```
#include <msp430.h>
int main(void)
{
   WDTCTL = WDTPW | WDTHOLD;                          // Stop WDT

   // Configure GPIO
   P6DIR |= BIT0;                                  // Set P6.0/LED to output direction
   P6OUT &= ~BIT0;                                    // P6.0 LED off

   // Configure P1.1 as input (for motion sensor)
   P1DIR &= ~BIT1;
   P1REN |= BIT1; // Enable pull-up/pull-down resistor
   P1OUT |= BIT1; // Select pull-up resistor

   PM5CTL0 &= ~LOCKLPM5;



   while(1)
   {
        // Check the status of P1.1 (motion sensor input)
           if (P1IN & BIT1)
        {
           // Motion detected, turn on LED
           P6OUT |= BIT0;
           P1DIR |= BIT6 | BIT7;                  // P1.6 and P1.7 output
           P1SEL1 |= BIT6 | BIT7;                  // P1.6 and P1.7 options select

              // Disable the GPIO power-on default high-impedance mode to activate
              // previously configured port settings
```

```
            PM5CTL0 &= ~LOCKLPM5;

            TB0CCR0 = 128;                  // PWM Period/2
            TB0CCTL1 = OUTMOD_6;                // TBCCR1 toggle/set
            TB0CCR1 = 32;                   // TBCCR1 PWM duty cycle
            TB0CCTL2 = OUTMOD_6;                // TBCCR2 toggle/set
            TB0CCR2 = 96;                   // TBCCR2 PWM duty cycle
            TB0CTL = TBSSEL_1 | MC_3;           // ACLK, up-down mode

          __delay_cycles(5000);
        }
        else
        {
          // No motion, turn off LED
          P6OUT &= ~BIT0;
          P1DIR &= ~BIT6;               // P1.6 and P1.7 output
          P1SEL1 &= ~BIT6;              // P1.6 and P1.7 options select
          P1DIR &= ~BIT7;               // P1.6 and P1.7 output
          P1SEL1 &= ~BIT7;              // P1.6 and P1.7 options select
        }
      }
}
```