Exercise 1

In this exercise, we would like you to write a BASIC program that blinks the red LED. The light should alternate between on and off, with one second between each transition, that is, a full on and off cycle should take two seconds. The program should not finish until the mote is reset or the "Stop" command is issued from the programming environment. When completed, please title your application exercise_1.bas and save it into the indicated directory on the desktop.

Exercise 2

In this exercise, we would like you to write a power-efficient program to detect when a desk lamp near the mote is turned off. When the lamp is turned off, the mote should send a message to the base station. To simplify the problem, you can adjust the mote so that the light sensor is facing the lamp. The message should appear at the base station approximately one or two seconds after turning off the lights. The program should not finish until the mote is reset or the "Stop" command is issued from the programming environment. When completed, please title your application exercise_2.bas and save it into the indicated directory on the desktop.

Exercise 3

In this exercise, we would like you to write a power-efficient program that simulates a "smart" lighting system. The program should illuminate the yellow LED when the desk lamp is turned off, just as a lighting system might activate when natural light is not sufficient. The light should illuminate approximately two seconds after the desk lamp is turned off. The program should not finish until the mote is reset or the "Stop" command is issued from the programming environment. When completed, please title your application exercise_3.bas and save it into the indicated directory on the desktop.