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 to generate the code that connects one of the PWM channels to our user LED.
    c. Modify the code generated like 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 solving 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.
-   Submit a link to your GitHub repo assignment:
    o   Ex: "https://github.com/<account_id>/embsys100/assignment08"