

# CS170 Discussion - 2009-04-24

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# Outline

- Announcements
- Pair Programming
- Project 3 Questions
- Partner Assignment



# Announcements

- Project 3 Deadline extended to Friday March 1 11:59
- Late Point Deduction: 1% every 5 minutes
- New rules for making patches
  - [http://cs.ucsb.edu/~bboe/dynamic/170\\_teams#patches](http://cs.ucsb.edu/~bboe/dynamic/170_teams#patches)



# Pair Programming

- 2 people, 1 computer
- Two Roles
  - Driver – in control of keyboard and thus for the code that get emitted
  - Observer – watches driver, plans the next steps



## Why am I talking about this?

- Both members understand all changes, thus get more out of this course
- Mutual benefit of shared knowledge and experience



# Hand-wavy statistics

- ~15% less efficient than two independent developers
- ~15% fewer bugs produced\*
- Increased enjoyment from of programming
- <http://collaboration.csc.ncsu.edu/laurie/Papers/XPSardinia.PDF>

“It's like twice the brains with half the typing!” - Jeff Browne 1<sup>st</sup> year Ph.D.











## PAIR PROGRAMMING

As awesome as luging, no neon tights required.

Source: Jonathan Kupferman 1<sup>st</sup> year MS



# Pair Programming Video

[http://agile.csc.ncsu.edu/pairlearning/  
educators.php](http://agile.csc.ncsu.edu/pairlearning/educators.php)

Courtesy of North Carolina State University



## Project 3 - Realtime processes

- A realtime process is one that does not get
- Invoked via the syscall: `enter_rt(clock_t period)`



# Notes

- Steps in getting message to scheduler
  - User process makes system call
  - System call is a wrapper around passing message to the appropriate server
  - The appropriate server then sends a message to the kernel (kernel call)
  - The scheduler now has it.
- Round-robin scheduling of different priorities