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CS 350: Emerging Systems Architectures and Technologies

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**3-2 Milestone Two Questions**

* **How does the macro UART\_DATA\_BINARY impact the UART?**

The macro **UART\_DATA\_BINARY** configures the UART to interpret and transmit data in binary. By enabling this, the UART treats the data as binary as opposed to text which would possibly filter out or modify bytes based on character control rules.

* **How does the macro UART\_RETURN\_FULL impact the UART?**

The macro **UART\_RETURN\_FULL** impacts the UART’s read behavior. It ensures that the UART’s read() function only returns when the specified number of bytes has been received. Without this macro, the UART may return partial or incomplete data.

* **What driver call would you use to write 10 characters out of the UART?**

To write out 10 characters, you would use the UART2\_write() function. For example, in the code for the milestone, the UART2\_write function within the while loop includes the arguments **uart**, **&charinput** (defined before main), **1** (number of bytes), and **NULL**. For 10 characters it would be similar with the change being the defined variable name, and 10 being the number of bytes as opposed to 1.

* **What is the driver call to turn off LED 0?**

To turn the LED off, you would use the following line of code:

**GPIO\_write(CONFIG\_GPIO\_LED\_0, CONFIG\_GPIO\_LED\_OFF);**

**CONFIG\_GPIO\_LED\_0** is the identifier for the LED pin which is configured in ti\_drivers\_config.h. **CONFIG\_GPIO\_LED\_OFF** is a constant that represents the ‘OFF’ state for the GPIO pin.

* **What is the UART baud rate?**

The UART baud rate is **115200**, as defined in the code, **uartParams.baudRate = 115200;**

This means that the UART transmits data at a rate of 115,200 bits per second.