Isuru Kalhara
Week3 Assignment
Embedded Hardware and Operating systems

Description:

Blink is a simple application that blinks the LEDs. It tests that the boot sequence and millisecond timers are working properly. The three LEDs blink at 1Hz, 2Hz, and 4Hz. Because each is driven by an independent timer, visual inspection can determine whether there are bugs in the timer system that are causing drift. Note that this method is different than RadioCountToLeds, which fires a single timer at a steady rate and uses the bottom three bits of a counter to display on the LEDs.

Changes Done:

BlinkC.nc

```
module BlinkC @safe()
{
  uses interface Timer<TMilli> as Timer0;
  uses interface Timer<TMilli> as Timer1;
  uses interface Timer<TMilli> as Timer2;
  uses interface Timer<TMilli> as Timer3;
  uses interface Leds;
  uses interface Boot;
}
implementation
{
  event void Boot.booted()
  {
    call Timer0.startPeriodic( 250 );
    call Timer1.startPeriodic( 500 );
    call Timer2.startPeriodic( 1000 );
    call Timer3.startPeriodic( 100 );
  }

  event void Timer0.fired()
  {
    dbg("BlinkC", "Timer 0 fired @ %s.\n", sim_time_string());
    call Leds.led0Toggle();
  }

  event void Timer1.fired()
  {
    dbg("BlinkC", "Timer 1 fired @ %s \n", sim_time_string());
    call Leds.led1Toggle();
  }

  event void Timer2.fired()
  {
    dbg("BlinkC", "Timer 2 fired @ %s.\n", sim_time_string());
    call Leds.led2Toggle();
  }
  event void Timer3.fired()
  {
    dbg("BlinkC", "I am Timer 3 and I have the shortest period! @ %s.\n", sim_time_string());
    //call Leds.led3Toggle();
  }
```

Here I setup the BlinkC to use Timer3 as well and set it period to 100. Timer3.fired() event is added as described in the guideline.

BlinkAppC.nc

```
configuration BlinkAppC
{
}
implementation
{
  components MainC, BlinkC, LedsC;
  components new TimerMilliC() as Timer0;
  components new TimerMilliC() as Timer1;
  components new TimerMilliC() as Timer2;
  components new TimerMilliC() as Timer3;

  BlinkC -> MainC.Boot;

  BlinkC.Timer0 -> Timer0;
  BlinkC.Timer1 -> Timer1;
  BlinkC.Timer2 -> Timer2;
  BlinkC.Timer3 -> Timer3;
  BlinkC.Leds -> LedsC;
}
```

This is where it creates the Timer3.

Running application