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CPE 422 IoT

Final Exam Problem 3

(a) Explain in detail every line in the following function. Explain what the function does. You can ignore the meaning of the keyword **virtual**.

virtual int setDirection(GPIO\_DIRECTION);

In the author’s GPIO class, GPIO\_DIRECTION was set to direct a GPIO pin to input or output. SetDirection takes the GPIO\_DIRECTION as a parameter. When setDirection is enabled as in or out, the way the GPIO is setup changes. If setDirection of a GPIO pin is set to in, it means the GPIO pin will act as an input and receive information such as being able to read if it’s on or off. If setDirection of a GPIO pin is set to out, it means the pin will act as an output that sends information, such as using the pin to output values that would turn an LED on, off, or blink it. This function returns as an integer value.

(b) Explain in detail every line in the following function. Explain what the function does. You can ignore the meaning of the keyword **virtual**.

virtual GPIO\_VALUE getValue();

GPIO\_VALUE was set to direct values of either 1 or 0, high or low, to a GPIO pin. The getValue() function would be used to give a GPIO pin either binary value that could be used to turn an LED on or off. High meaning on, low meaning off.