ENSC 3213 Lab 1
Lab Demo - SOLUTIONS

Student Name: _____

Date: _____

1. Demo your implementation to your lab TA

2. Show TA that you can toggle a LED in the debug environment by directly changing the value of the Output Data Register (ODR) of a GPIO port.

3. Write your answer to the following questions (TA will grade them during your lab session).

   - Why did we configure the pins that drive the LEDs (PB 2 and PE 8) as push-pull instead of open-drain?

   If configured as open-drain, the LED won't be light up when the output of the corresponding pin is 1. The output will be floating if a GPIO pin is configured as open-drain and its output is 1.

   - What is GPIO output speed? What is the default speed? Did you notice any difference of you choose different speeds in this lab assignment?

   The GPIO output speed is the slew rate. It describes how fast the output signal changes.

   The default speed for most GPIO pins are Low speed (00).

   For this lighting up LED lab, human eyes cannot observe any differences between low speed and very high speed. (We must use an oscilloscope to observe the difference.)