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Help

You will see your two grades for Lab12 as Lab09 in the progress bar.

LAB 12 - SIMULATION GRADER (45/45 points)

Grading your lab solution on the simulator does not require the LaunchPad development board. Compile (build) your Lab 12 project in Keil, and start the debugger in simulation mode. Execute **Peripherals->TEaS Lab12** to open the **TEaS edXLab12** window. In this window make sure the input and output pins match your solution. Reset the microcontroller. Enter the **3240** number into the **Num From EdX** field. Click the **Grade** button and wait until grading is finished. Any score above 70 will be considered a passing grade. If you are not satisfied with your score you are allowed multiple submissions.

Enter the **CopyThisToEdX** code from the Lab 12 grading engine:

BiAiiCak

Answer: 100

EXPLANATION

Lab 12 uses one input from a switch and generates one output on a pin running in simulation. The input switch can be connected to PA3, PB3 or PE3. The output wave can be connected to PA2, PB2 or PE2. The grading engine checks for proper initialization on the input and output pins. SysTick interrupts must be configured and there is exactly one best **RELOAD** value that will generate the required 880 Hz interrupt. To find this one best value, look back into the chapter to see the relationship between the bus frequency (80MHz), the **RELOAD** value, and the desired interrupt frequency of 880 Hz. Initially if the switch is not pressed the output should be low. Then if the switch is pressed, each execution of the ISR should toggle the output. If the output is toggled 880 times/sec, then the output wave will be 440 Hz. There is no partial credit, but you are allowed as many attempts as you need to complete this lab. There are four things that must be correct to receive credit for the simulation Lab 12: 1) you must run Lab 12 in simulation (dialog DLL has this parameter -pCM4 -dedXLab12) and grade it with Keil debugger showing **TEaS edXLab12** window, 2) the **3240** number must be entered into the **NumFromEdX** field of the **TEaS edXLab12** window before grading is started, 3) the input and output pins used by your software must match the configuration specified in the **TEaS edXLab12** window, and 4) you must get a score of 70 or above.

Reset

Hide Answer

Grading your lab solution on the real board will require the LaunchPad development board. First connect the LaunchPad to the PC using the USB cable. Interface a positive logic switch to PA3, PB3, or PE3. There will be one digital output on PA2, PB2, or PE2. While testing you can connect a 1k resistor between the output and your headphones. However, during grading you should not connect the headphones. Compile (build) your project in Keil, and download it to the board. Enter the **7041** number into the **NumFromEdX** field. You must hit reset and run your software. Make sure the Lab parameter shows Lab 12 and the **7041** is still correct. Click the **Grading** button within the Keil uVision TExaS Grader window. Follow the directions pushing and not pushing the switch as instructed. Any score above 70 will be considered a passing grade. If you are not satisfied with your score you are allowed multiple submissions.

Enter the **CopyThisToEdX** code from the Lab grading engine:

Check

Save

Show Answer



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