Lab 4: Programming Embedded Systems

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Generating Tones in Microblaze

3. Configure a Periodic Timed Interrupt

   (a) Provide the content of your main program loop and interrupt service routine.

4. Starve the Processor

   (a) At what frequency does MicroBlaze exhibit erratic behaviour or become unresponsive? What behavior did you observe?

5. Share your Feedback

Program an ADC in MicroBlaze

3. Poll the ADC

   (a) Provide the content of your main() program loop.

   (b) When configuring the ADC in the main() program loop, were there any steps that set the rate at which the ADC is polled, or does your code run as fast as possible?

4. Use Timed Interrupts to Poll the ADC

   (a) Provide the content of main() that configures the timer ISR, as well as the body of the ISR routine.

5. Use ADC and Timed Interrupts to Read the ADC

   (a) Provide the content of your main() function needed to configure the timer and ADC ISRs, as well as the content of the timer and ADC ISRs.

6. Share your Feedback