

Assignment 5

Blinking LED

Embedded Logic Design

August 30, 2015

1 Blinking LED

Write the same program as in assignment 2 utilizing the AVR library. However this time, you are not allowed to use any `delay` function and an inclusion of `util/delay.h` is not allowed. The assignment is divided into two parts:

1. Configure a timer (i.e. timer0, timer1 or timer2), issuing an interrupt at every second, in which the state of the LED toggles.
 - Which timer do you use and why?
 - Which mode do you choose and why?
 - What are the register values?
2. Instead of the timer, use the Watchdog Timer (WDT) to achieve the same.
 - How do you configure the WDT?
 - Why is it required to obey several timing rules while configuring the registers?

Please note: As recommended by you during class, the deadline for this assignment is on coming Friday at 11:59pm.

2 Deliverables

All files must be submitted to nanu.iiitd.edu.in via `git` or `subversion`. Late submissions are not evaluated nor will be submissions through <https://www.usebackpack.com> or mail. Your repository has to contain:

- Source code
- Makefile

2.1 Remarks

If you encounter a problem, ask Google, DuckDuckGo, Bing, etc. first. The TAs will not type the question that you have, into the mask in the search engine for you. Required resources, textbooks, etc. are available on the ELD course website of <https://www.usebackpack.com> or in the Internet (datasheets, AVR library documentation, etc.)