Distributed Systems Project

Jussi Kangasharju
Course Outline

3 exercises to look at distributed systems in practice

Exercises mostly programming

Groups of up to 3 people allowed

Group work not mandatory, but recommended
Course Schedule

18.1. Start of first exercise
25.1. Q&A for first exercise
1.2. Deadline for first exercise, start of second exercise
8.2. Q&A for second exercise
15.2. Deadline for second exercise, start of third
22.2. Demo session for second exercise
13.3. Deadline for third exercise
Demo session for third exercise to be decided
People

Jussi Kangasharju
   Office hour: Mon 13-14 or ask for appointment by email

Liang Wang
   Office hour: During meetings or ask appointment by email

Additional Q&A sessions can be arranged on Thursdays if needed (Thu 10-12)
Assignments

Consistency
Consistency in distributed storage

Distributed algorithms
Implement vector clocks

Multitier architectures
Use Ajax to program a web application

Details for assignments 2 and 3 presented later
Grading

Each assignment graded on scale 1-5

Same grade for all members of group

Overall grade is weighted average of assignment grades

Assignments 1 and 2: Weight 1
Assignment 3: Weight 2
Assignment 1: Consistency

Link to assignment will be posted to course website
Two main tasks

Consistency in CODA (http://www.coda.cs.cmu.edu)
  What consistency models does CODA support?
  What algorithms are used?
  What kind of data replication is used?

Real cloud-based storage
  Pick a cloud-based storage (examples given)
  What consistency models does it support?
  Experiment with it and break consistency
What to Return?

Return a report with answers to the questions given on the assignment sheet

Do NOT copy answers from documentation

Work is mainly reading and investigating
Some programming might be needed
Next steps

Q&A session on 25.1.

Deadline for returning February 1\textsuperscript{st} at 10:00

Return as PDF to Liang.Wang@cs.helsinki.fi