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The STM32cubeMX development environment allows for automated generation of Keil projects. We are going to use those tools. Manuals have been identified for this assignment on Camino and examples have been demonstrated in class. There is an introductory document explaining how to configure a project on the ECC machines. That document is called *Using the STM32cubeMX environment on ECC Lab Computers* and is in the Lab Handouts directory. There is a document that explains copying STM32cubeMX projects called *Copying a CubeMX Project* that is also in the Lab Handouts directory. Read them both in advance of lab.

Review sections 3.11.2, 3.12, and 31 of *STM32L4 HAL and low-layer drivers* (in the Readings directory). In your prelab,:

1. identify the parameters that need to be provided to the function HAL_GPIO_TogglePin()

Parameters:

GPIOx Selects the GPIO peripheral to be pin toggled where x is the letter (b, e, etc.)

GPIO_PinSpecifies the pins to be toggled.

2. Write an example call to this function using constants from the stm32l476xx.h file.

HAL_GPIO_TogglePin (GPIOE, ((uint16_t)0x0100));

There was no GPIO_PIN_8 constant in the file so I just used the actual number.