Welcome back…

AREN'T YOU SUPPOSED TO BE DOING YOUR HOMEWORK?
I'M PRETTY SURE THE ASSIGNMENT WAS OPTIONAL.
DENIAL SPRINGS ETERNAL.
IT'S NOT DENIAL. I'M JUST VERY SELECTIVE ABOUT THE REALITY I ACCEPT.
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9-28

COMP2007

Concurrent Programming Part I

Module Content

- More Java
- Basics of implementing Graphical User Interfaces
- Programming Project Organisation
- Test-Driven Programming
- Threads
- Concurrency
- + lots of programming exercises/coursework

Who Teaches the Module?

- Part I — Java Programming: Graham Roberts (me!)

- Part II — Concurrency: Kevin Bryson

When and Where

- Term 1 module, 30 lectures.
  - Check online timetable for updates.
  - Monday 2-3pm
  - Thursday 2-4pm

Your Goals

- To become confident in the use of Java for writing larger programs.
- To understand project structure, build and version control.
- To become a test-driven programmer.
- To learn about threads and concurrency.
- To be able to write concurrent programs that work.

Why more programming?

Programming is a craft or skill that needs a lot of practice.

You need to understand not only how to write code, but how to design, structure and test non-trivial programs.

What do you do in lectures?

- Attend all your lectures (or else).
- Stay Awake and Listen!
- Do ASK sensible QUESTIONS.
- Take notes.
- *Turn off mobile phones*.
- Learn something...

Behaviour

- Please DON'T talk, whisper, or fidget.
- I mean that…
  - You'll be asked to leave if you can't behave reasonably.
  - Unsatisfactory behaviour can lead to you being removed from the course.
- Feel free to tell other students making a noise to shut up.

Staff-Student Consultative Cttee

- 2 second year reps needed.
- Do you want to serve?
- Email me nominations.

Note Taking

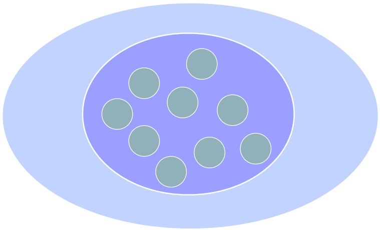
- You will get copies of some lecture slides,
- BUT, do make additional notes to help you remember what was said.
- Not everything I say will be on a slide.
- Read books and online material.

3 stages of learning

- Rule follower (1st year)
- Problem solver (2nd year)
- Expert (3rd year?)

- Learn to select and evaluate possible solutions.
- Learn how to solve problems without relying on following rules.
- Learn how to learn.

The Subject



Study Strategies

- Must spend time reading, practicing, programming outside lectures.
  - Full-time occupation.
  - Immerse yourself in the subject.
- Study groups.
  - But not plagiarism groups...
- Look for depth, don't simply hunt marks.
- And again: Do lots of programming.

Email Registration

Make sure you register on the 2007 mail list.

Send an email to 2007-request.
Type *join* on the subject line.

Only register from a CS dept. machine
with a CS email address.

Course Web Pages

For Part I
Goto to Moodle
Course title is:
COMP2007: Concurrent Programming (More Java)
Enrolment key is maven

Assessment

- 15% coursework, 85% exam.
  - Java Programming coursework 5%
  - Concurrency mini-project 10%
- 2.5 hour exam.
- Expected to submit *all* coursework.

Java Programming Coursework

- 3 sets of *collaborative* binary marked exercises, worth 5%.
  - Classes, interfaces and inheritance (2%).
  - GUIs (1%).
  - Testing and test-first programming (2%).
- Must complete at least minimum number of questions to get tick.
  - Finish all by end of reading week.
  - You need to do these properly, otherwise you won't pass the module.

Pause!

Any Questions?

Course Texts

Developing Java Software, 3rd Edition
by Russel Winder and Graham Roberts
pub. by John Wiley & Sons (2006)
ISBN: 0 470 09025 1

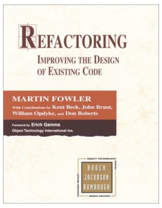
Course Texts (2)

Refactoring – Improving the Design of Existing Code
Martin Fowler*
Addison Wesley, 1999
ISBN 0-201-48567-2

You should read this.

The material will not be covered in lectures.

Also see www.refactoring.com



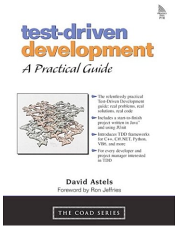
*UCL CS graduate

Course Texts (3)

Test-Driven Development – A Practical Guide, David Astels, Prentice Hall PTR, 2003, 0-1311-01649-0

Excellent book on test-driven programming.

You should read this as well.



Course Texts (4)

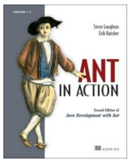
Effective Java, Second Edition by Josh Bloch,
Addison Wesley 2008,
ISBN: 0321356683

Reading this is very strongly recommended.

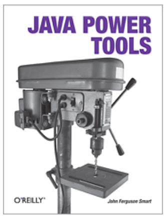
Programming Books

Look for books, websites about Ant.

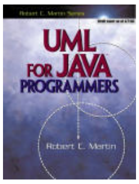
Good introduction to tools such as Ant, JUnit, Maven, Subversion, Hudson, FindBugs and many more.

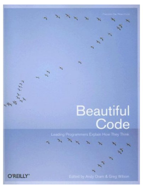


Ant is the standard Java build management tool – essential when writing any non-trivial program.



Programming Books (2)





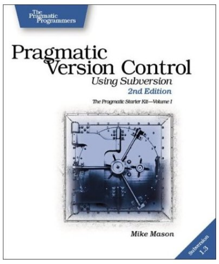
Programming Books (3)

Pragmatic Version Control using Subversion, 2nd edition

Mike Mason

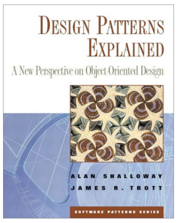
Pragmatic Bookshelf, 2006

ISBN 0977616657


The Pragmatic Programmers
Pragmatic Version Control
Using Subversion
2nd Edition
The Pragmatic Starter Kit—Volume I
Mike Mason
Subversion 1.3

Patterns Books

Design Patterns Explained, by Alan Shalloway & James J. Trott, Addison Wesley 2001, ISBN: 0201715945


DESIGN PATTERNS EXPLAINED
A New Perspective on Object Oriented Design
ALAN SHALLOWAY
JAMES R. TROTT
SOFTWARE PATTERNS SERIES

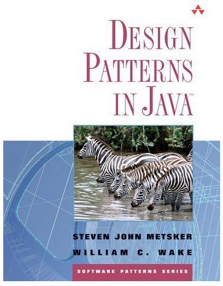
Patterns Books (2)

Design Patterns in Java

by William Wake, Steven John Metsker

Addison Wesley, 2006

ISBN 0321333020

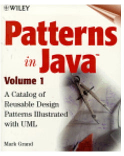


Pattern Books (3)

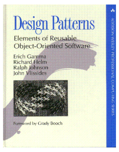
A useful book but more demanding to read and understand:

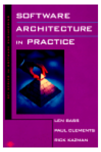
Patterns in Java, vol.1
by Mark Grand
John Wiley & Sons, 1998,
ISBN: 0471258393

There are 2 more volumes in the series.



Other Books (see reading list)





What else?

- See the reading list in the notes.
- Time spent reading is very valuable.
  - Don’t treat the reading list as something that can be ignored.
- Read about patterns and software architecture.
- Well worth looking out for the books on building architecture.
- Check prices on Amazon.
- Also use web-based material.
  - Wikipedia is a useful starting point.

Java Software

- We will be using Java 2 Platform, Standard Edition.
  - either versions 5 and 6 can be used.
  - use version 6 if you can.
- Currently version 6 on lab machines.
- You can download for Windows, GNU/Linux.
- Standard on OS X
  - Upgrade to Snow Leopard for latest version 6.

Done!

That’s the course introduction.

Questions?