

# MCHE 470: Robotics

## Fall 2013 - Mini-Project 1

Assigned: Thursday, September 5th  
Due: Friday, September 13th, 5pm

Grading: Each task is P/F worth 1 point.

Assignment: Complete each of the tasks below.

1. Connect one pushbutton switch and a single-color LED. Have the LED toggle between on and off with each press of the button. See Circuit #5 from the SIK for help with the pushbutton switches.
2. Connect the flex sensor. Read its value every 500ms and print it to the Serial Monitor on your computer. See SIK Circuit #9 for help connecting the flex sensor.
3. Connect the two pushbutton switches and the multicolor LED. If no buttons are being pressed, the LED should display green. If either button is pressed alone, it should be yellow. If both buttons are pressed, it should run red. See Circuit #3 from the SIK for help with the multicolor LED and Circuit #5 for the pushbutton switches.
4. Connect the potentiometer and the servo motor. Have the servo track the position of the potentiometer, so that when the potentiometer is at the minimum of its range (all the way “left”), the servo is rotated to the left edge of its range, and similarly for the right side. “Center” on the potentiometer should center the servo. See Circuit #8 from the SIK Guide for help using the servo.

Submission: Email to schedule a time for your team to come to my office to demonstrate your solutions.

**OR**

Email a link to a separate video for each your solutions:

- to [joshua.vaughan@louisiana.edu](mailto:joshua.vaughan@louisiana.edu)
- with each video containing
  - each team member saying hello
  - one of you pressing the upload button
  - the correct functionality asked for