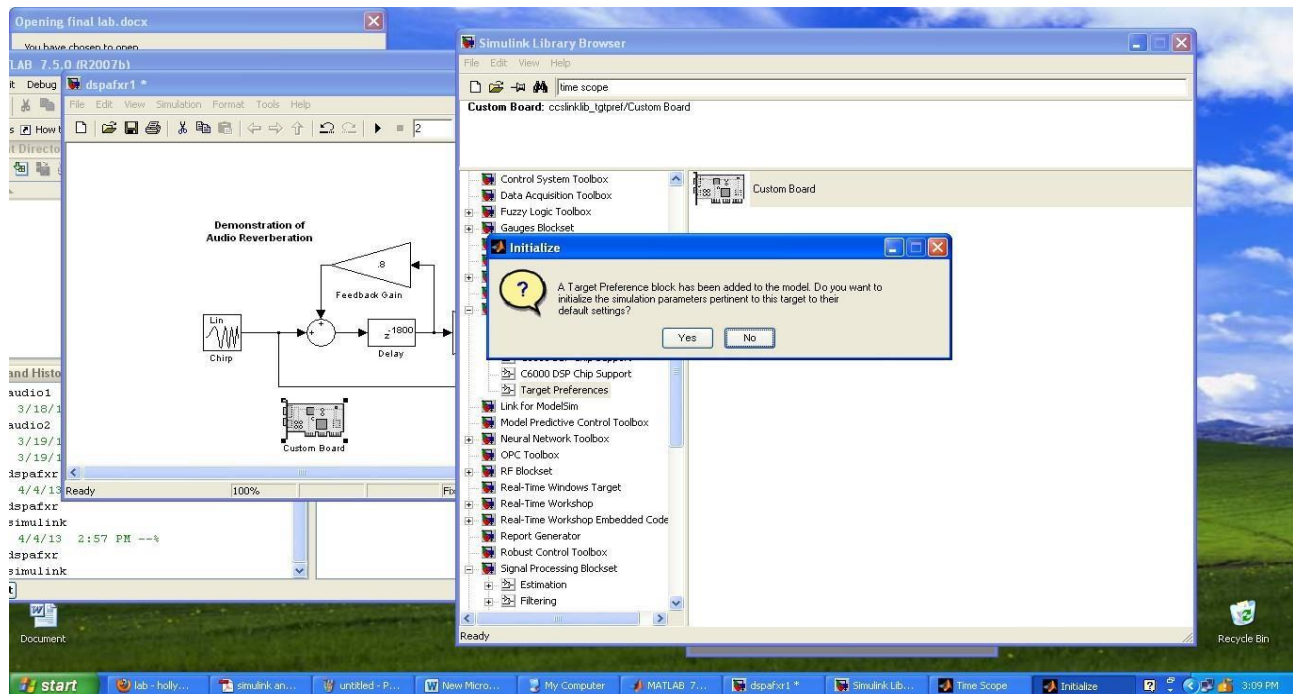
(in Simulink browser click link for cc block )

**Step14:**

(in that click target preferences and drag the block to the model)

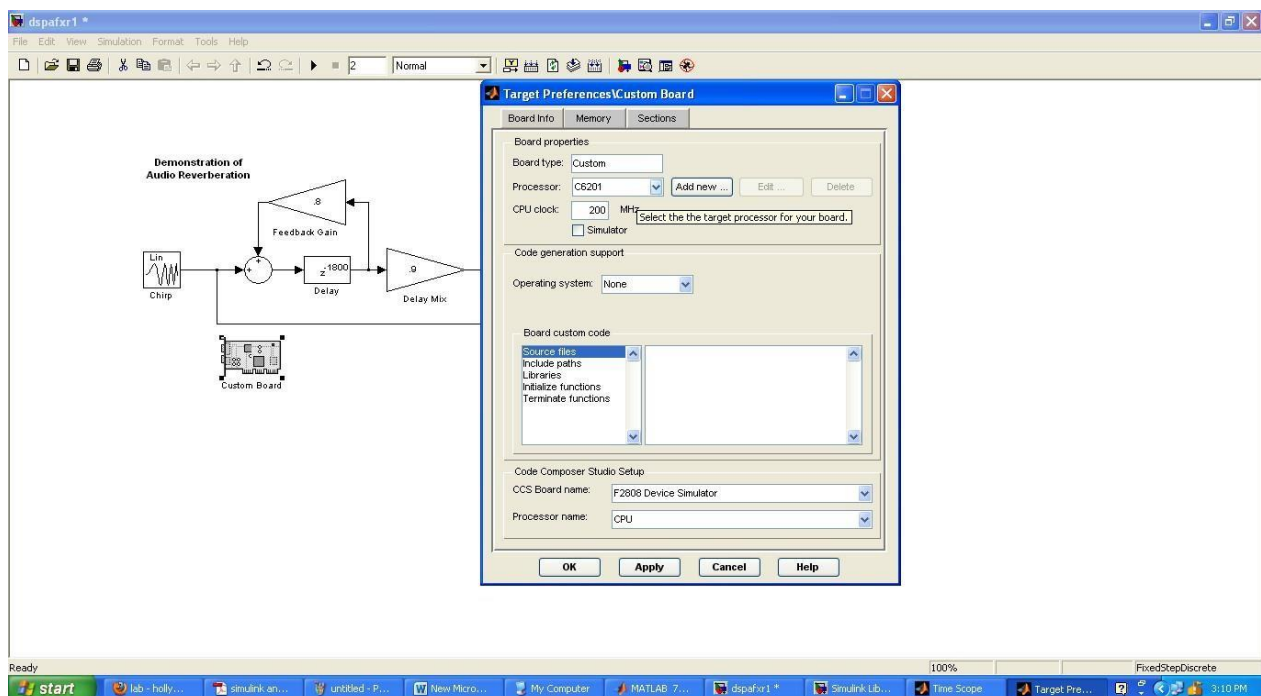


**Step15:**



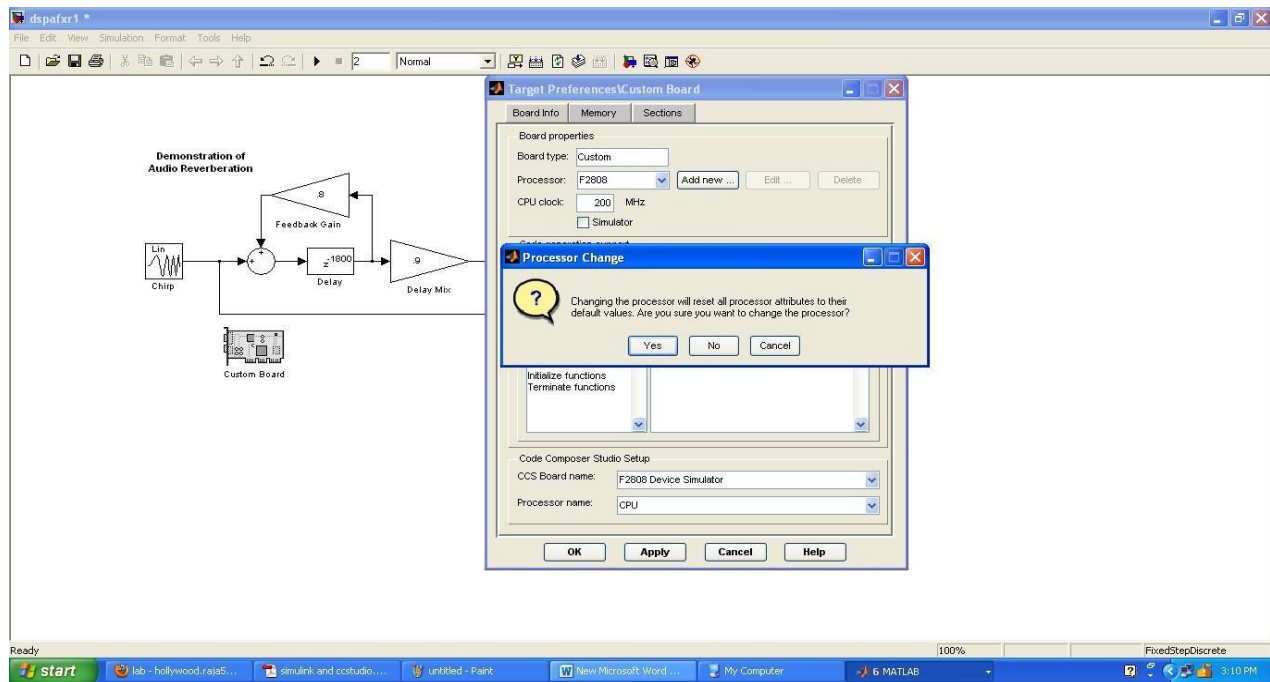
(double click the custom board and click yes)

**Step16:**



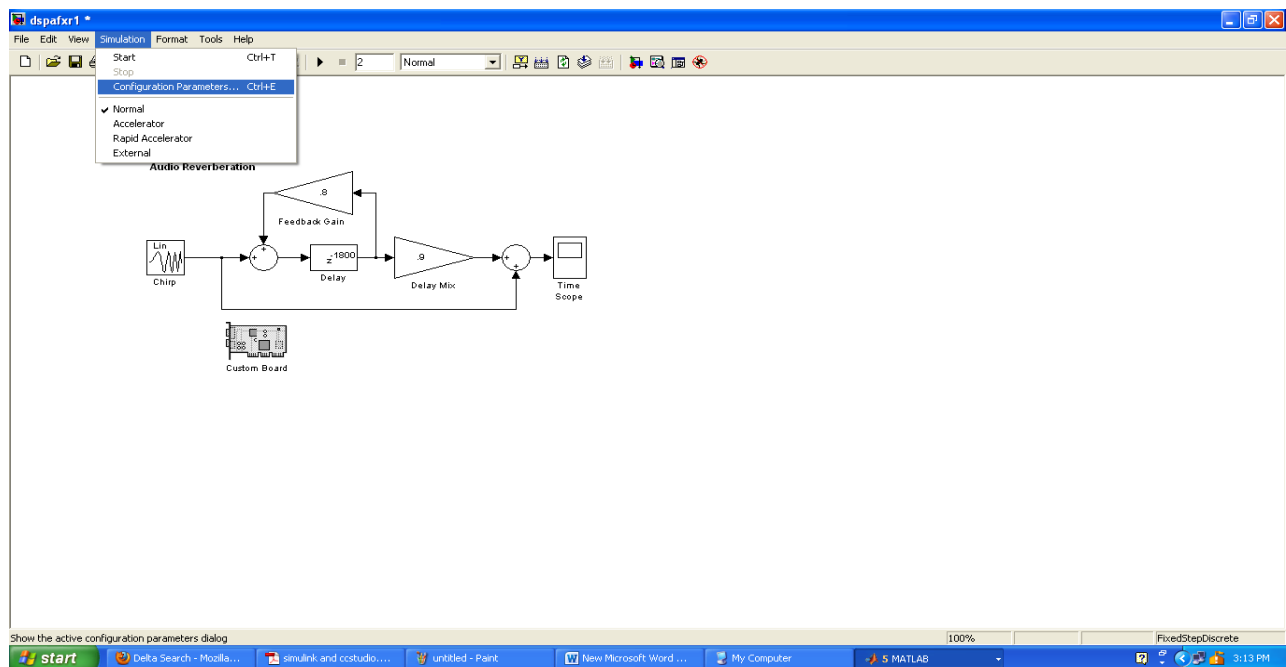
(a dialog box target preference is open it)

**Step17:**



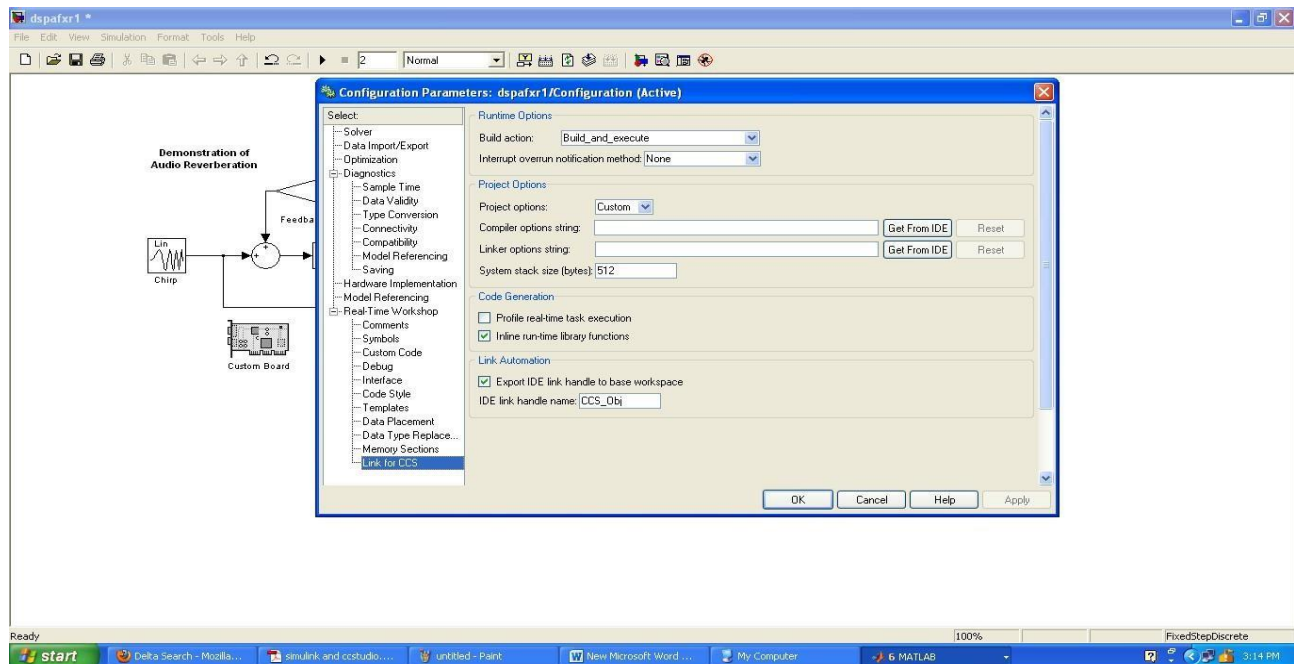
(in the build type click build and apply it ok and click yes)

**Step18:**



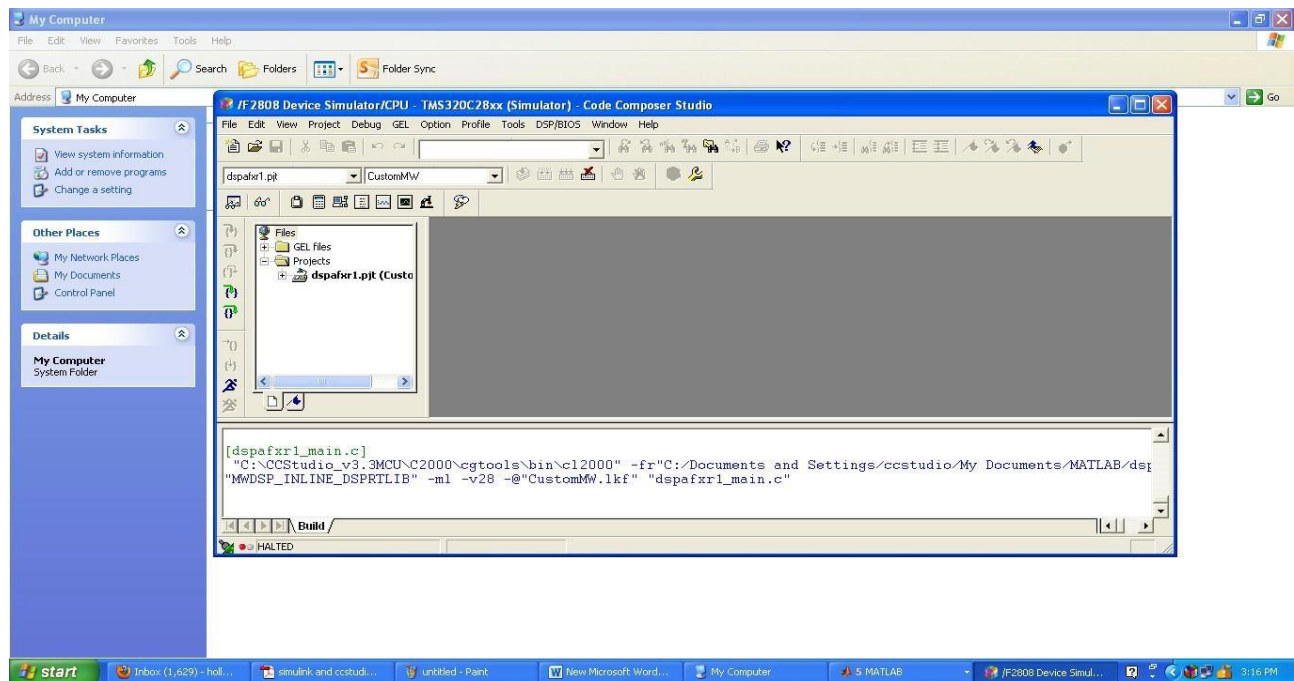
(simulate/configuration parameter)

**Step19:**

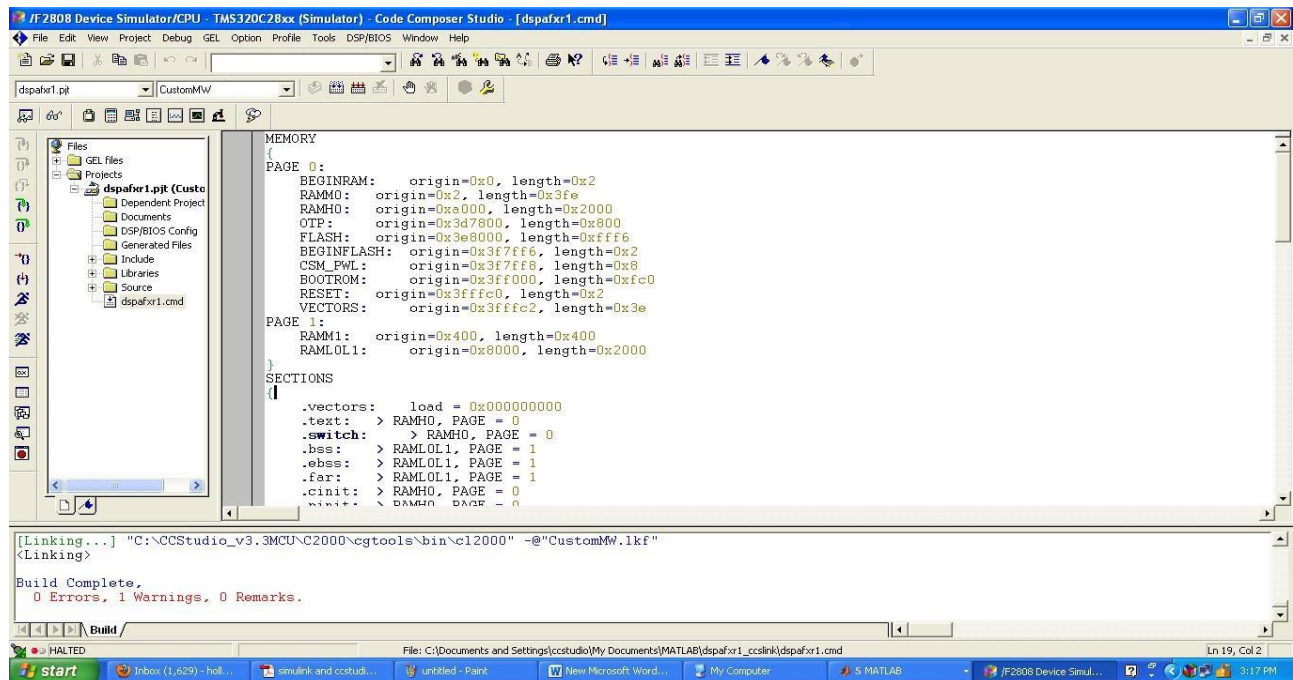


(in the config parameter click link to ccs and in the model make ctrl+b))

**Step20:**



(in the device simulator click dspafxr to get the assembly language of the blocks)

**Step21:**


The screenshot shows the Code Composer Studio interface for the JF2808 Device Simulator. The main window displays the MEMORY section of the assembly language for the dspafxr1 block. The memory layout is as follows:

```

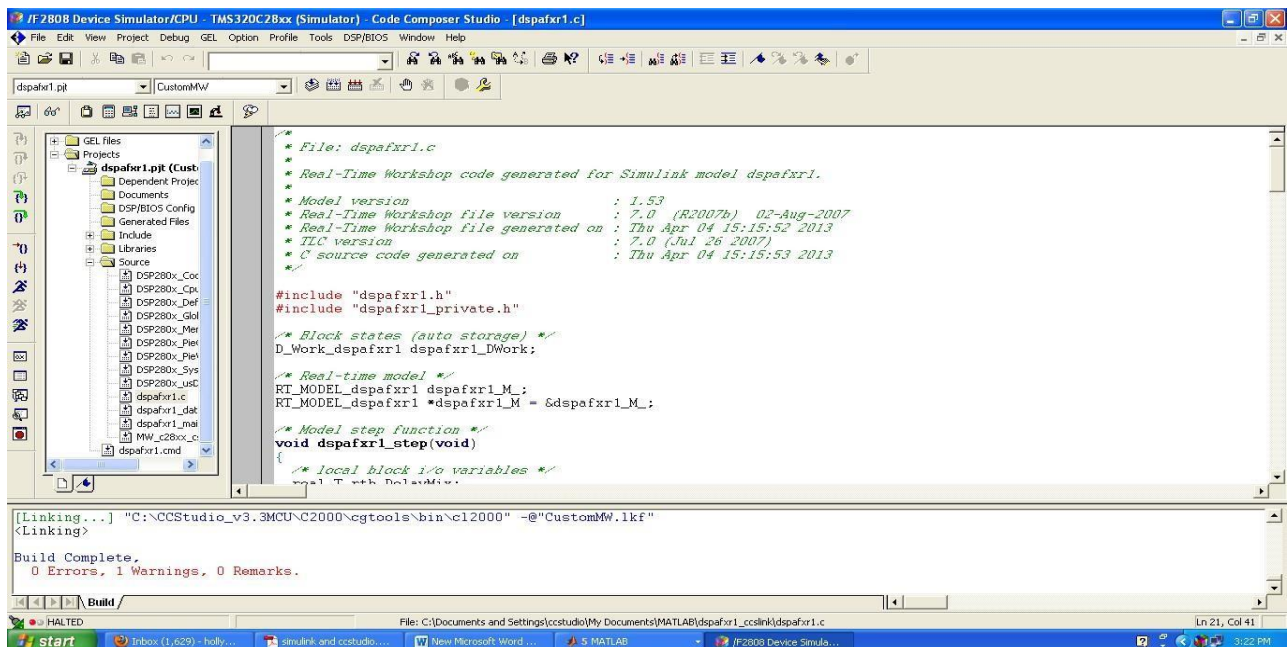
MEMORY
{
  PAGE 0:
    BEGINRAM:    origin=0x0, length=0x2
    RAMM0:       origin=0x2, length=0x3fe
    RAMH0:       origin=0x4000, length=0x2000
    OTP:         origin=0x3d7800, length=0x800
    FLASH:       origin=0x3e8000, length=0xffff6
    BEGINFLASH:  origin=0x3f7ff6, length=0x2
    CSM_PWL:     origin=0x3f7ff8, length=0x8
    BOOTROM:     origin=0x3ff000, length=0xfcc0
    RESET:       origin=0x3fffc0, length=0x2
    VECTORS:     origin=0x3fffc2, length=0x3e
  PAGE 1:
    RAMM1:       origin=0x400, length=0x400
    RAMOL1:      origin=0x8000, length=0x2000
}

SECTIONS
{
  .vectors: load = 0x00000000
  .text:    > RAMH0, PAGE = 0
  .switch:  > RAMH0, PAGE = 0
  .bss:     > RAMOL1, PAGE = 1
  .obss:    > RAMOL1, PAGE = 1
  .far:     > RAMOL1, PAGE = 1
  .cinit:   > RAMH0, PAGE = 0
  .init:    > RAMH0, PAGE = 0
}

```

The status bar at the bottom indicates the build is complete with 0 errors, 1 warning, and 0 remarks.

(the assembly language of the block is displayed)

**Step22:**


The screenshot shows the Code Composer Studio interface for the JF2808 Device Simulator. The main window displays the C program for the dspafxr1 block. The code is as follows:

```

/* File: dspafxr1.c
 * Real-Time Workshop code generated for Simulink model dspafxr1.
 *
 * Model version           : 1.53
 * Real-Time Workshop file version : 7.0 (R2007b) 02-Aug-2007
 * Real-Time Workshop file generated on : Thu Apr 04 15:15:52 2013
 * TLC version             : 7.0 (Jul 26 2007)
 * C source code generated on : Thu Apr 04 15:15:53 2013
 */

#include "dspafxr1.h"
#include "dspafxr1_private.h"

/* Block states (auto storage) */
D_Work_dspafxr1 dspafxr1_DWork;

/* Real-time model */
RT_MODEL_dspafxr1 dspafxr1_M;
RT_MODEL_dspafxr1 *dspafxr1_M = &dspafxr1_M;

/* Model step function */
void dspafxr1_step(void)
{
  /* local block i/o variables */
  real_T y;
}

```

The status bar at the bottom indicates the build is complete with 0 errors, 1 warning, and 0 remarks.

(the c program for the block is displayed)

**For any queries/feedback kindly  
contact**

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