

EMBSYS100 - AU19

ASSIGNMENT 08 (Bonus assignment)

Goal

The goals for the assignment this week:

1. Explore the use of PWM on our NUCLEO-F401RE board.

Problems:

1. **Bonus:**
 - a. Study the tutorial:
https://www.waveshare.com/wiki/STM32CubeMX_Tutorial_Series_PWM
 - b. Use the STM32CubeMx similar to what's described in the tutorial in order to generate the code that connects one of the PWM channels to our user LED.
 - c. Modify the code generated similar to the tutorial in order to control the LED blinking and brightness.
 - d. Create a video demonstrating the brightness of the LED changing overtime.
 - e. Submit your video along with your entire IAR project to your GitHub.
 - f. Describe one problem you encountered while working on this project, and share what was your approach to solve it.

Hint: Refer to the STM32F401 Reference Manual [RM0368](#) for details on TIMERS and PWM.

What to turn in and how:

- Check in all your homework in your repo under the folder “**assignment08**”.
- Your folder should contain the following:
 - o Turn in your entire project.
 - o Turn in your video showing the brightness of the LED changing overtime.
 - o
- Submit a link to your GitHub repo assignment:
 - o Ex: “https://github.com/<account_id>/embsys100/assignment08”