

```

59 public void handleStateTransition ( String reason ) {
60     // handle timer vs estop separately:
61     if ( reason.equalIgnoreCase("timer") ) { // the timer timed-out
62
63         switch( state ) {
64             case RED: // in RED state; transition to GREEN and change lights
65                 state = States.GREEN;
66                 display.turnOnOff(States.RED, false);
67                 display.turnOnOff(States.GREEN, true);
68                 resetTimer(GREEN_TIMEOUT);
69                 break;
70             case GREEN:// in GREEN state; transition to YELLOW and change lights
71                 state = States.YELLOW;
72                 display.turnOnOff(States.GREEN, false);
73                 display.turnOnOff(States.YELLOW, true);
74                 resetTimer(YELLOW_TIMEOUT);
75                 break;
76             case YELLOW:// in YELLOW state; transition to RED and change lights
77                 state = States.RED;
78                 display.turnOnOff(States.YELLOW, false);
79                 display.turnOnOff(States.RED, true);
80                 resetTimer(RED_TIMEOUT);
81                 break;
82             case EMERGENCY: // in EMERGENCY state; remain in this state & just toggle RED light between on and off
83                 isRed = !isRed; // toggles between true & false with each subsequent timeout
84                 display.turnOnOff(States.RED, isRed);
85             default:
86                 // good practice requires a default, even though we've handled all cases
87             } // end switch
88
89         } else if( reason.equalIgnoreCase("estop") ) { // "emergency" button was pressed
90
91             if( state != States.EMERGENCY ) { // not in EMERGENCY state (yet)
92                 state = States.EMERGENCY; // enter EMERGENCY state
93                 resetTimer(EMERGENCY_TIMEOUT);
94                 display.turnOnOff(States.YELLOW, false);
95                 display.turnOnOff(States.GREEN, false);
96                 display.turnOnOff(States.RED, true);
97                 isRed = true; // toggle RED flag to true (note this is a private class attribute)
98             } else { // already in EMERGENCY state
99                 state = States.GREEN; // exit EMERGENCY and enter GREEN state
100                 resetTimer(GREEN_TIMEOUT);
101                 display.turnOnOff(States.GREEN, true);
102                 display.turnOnOff(States.RED, false);
103             }
104
105         }
106     }
107 }
108

```