CMSC 433
Open source project
Final exam review
May 11th, 2010
Final exam

- Where: here
- When: Tuesday, May 18th, 1:30pm - 3:30pm
- One page notes
  - 8.5 x 11 inches, doubled sided, whatever font you want
- Group efforts to prepare notes allowed and encouraged
Study day
dinner

Wednesday, May 12th, 4pm

I’ll bring my torches
Course Evaluations

- 94% complete
- still missing 2 evaluations
- I’ll bring treats to the final if we get to 100%
- Only 5 responses to the 433 post-class survey
- Cookies is complete
Guidance for future 433 offerings

• Please answer quick Survey about what topics 433 should cover
  
  • https://www.surveymonkey.com/s/2SXFZPJ

• My version of 433 was a bit different than previous versions.

• I won't be offering the course next year

• Need feedback on what topics you think should be covered
Open source project

• John is in charge and the final authority

• I’m working on finishing grading of previous projects, writing the final, and will be grading the final

• You were supposed to be done today

• but I know a number of you aren’t

• We can accommodate a flexible finish time

• but you really need to have made good progress today

• I need final grades from John 24 hours after final
Office hours

- I’m attending a talk from 2-3 today
- Otherwise will have some time this afternoon
- Normal office hours end today
Project 9

• Finally got many of the server side test cases resolved
• nasty class loader problems
• A number of people have data races problems and other threading issues
• Some people failed most tests on server, but few on desktop... investigation proceeding
Project 9 test cases

• A little bit different than distributed ones
• I’ll probably make a few more changes, add a few more test cases
  • you are responsible for the correctness of your code, regardless of the existence of tests cases before the deadline
• When done, I’ll distribute new test cases
Project 8 and 9 testing issue

• Projects 8 and 9 are visible on grades.cs.umd.edu
  • but grades are not visible yet
• If your test results on the desktop are different than submit server results, submit regrade request, and describe the differences
  • trying to identify big, significant differences
• Names are different, don’t submit just because of that.
Unit testing

• Project was a bear to test

• Some students had immense difficulty on projects that turned out to be stupid problems in classes like AccumulatingPairWriter

  • writing a single test case for AccumulatingPairWriter would have found the problem

• Lesson: debugging a big system like distributed map reduce is painful, and you want to catch as many of your bugs as possible with simple unit tests
Open source project

- If you resolve an issue a bug had been filed on, provide a requested enhancement, provide your own enhancement, or can write a test case showing the code had a problem and your change fixes it, you’ve got a good contribution
What you need to do and document

- Build software: document what was required to build it, how many lines of code
- Run test suite: document test suite and results
- Determine contribution
- Create and submit patch for fix and test cases
- Communicate with developers
Final exam
Big topics

• Concurrency
  • multithreaded test case
• MapReduce
  • User’s perspective: mappers, reducers and combiners
• Distributed computing
• Security
Final Exam
also covered

• Java coding
• Decorator and Adapter design patterns
• Sockets
• Object serialization
• Reflection
• Simple web services (e.g., GET vs. POST, how forms works, etc).
Old 433 exams

• particularly Fall 2007: last time I taught 433, has questions on MapReduce

• Not responsible for: RMI

• Not responsible for (but should probably know): garbage collection, code coverage, Python, parsing
Practice final exam

- I’ll post a practice final exam on Thursday
- questions drawn from previous exams. If you want to take the practice exam cold, don’t look at previous exams until you take the practice exam
Concurrency exercises

- We had lots of small concurrency exercises
- Including ones in p7-core, for core mastery track
- Almost all of them are good practice exam questions
Code review, project 9