

Laboratory 09: Branching Functions Delays

SIMULATION: <https://youtu.be/-sxVZY8-H7k>

HARDWARE: <https://youtu.be/lVXmaRG1ckU>

QUESTIONS:

1. What does it mean for a debugging instrument to be minimally intrusive?
There's a negligible effect on the system being debugged.
2. If a microcontroller is running at 50 MHz, then the SysTick counter decrements every __ ns.
20 ns
3. If a microcontroller is running at 16 MHz, then the SysTick counter decrements every __ ns.
62.5 ns
4. If we change the bus clock to 50 MHz, what is the longest elapsed time we could measure with Program 7.2?
 $2^{24} \times 20\text{ns} = 335.5\text{ms}$
5. With the SysTick counter, what event causes the COUNT flag to be set?
The even causes the COUNT flag to be set when the current value decrements from 1 to 0.