```c
// Stop Go C Example (Basic)
// Jason Losh

//-----------------------------------------------------------------------------
// Hardware Target
//-----------------------------------------------------------------------------

// Target Platform: EK-TM4C123GXL Evaluation Board
// Target uC:       TM4C123GH6PM
// System Clock:    40 MHz

// Hardware configuration:
// Red LED:
//   PF1 drives an NPN transistor that powers the red LED
// Green LED:
//   PF3 drives an NPN transistor that powers the green LED
// Pushbutton:
//   SW1 pulls pin PF4 low (internal pull-up is used)

//-----------------------------------------------------------------------------
// Device includes, defines, and assembler directives
//-----------------------------------------------------------------------------

#include <stdint.h>
#include <stdbool.h>
#include "tm4c123gh6pm.h"
#include "clock.h"
#include "gpio.h"

// Pins
#define RED_LED PORTF,1
#define GREEN_LED PORTF,3
#define PUSH_BUTTON PORTF,4

//-----------------------------------------------------------------------------
// Subroutines
//-----------------------------------------------------------------------------

// Blocking function that returns only when SW1 is pressed
void waitPbPress()
{
    while(getPinValue(PUSH_BUTTON));
}

// Initialize Hardware
void initHw()
{
    // Initialize system clock to 40 MHz
    initSystemClockTo40Mhz();

    // Enable clocks
    enablePort(PORTF);

    // Configure LED and pushbutton pins
    selectPinPushPullOutput(GREEN_LED);
    selectPinPushPullOutput(RED_LED);
    selectPinDigitalInput(PUSH_BUTTON);
    enablePinPullup(PUSH_BUTTON);
}

//-----------------------------------------------------------------------------
// Main
//-----------------------------------------------------------------------------

int main(void)
{
    // Initialize hardware
    initHw();

```

```
70      // Turn off green LED, turn on red LED
71      setPinValue(GREEN_LED, 0);
72      setPinValue(RED_LED, 1);
73
74      // Wait for PB press
75      waitPbPress();
76
77      // Turn off red LED, turn on green LED
78      setPinValue(RED_LED, 0);
79      setPinValue(GREEN_LED, 1);
80
81      // Endless loop
82      while(true);
83  }
84
```