

Lab 1

Setup your Development Environment. (see note on itslearning).

Create your first project (see note on itslearning).

Type the code from list 1 into your main.c.

Compile the code, connect the kit, download and reset.

The on-board LED will now light up when you press the <SELECT> button.



Fig. 1: Tiva EK-TM4C123GXL Evaluation Board

```

/*****
 * MODULENAME.: main.c
 *****/
#include <stdint.h>
#include "tm4c123gh6pm.h"

int main(void)
/*****
 * Function : LED follows SWITCH
 *****/
{
    int dummy;

    // Enable the GPIO port that is used for the on-board LEDs and switches.
    SYSCTL_RCGC2_R = SYSCTL_RCGC2_GPIOF;

    // Do a dummy read to insert a few cycles after enabling the peripheral.
    dummy = SYSCTL_RCGC2_R;

    // Set the direction as output (PF1 - PF3).
    GPIO_PORTF_DIR_R = 0x0E;

    // Enable the GPIO pins for digital function (PF1 - PF4)
    GPIO_PORTF_DEN_R = 0x1E;

    // Enable internal pull-up (PF4).
    GPIO_PORTF_PUR_R = 0x10;

    // Loop forever.
    while(1)
    {
        if( GPIO_PORTF_DATA_R & 0x10 )
            GPIO_PORTF_DATA_R &= ~(0x02);
        else
            GPIO_PORTF_DATA_R |= 0x02;
    }
    return( 0 );
}
/***** End Of Module *****/

```

List 1. Main.c

Congratulations, you have made your first program.