Experiment: Implementation of LED_init.h( ) & DIP_init.h( )

Steps for programming in Code Composer Studio for LED:

1. New project from project menu and create new project
   Settings during New project:
   1. Family : C6000
   2. Variant : C671x floating point dsp
   3. TMS320C6713
   4. Connection: Spectrum Digital DSK-EVM eZdsp onboard DSP emulator
   5. Empty project with main.c
2. Go to properties of new project and do following settings
   1. C6000 compiler :
      A. Include options: add following files
         1) "C:\DSK6713\c6000\dsk6713\include"
         2) "C:\C6xCSL\include"
      B. Advance options-predefine symbol : Delete previous name and type CHIP_6713
   2. C600 Linker : Includes following files
      1) "C:\DSK6713\c6000\dsk6713\lib\dsk6713bsl.lib"
      2) "C:\C6xCSL\lib_3x\csl6713.lib"
3. Do programming and build by cntrl+b and debug by f11.

Description Of Header Files:

1. dsk6713.h
   This files contains DSK6713 board specific I/O registers define for the CPLD.
2. dsk6713_led.h
   Interface for LEDs on the DSK6713 board and it contains the declaration function required for initializing led.
3. dsk6713_dip.h
   Interface for DIPs on the DSK6713 board and it contains the declaration function required for initializing DIP switches.

Description Of Functions:

1. DSK6713_init();
   This function is called for initializing the board i.e. setting up clock and other peripherals.
2. DSK6713_LED_init()
   This function is called for initializing LEDs.
3. DSK6713_DIP_init();
   This function is called for initializing DIP Switches.

CODE:

```
#include "dsk6713.h"
#include "dsk6713_led.h"
#include "dsk6713_dip.h"
void main()
{
   DSK6713_init();
   DSK6713_LED_init();
   DSK6713_DIP_init();
   while(1)
   {
      DSK6713_LED_toggle(0);
      DSK6713_LED_on(1);
      DSK6713_LED_on(2);
      DSK6713_waitusec(500000);
      DSK6713_LED_off(1);
      DSK6713_LED_off(2);
      DSK6713_waitusec(500000);
     if (DSK6713_DIP_get(3) == 0)
        DSK6713_LED_off(3);
        else
        DSK6713_LED_on(3);

   }
}
```

Conclusion:

1)LED0 will turn on and off continuously.

2)LED1 & LED2 will turn on and off continuously with delay of 0.5 sec.

3)LED3 will turn on when switch is not pressed and turn off when switch is pressed.