Project 2

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Synchronization

- P2 (et seq.) partners

  - *"Partner Registration Page" on web site!!*

- Good things to talk about

  - How many late days?

  - Projects in other classes?

  - Auditing or pass/fail?

  - Prior experience

  - Class load

Outline

- ## What you'll build
    - Mutex, condition variable
    - Thread library
    - Supplemental library routines
    - Tests

- ## How the pieces fit together
    - A picture is worth 1000 words
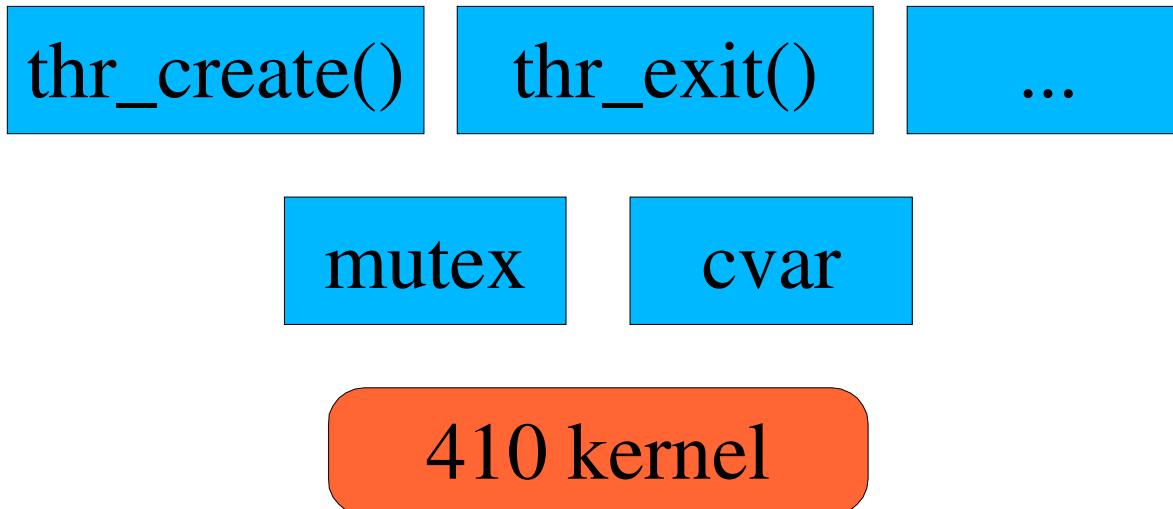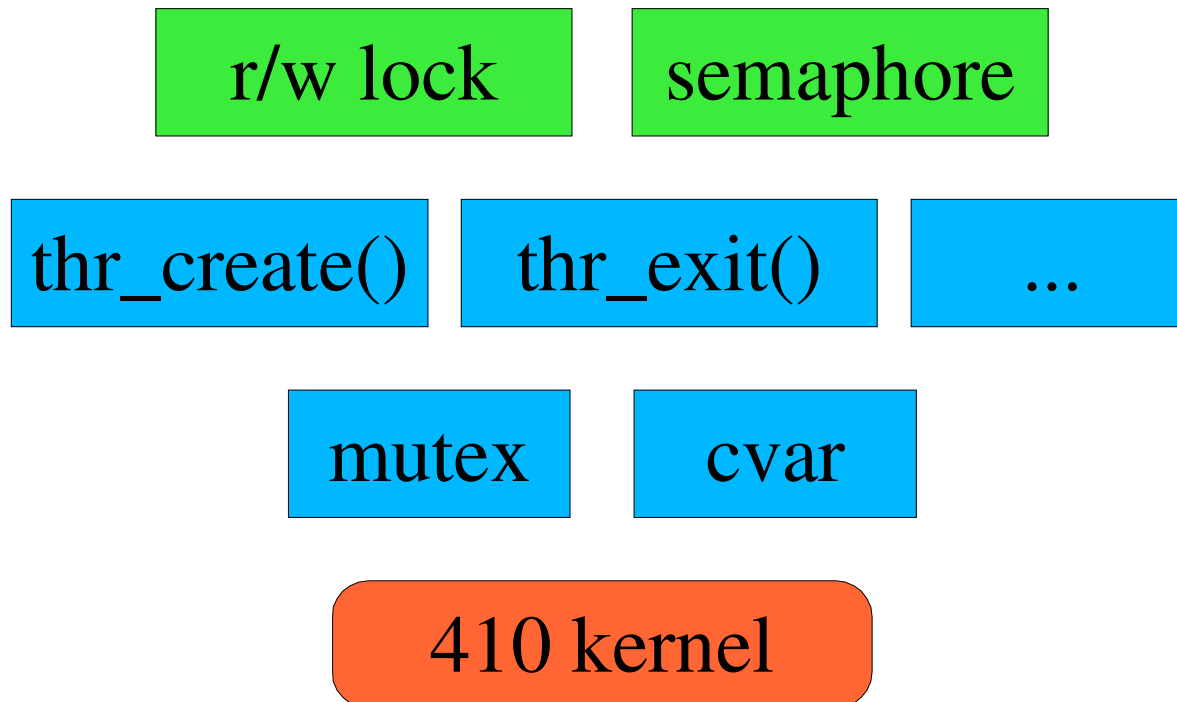   - The handout is >1000 words

Mutex & Condition Variable
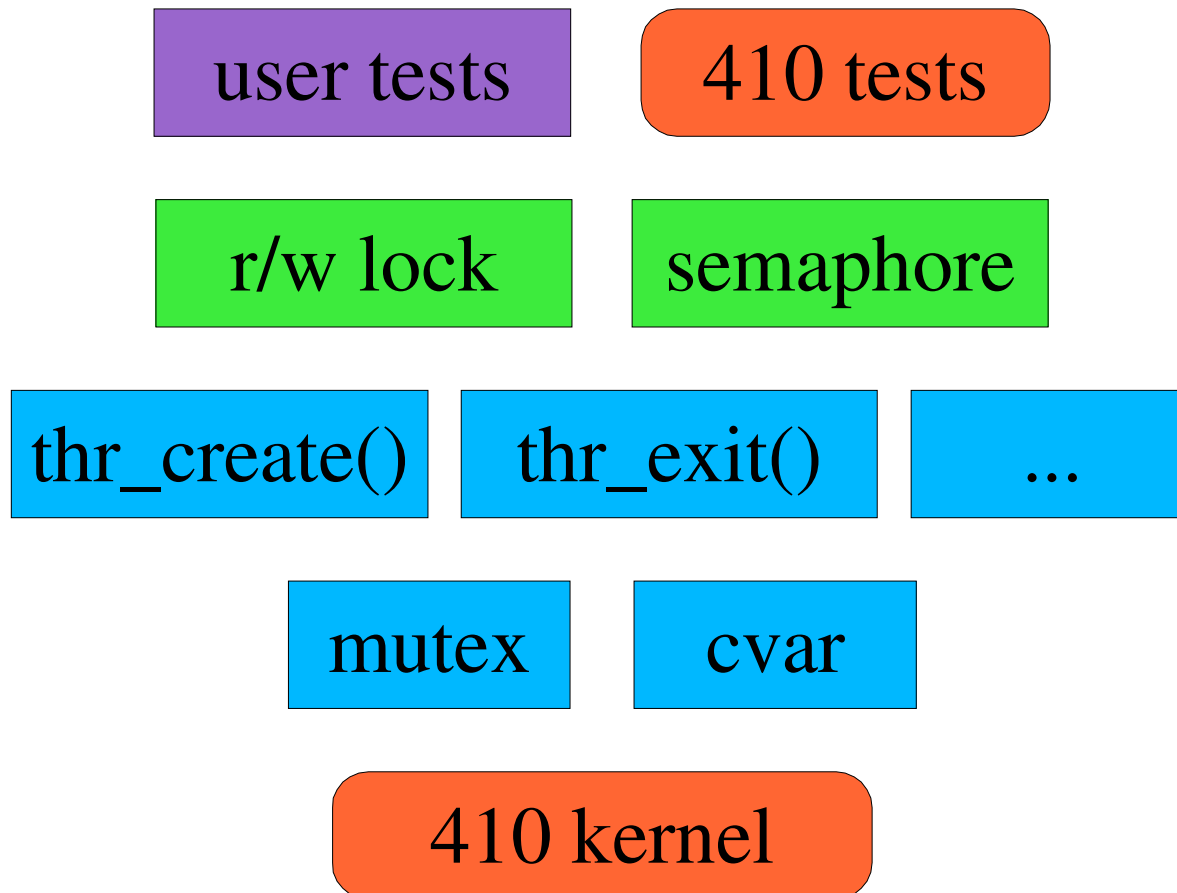
mutex   cvar
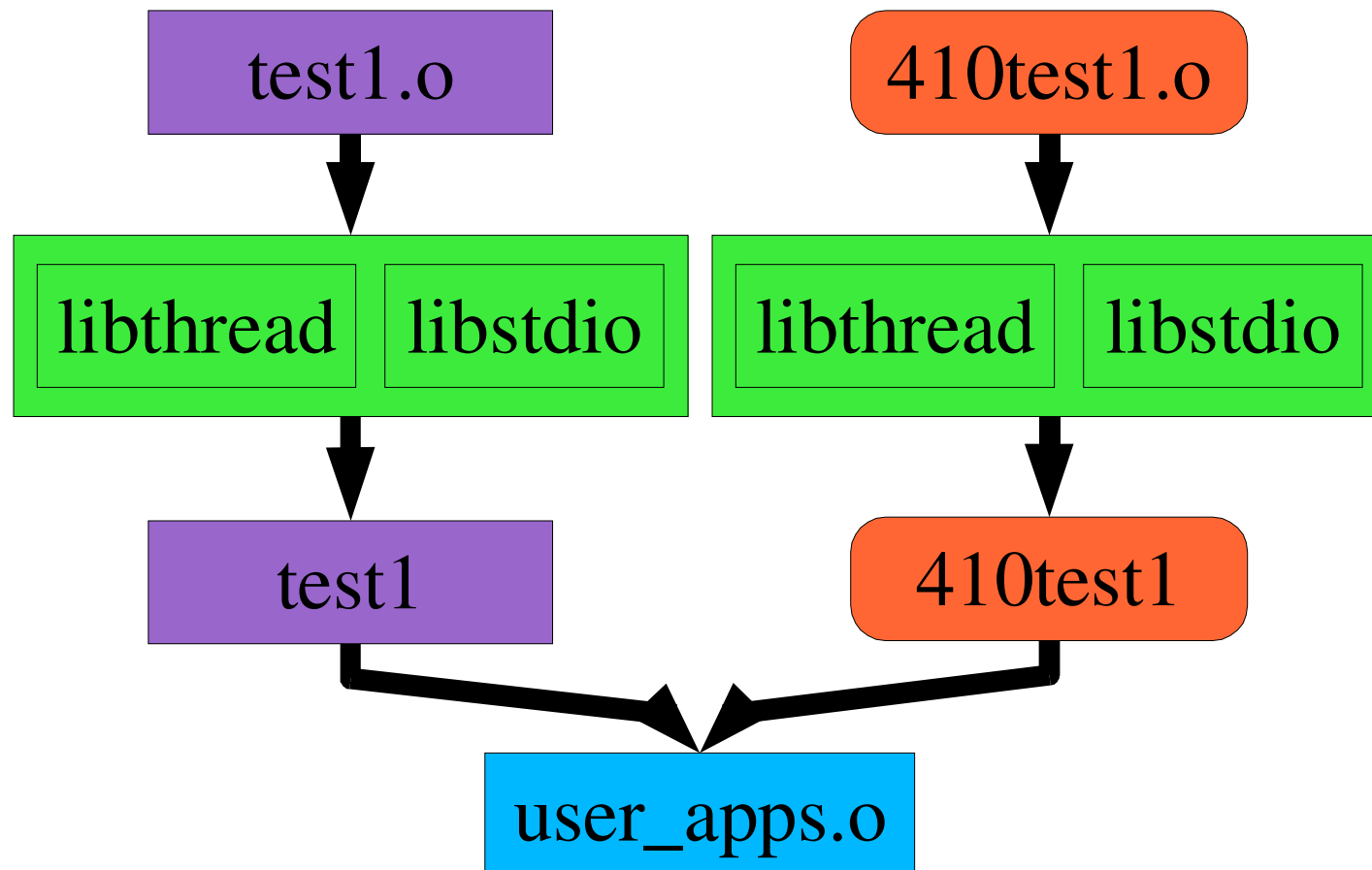
410 kernel

Remainder of Thread Library

thr_create()   thr_exit()   ...

mutex   cvar

410 kernel

Supplemental Library Routines

r/w lock   semaphore

thr_create()   thr_exit()   ...

mutex   cvar

410 kernel

Tests (Yours & Ours)

user tests   410 tests

r/w lock   semaphore

thr_create()   thr_exit()   ...

mutex   cvar

410 kernel
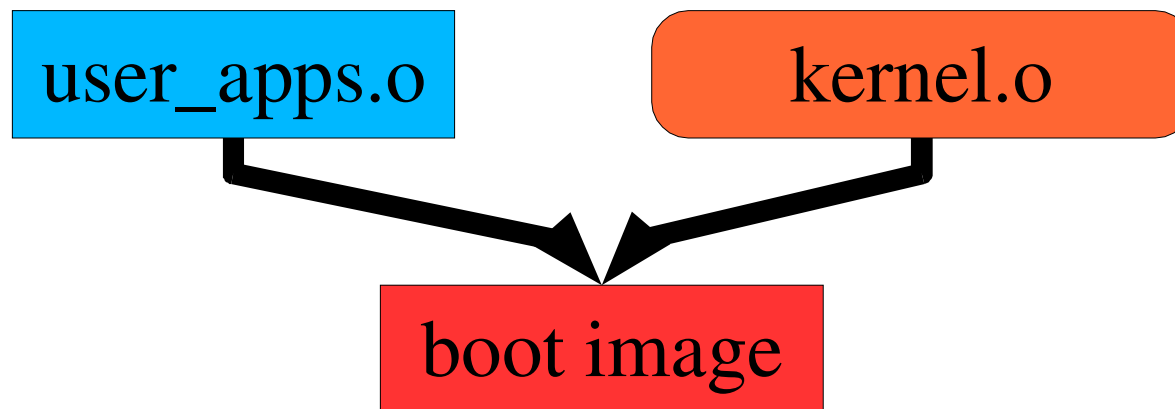
7

Building a "RAM disk" image

Linking "RAM disk" to kernel

Plea

- This code is *tricky*
  - Most of you have already written multi-threaded code
    - Tricky enough
  - Writing the internals is harder
    - Get a part 99% done
    - Discover a bug
    - *Totally new design* to fix it
- The first 90% will take the first 90% of the time
  - The last 10% will take the *second 90% of the time*