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**Lab1-Question**

**Question #1: What happened to the blink rate? Why?**

* When the delay time was adjusted, we witnessed the LED blink faster if we decreased the delay time and blink slower if we increased the delay time. Because the delay control the pause between high and low signal of the LED.

**Question #2: how many bits wide is the default ADC data output in the MK20DX256?**

* The default ADC data output in the MK20DX256 is 16 bits.

**Question #3: How many bits do you need for the delay, and how do you calculate the delay?**

* It depends on the value of the delay. In our case, the maximum bits we need for delay is 10 (1023). When we change the value of potentiometer, we notice the change in the delay. The delay value has an approximate inverse relationship with the resistor between pin A2 and 3.3V source. The higher the resistor value the lower the value of delay and vice versa. So depends on the requirement delay, I can adjust the potentiometer.

**Question #4: How do you change the sample width?**

* Sample width is the resolution of the analog value you read. In order to change this value, we should use the function analogReadResolution() which is an extension of the Analog API for the Arduino Due and Zero. It is used to set the size, in bits, of the value returned by analogRead(). Its default value is 10 bits, which returns values from 0 to 1023, however, we can change that by setting the resolution to 12. This will return values from 0 to 4095. Its syntax is “analogReadResolution(bits)”.