

Recitation #13

18-649 Embedded System Engineering

TA: Ninar



Electrical & Computer

ENGINEERING

Note: Course slides shamelessly stolen from lecture

All course notes © Copyright 2006-2010, Philip Koopman, All Rights Reserved

**Carnegie
Mellon**

Announcements and Administrative Stuff

- ◆ **Final presentation template posted on Recitations page**
 - Due: Sunday Dec 1th at 5 PM
- ◆ **Project 13 due Tuesday 10th Dec**
- ◆ **Demos can be scheduled beginning Monday 2nd Dec**
 - You will be allowed 5 chances to demo
 - 4 Practice demos: 2 with EPIC test, 2 without
 - 1 final demo
 - Set up a time with a TA in advance for demos
 - If you tell the TA to grade your demo early you cannot change your submission (traceability etc.) after that point
 - That will be your final submission
 - Demo on final day is your final demo, unless you had it early
 - All group members must be present at the demo

Weekly Progress Update Page

- ◆ **Fill these in status reports every week by the deadline**
- ◆ <http://www.ece.cmu.edu/~ece649/progress/>
- ◆ **Your participation grade *heavily* depends on these reports**
 - Participation is 5% of total grade
- ◆ **Weekly progress updates due every week **Friday 9:00 PM****
- ◆ **Everyone submits one report each week**
 - Even if they're late, we still want them (Standard late penalties apply)
- ◆ **All students should be able to access the progress page**
 - If for some reason you cannot email us your progress before the deadline

Course Project Exit Criteria

- ◆ **Run Time Monitor Must Be Implemented**
 - Pass all unit tests with zero failed assertions
 - Pass all integration tests with zero failed assertions
 - This ensures you will pass ours

- ◆ **Pass all acceptance tests**
 - Using -b 200 and -fs 5.0
 - Zero failed assertions (after startup)

- ◆ **Must have a working elevator to complete the course**
 - “Working” means passes the set of tests listed on the final project web page
 - Non-working results in Incomplete if you don’t get it working by grade deadline

Extra Credit Opportunities

+0.5% final grade for a fault tolerant elevator

Need to enable tolerance under dropped messages (25% to 50% dropped)

Need to submit two complete portfolios

One with fault tolerance

One without – only this one is graded for completeness

Fault tolerance will slow down your elevator

+1% final grade for best elevator (one group only)

Rank groups by average performance and satisfaction across acceptance tests

+1% final grade for complete and consistent design portfolio

All groups are eligible for this

Performance Competition

- ◆ **Two performance metrics**
 - Delivery Performance – efficiency of elevator
 - Satisfaction Performance – passenger satisfaction
- ◆ **Existing and new acceptance tests will be used**
- ◆ **A rank will be awarded for each workload for each metric (1 - 10)**
- ◆ **Over all group score will be sum of all the ranks for each workload**
- ◆ **Group with the lowest sum will be the winner**
- ◆ **Ties will be broken based on scores received for each metric**
- ◆ **Winner will get 1% extra on the final course grade**

Suggestions for Project 13

- ◆ **Impose a “code freeze” as soon as possible**
 - Stop changing code as soon as your design reliably passes all tests
 - No new features, no new fixes, no new comments or cleaning
 - If it works, stop fixing it, and archive a COMPLETE COPY somewhere safe
 - “Safe” does not mean in the same directory structure as your 649 working copies
 - “Safe” means write-protected
 - Version control is very effective, but nothing is perfect!
 - Keep all your different “this one works” copies until you get your final course grade
 - If you edit a single line of code (even a comment), re-run ALL tests
- ◆ **When submitting your code**
 - Do a clean export from version control and upload it
 - Extract a new clean copy of the simulator framework in a new directory
 - Download what you submitted and insert it into the new simulator
 - Recompile (make clean) and re-run all your tests
- ◆ **Focus on traceability as soon as you can (its worth A LOT of points)**
 - End to End traceability is required for this project
 - Tweak performance after you have a clean, traceable hand-in so you don’t get caught short on time

Questions?