

## Group: Homework3\_Group\_110

The process “**Handle button presses**” (`pt_btn`) waits for a user button press event. When a user button is pressed, there are two possibilities:

1. There is no fire alert/alarm already active i.e the alarm is off for all motes. In that case, the mote turns on the red led and informs all other neighbouring motes by sending a broadcast message with an alert message 1. At this point another process is also started i.e “Listen Alarm” (`pt_listen`). This process resets the alert (i.e turn off the red light) for this mote which initiated the alert/alarm after 20 seconds.
2. There is a fire alarm/alert already active. In this case, the led light for this mote is turned off and this mote also informs all other motes about this event i.e resetting the alert by sending out a broadcast message.

The process “**Listen alarm**” (`pt_listen`)” sets a timer which expires after 20 seconds and then turns off the led (reset alert).

The function ***recv\_broadcast*** is a callback function for receiving a broadcast message. This function checks the alert type i.e 1 or 0 and based on that turns on/off the blue led. If an alert 0 message is received it also stops any pending timers and exits the process which resets the alert. If an alert 1 message is received, it turns on the blue led and also starts the process *pt\_listen* which resets the timer after 20 seconds.





