

Simon

For my final project I will do MMA8451Q accelerometer over I2C, where LED colors will change depends on the device orientation, could be something similar to the traffic light pattern we did in assignment 4.

The methods that will be used in this project are:

I2C: communicating with MMA8451Q

GPIO: tie to LED

GPIO interrupt: MA8451Q can trigger the KL25Z when it detects the sudden acceleration.

PWM: adjust LED brightness therefore change color.

The references will be used for this project are: KL25Z Reference Manual, MMA8451Q data sheet, Dean's chapter 8.

This project doesn't need extra hardware since MMA8451Q is already embedded in MCU.

For this project it will be manual test. We will only see color change, and may print xyz-axis values too for manual check.