Homework 3 - TinyOS

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Repo link: https://github.com/MoioMan/IoT

Requirements to met:

- The mehttps://github.com/MoioMan/IoTssage is composed by a **counter** and the **sender id**

We created a structure for the purpose:

typedef nx_struct am_radio_count_msg_t

{

     nx_uint16_t counter; // counter value

     nx_uint16_t senderId; // From whom it has been sent

} am_radio_count_msg_t;

- All the messages are sent in <u>BROADCAST</u>

We assumed senders wouldn't receive their own messages

- Messages are sent at 1 Hz for mote 1, 3 Hz for mote 2, 5 Hz for mote 3

We set 1000, 333 and 200 as period for transmission (in ms) for motes 1, 2 and 3 respectively.

- Messages received with 'counter mod 10' == 0 turn off all the LEDs

We checked, each time a message is received, if *counter mod 10* equals 0. If so, all the LEDs are set to 0. Otherwise, LEDs are set as follows

- Messages sent by mote 1, 2, 3 toggle led 0, 1, 2 respectively

We used a switch and ledXToggle function to properly set each LED, when its "corresponding" mote was the sender. Of course, the central LED is always off (second assumption)

Since Leds.get() did not work properly, we just implemented our own bitmap, and updated each bitfield when an LED is toggled.