Exercise 2: Digital bubble level

Objectives:

- Design a real time application.

Tasks:

1. **Compute tilt measurement using the embedded accelerometer**
2. **Use the 4 LED to mimic the bubble of the bubble level.**
    1. Measure more than 3° LED 3 ON
    2. Measure between 2 and 3° LED 2 and 3 ON
    3. Measure between 1 and 2° LED 2 ON
    4. Measure between +/-1° LED 1 and 2 ON
    5. Measure between -2° and -1 LED 1 ON
    6. Measure between -3 and -2 LED 0 and 1 ON
    7. Measure less than -3 LED 0 ON
3. **Use the button to store the current value as the new setpoint (ie bubble centered).**
4. **Use a file to save the setpoint so as at reboot, the setpoint will be loaded.**