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Milestone Three Timer Interrupt Lab Guide

1. **What is the purpose of the timerCallback() function?**

* The timerCallback() function serves as the timer interrupt handler that implements the state machine for blinking LEDs in Morse code. It is triggered periodically by the timer to manage the LED states and transitions based on the Morse code timing.

1. **What does period mean in this context?**

* The period in this context refers to the time interval between consecutive timer interrupts. It is set to 500,000 microseconds (500 milliseconds), meaning the timerCallback() function is called every 500 milliseconds to update the LED states.

1. **How does the Timer\_CONTINUOUS\_CALLBACK parameter impact the driver?**

* The Timer\_CONTINUOUS\_CALLBACK parameter configures the timer to repeatedly trigger the callback function at each period interval. This ensures that the timerCallback() function is called continuously at the specified period without needing to restart the timer manually.

1. **What is gpioButtonFxn0() used for?**

* The gpioButtonFxn0() function is a callback function for handling interrupts from the button connected to CONFIG\_GPIO\_BUTTON\_0. It sets a flag (toggleMessage) to indicate that the button has been pressed, which is used to toggle the message between SOS and OK.

1. **What is the purpose of GPIO\_CFG\_IN\_INT\_FALLING?**

* The GPIO\_CFG\_IN\_INT\_FALLING configuration sets the GPIO pin as an input with an interrupt triggered on a falling edge. This means the interrupt will be triggered when the button is pressed (transition from high to low voltage), allowing the corresponding callback function to handle the button press event.