THE UNIVERSITY OF QUEENSLAND

CSSE2003
Software Engineering Studio

Semester 2, 2009

Lecture 20:
Course Review / Exam Preview

Lecture Summary

- Course Review
- Teaching and course evaluations
- Exam Preview

This course aims to:

- Demonstrate the concepts and practice of software design and testing, the UML notation, patterns, software maintenance, code refactoring, code build, and configuration management
- Extend students' experience, particularly in software design, testing and maintenance, but also in the use of additional program structures and configuration management
- Provide students with positive experiences of collaborative learning and some appreciation of the need for life-long learning skills

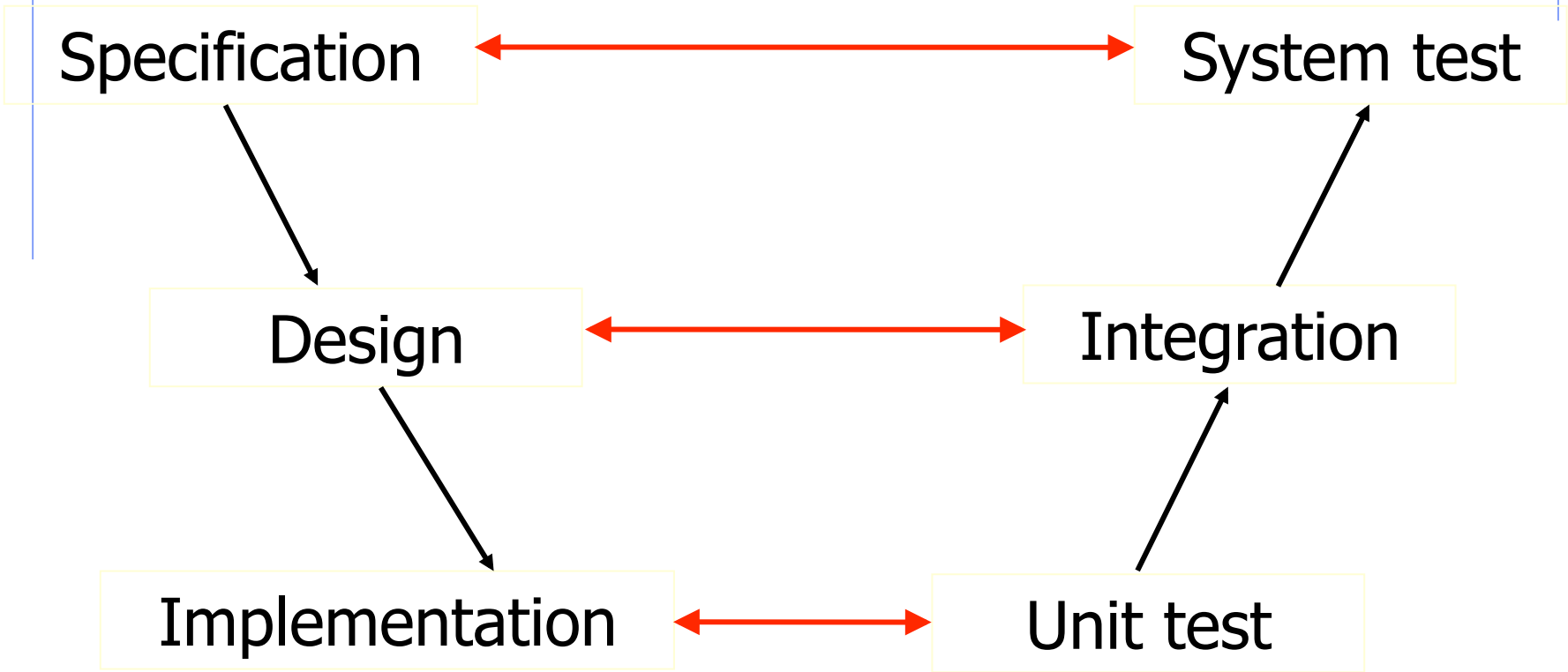
Students who master the material in this course will be able to (1):

- Represent the design of a software product using UML notation
- Document the design decisions underlying a software design
- Describe software structures in terms of architectures and design patterns
- Extract an abstract design representation from source code
- Manage an evolving software product using configuration management tools
- cont...

Students who master the material in this course will be able to (2):

- Apply refactoring strategies to improve the quality of existing designs and code
- Develop sets of test cases from the specification of a software system (or some component)
- Choose appropriate test strategies for test case design
- Participate effectively as a member of a small software development team

Software life-cycle (V model)



Course Review: Design -1

- Defined the role of design in software life-cycle
- Introduced UML as the accepted object-oriented design notation:
  - class diagrams
  - sequence diagrams

Course Review: Design -2

- Software design patterns:
  - generic solution to recurring design problem
- Refactoring:
  - improving the quality of the code without changing the functionality

Course Review: Testing

- Described levels of testing: unit (isolated), integration, system, acceptance, regression
- Identified role for test harness: drivers and stubs
- JUnit introduced as open source testing framework

Announcements - 1

- Testing assignment:
  - not yet marked
  - We expect to have results back to you before the exam
- Assignment 3 presentation:
  - Results will be released next week – check the course website
  - Peer comment summary sheet will be emailed
  - Feedback from the tutors will be returned with the report results

Announcements - 2

- Assignment 3 report:
  - Due at 5 pm Friday 30 Oct (this week)
  - Will NOT be marked before the exam - availability will be announced via the newsgroup
- Week 13 time monitoring data is due by Wednesday 29 October 10 pm.
- Time recording results will be released after the deadline for the time record for Week 13 - availability will be announced via the newsgroup.
- Check **all** your marks on the web before (and after) assignment 3 is marked - contact me with any discrepancies.

Something to Consider

- If your team has made what you believe are useful changes to your open source program, consider offering your changes back to the project.
- While that might initially seem presumptuous, what have you got to lose?
- Ideally, we would be able to award excellence and innovation marks for such an activity, but the timeframe involved does not really support it ☹

TEVAL forms

- TEVAL evaluation: Jorn Guy's teaching
  - He would really appreciate comments on the back
- ICEVAL evaluation: CSSE2003 as a course
  - I would really appreciate comments about my teaching on the back
- Issues on which I would like your comments (on the ICEVAL form) :
  - lectures
  - tutorials
  - assignments
  - time monitoring
  - textbooks
  - working in teams
  - mark allocation
  - web

Grading

Reminder: Final exam contributes 35% to grade, but to be awarded a ...

7	Total ≥ 85% **and** Exam ≥ 80%
6	Total ≥ 75% **and** Exam ≥ 70%
5	Total ≥ 65% **and** Exam ≥ 60%
4	Total ≥ 50% **and** Exam ≥ 45%
3	Total ≥ 45% **and** Exam ≥ 40%
Fail	Total < 45% **or** Exam < 40%

Exam Preview

- Exam is Open-Book (any written material)
  - it is important to come prepared
  - we assume you will bring all notes, assignments, tutorial/practical exercises, text book, etc.
  - Testing understanding, not memory of past problems
- Non-programmable approved calculators are allowed.
- Two hours duration - *plus 10 minutes perusal*.
- Marks out of 120 (for 2 hours).

Type and Value of Questions

Q1. [40 marks] Testing

Q2. [35 marks] UML and OO design

Q3. [45 marks] Refactoring and design patterns

Past exams

- Available from library:

  http://www.library.uq.edu.au/exams

- CSSE2003 in 2005-2008
- COMP2801 in 2003-2004
- COMP2501 in 2001-2002

- I encourage you to discuss possible solutions via the newsgroup – tutors will participate as time permits.

General Advice (1)

- Don’t Panic!
- Read each question carefully.
- Answer the question as written, not the question you expected to get.
- Remember to justify your answers, if requested.
- Plan the structure of your answers.
- *Allocate your time over all questions.*
- Do all the parts you can.

General Advice (2)

- *Re-read the question when you have finished* to make sure you have:
  - answered all parts of the question, and
  - answered the question as written and not what you thought it said
- *Read your final answer after you have finished* to make sure it says what you meant it to say
  - if you accidentally leave out the word “not”, we can’t read your mind, only what is written

Are you prepared for your Exams?

Do you:

(i) have your current student ID card?

(ii) know where your exam is?

(iii) know what materials you are permitted to bring to the exam? – check with your course coordinator

For each exam, ensure you:

(i) have rechecked the timetable for exam date, time and venue and checked your emails

(ii) have your student ID card on hand, and ready to present on entry to the exam room – should you forget it, you should report to the Student Centre before your exam

(iii) have spare pencils and pens

(iv) have any permitted materials

(v) arrive at your exam venue at least 15 minutes before the scheduled start of the exam

All the best for the future