Course Evaluations

• http://www.courseevalum.umd.edu
Final Exam

- Friday, 8-10 am
- I’ll bring doughnuts
- You may bring one page of notes
- 8.5 x 11 inches, double sided
- any resolution
Updates

- David has office hours 11am-3pm today
- Configuration problem on build server should be fixed momentarily
- Project due at 6pm (late deadline sunrise tomorrow)
Material

• Stuff from Midterm
• Concurrency Abstractions
• Security
• Distributed Computing
• Map Reduce
Concurrency Abstractions

• Semaphore
• CountDownLatch
• CyclicBarrier
• AtomicXXX
• Executors
• Future
• ConcurrentHashMap, CopyOnWriteArrayList
Security

- Untrusted input
- Buffer overflows
- Format string vulnerabilities
- SQL Injection
- Cross site scripting
- Appending strings to file paths
Distributed Computing

• Read “Introduction to distributed system design” and “A Note on Distributed Computing”, Wikipedia: “Fallacies_of_Distributed_Computing”

• you are responsible for having read them and for the content contained in them
Technologies

- Remote Procedure Call and Remote Method Invocation
- Object serialization and marshaling
- Proxies
- SOAP
- REST
Map Reduce

- You are responsible for reading the MapReduce paper
- What Mappers and Reducers do
- How MapReduce handles failure and slowness
- All the stuff you needed for project 4
Project 4

- Read the project 4 FAQ
Project 4 undesirable shortcuts

- sorting phase 1 to phase 2 on the Master
- Only using a single thread on the master
- only one task at a time is being worked on
- Not ensuring that there is only a single call to the reducer for each key
- Current public tests don’t check these, but they will matter for the final 13 points (and the t-shirt)