COMP90041
Programming and Software Development

Lecturers:

Prof Rui Zhang
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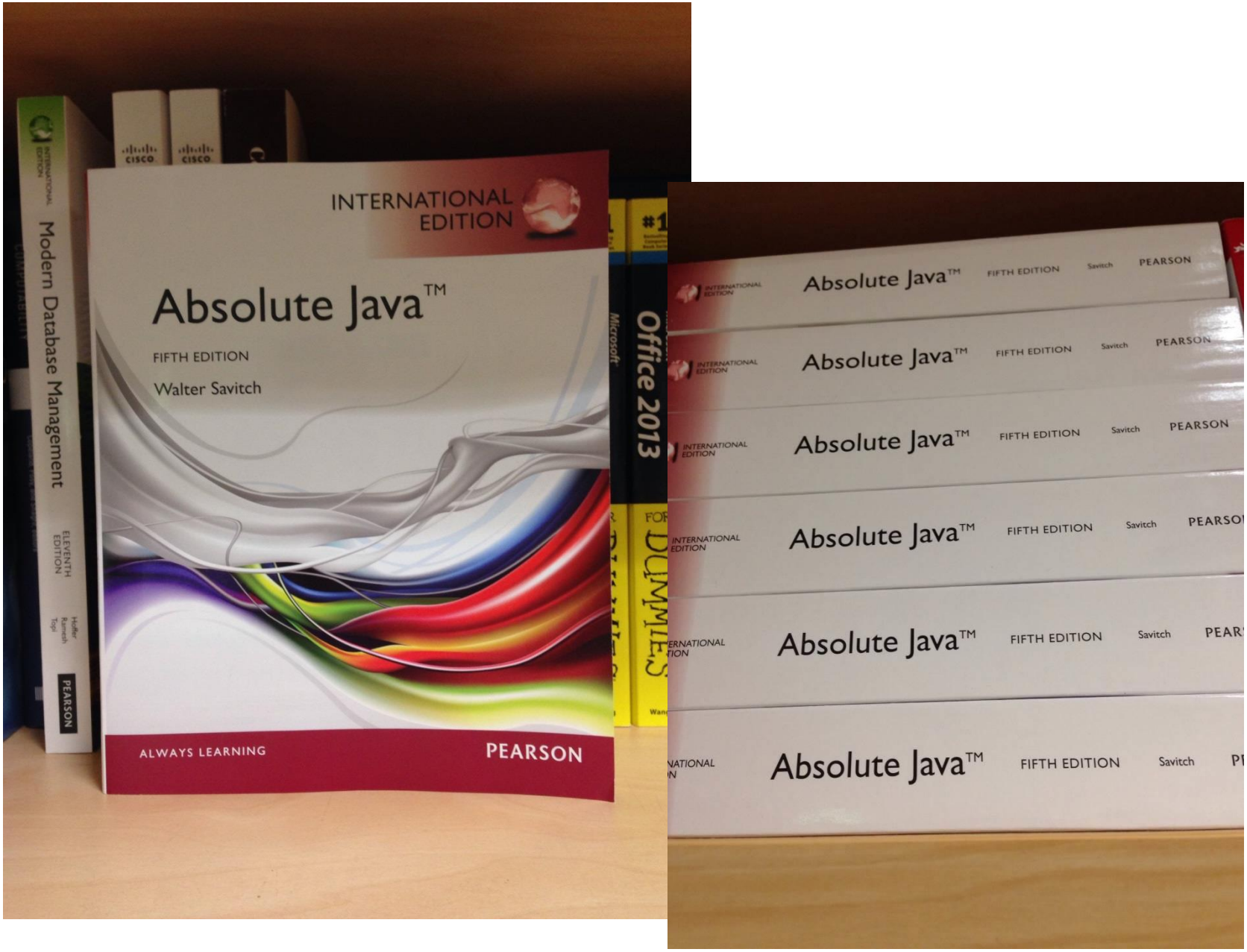
Possible guest lecturers

Why Programming (Java)

- Preparation for other subjects of your degree
  - Mobile computing
  - Masters research project
- Build small tools for your own use
  - A program to compute income tax
  - A program to simulate a financial model
- Become a millionaire
  - Develop an app/game

Subject Structure

- 12 lectures (Wednesday 4:15pm-6:15pm)
  - 2 hours lecturing
  - 1 hour lab practice (starting from week 2, Friday workshops starting from week 1)
- Assessment:
  - 40/100 project (hurdle 20/40)
  - 60/100 Final exam (hurdle 30/60)
  - All assessments will be individual (Unless otherwise stated)!
- Textbook:
  - Walter Savitch, *Absolute Java*, 4th Edition or newer, Addison Wesley. 3rd Edition is also fine.
  - 2nd Edition should also work, but check for differences.


INTERNATIONAL EDITION
Absolute Java™
FIFTH EDITION
Walter Savitch
ALWAYS LEARNING
PEARSON
Modern Database Management
ELEVENTH EDITION
PEARSON
Office 2013
DUMMIES
Absolute Java™ FIFTH EDITION Savitch PEARSON

Subject Prerequisites

- ISYS90088 Introduction to Application Development or Equivalent

OR

- COMP90059 Introduction to Python

OR

- COMP10001 or COMP10002 or COMP20005
- Admission to one of the following courses:
  - Master of Information Technology
  - Master of Engineering (Software)
  - Master of Engineering (Software with Business)
  - Master of Engineering (Mechatronics)
  - Graduate Diploma in Computer Science
  - Master of Data Science
- **If you have not done the prerequisites or a programming subject before, then you should practice a lot and work hard for this subject. If you feel any difficulty or concerns, please email me and we may have a discussion as early as possible.**

Focus of the Subject

- Object-Oriented (OO) software development
  - problem solving
  - program design, implementation and testing
  - OO concept
    - classes
    - objects
    - encapsulation
    - inheritance
    - polymorphism
  - the Java programming language

Subject Resources

- All available from the Learning Management System (LMS).

  http://www.lms.unimelb.edu.au/

Feedback from Previous Offering

- If time of the subject Wednesday 4:15pm-6:15pm is not good for you, please consider the Semester 2, which will be on Monday afternoon 2:30-4:30pm

- Students with no/little background:
    - More syntax oriented especially in the beginning
    - **Practicing is extremely important**

- If the content is not suitable to you, please find course advisor to discuss

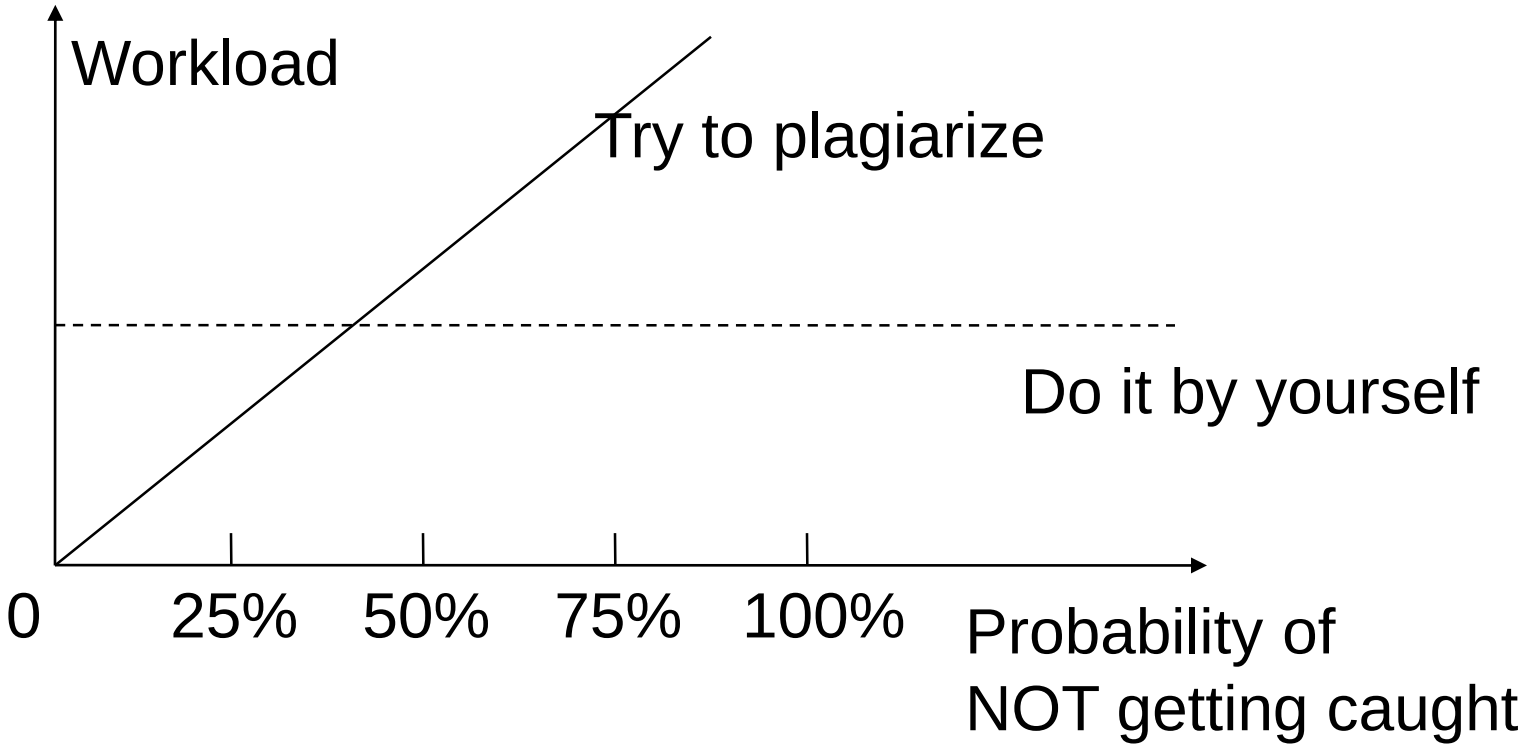
Expectations

- Lots of self-study is expected, and you need to be proactive.
- **Practice programming a lot**! Thousands of lines of code through the semester.
- Read the chapter **before** coming to lectures.
- Do lab exercises **before** you attend workshops. Workshops is the opportunity for you to ask the tutors questions, not for you to do the exercises. If you have no question after doing the lab exercises, then you may not need to come to the workshops. But workshops still provide you an opportunity to interact with other students and learn from the tutors.
- Do all the lab exercises and project assignments.

Getting help (in order of preference)

- Ask the Lecturer in the class
- LMS and Discussion forum (**DO NOT** post your assignment solution in Discussion forum or anywhere others can access)
- Ask tutors in the labs
- Email the Lecturer
- Come to see the Lecturer, but please email us first to make appointments

Academic Misconduct



- Do not copy from any source
- Do not give your code to anyone other than submitting it
- Do not post your code to the Internet (not on Github etc)

Things to do in Week 1

- Connect to the server (see Week 2 lab instructions), if you work from home, connect to the server via VPN
- Prepare week 2 lab exercise
- Compile and run a Java program
- Learn Student Manual A: esp. Unix command
- Buy textbook
- Read chapter 1