CITS1001 Object Oriented Programming and Software Engineering
Introduction and admin

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CITS1001 - Course content

- Introduction to object-oriented programming. . .
  . . . with a strong software engineering foundation. . .
  . . . aimed at producing and maintaining large, high-quality software systems.

Unit objectives

- In CITS1001 you will learn how to write simple computer programs using the Java programming language
- Today's lecture will give you an overview of the unit and what you will have learnt by the end of the semester

Computer science is no more about computers than astronomy is about telescopes.
– Edsger Dijkstra

Goals

- Sound knowledge of programming principles
- Sound knowledge of object-orientation
- Able to critically assess the quality of a (small) software system
- Able to implement a small software system in Java

Unit philosophy

- CITS1001 is a first programming unit

  No prior programming experience is assumed
  But students' backgrounds vary widely

- CITS1001 is the first in a sequence of units giving you:
  - A detailed understanding of programming and software engineering
  - Excellent problem-solving skills
  - Exposure to a wide range of topics in ICT

Your teachers

- Unit Co-ordinator & lecturer
  Lyndon While
- Lecturer
  Arran Stewart
- Lab facilitators
  Amardeep Kaur
  Caitlin Woods
  Wesley Cox
  Yuki Osada

Learning resources

- Lectures
- Lab sessions
- Exercises
- Textbook
- Unit web page (http://teaching.csse.uwa.edu.au/units/CITS1001/)
- Video notes (for the text)
- Discussion forum
- Self-organised study groups
- Practice, practice, practice!

Lectures

- Two lectures/week
  - Noon on Tuesdays in Social Sciences LT
  - Noon on Thursdays in Social Sciences LT
- Lecture slides will be available from the unit web-site
  - All lectures are recorded, and the recordings will be available via the LMS
  - But note that sometimes recordings fail!
  - Assignments, announcements, slides and laboratory material will all be available on the unit web-site
  - If any lectures are altered or cancelled, this will be announced well in advance

Labs

- The labs are where you practice creating programs
  - Exercises for each lab will be on a lab-sheet on the web-site
  - Labs follow the lecture material for each week.
- Supervised labs will be held in labs 2.01, 2.03 and 2.05 on the top floor of the CSSE Building, starting 8 am Monday, week 2
  - Enroll yourself in one session
  - But feel free to attend as many sessions as you like
    Or to do the work at other times
  - Free wifi is also available
    – feel free to bring your laptop

Workshops

- 2pm on Fridays in Social Science LT, starting in Week 2
- No new material
- Student-driven questions
- Additional examples complementing the lectures
- Aimed principally at students who feel they need extra support
- All questions are welcome, but priority will be given to more basic questions

. . . The only bad question is the one that isn't asked

Online resources

- Everything that is distributed in CITS1001 will be on the unit website -

  http://teaching.csse.uwa.edu.au/units/CITS1001

  the only exception is the lecture recordings, which will be available via the LMS

- Familiarise yourself with the web-site!

  You will benefit from being able to find things quickly when required

help1001

- Online discussion forum, based on the philosophy of:

  "*read first*: if the answer is not there, *then post*"

- Asking questions is useful:
  - Normally the quickest way to get help
  - Sometimes just formulating a question properly is enough for you to realise what the answer is
- Answering questions is useful:
  - Explaining something helps you to understand it
  - And generates good karma too :-)
  - Prizes will be awarded at the end of semester for those who contribute most to answering questions on the forum.

Announcements

- Announcements will be made in three places:
  - On the unit noticeboard on the web-site
  - In CITS1001 lectures
  - On help1001

When an announcement has been made in these three places, we will assume that you are aware of it.

Text and other resources

- The text in CITS1001 is *Objects First with Java*, Barnes and Kölling, 6th edition (2016)
  - Earlier editions should be fine
- Other useful resources are available on the web-site
- But there are thousands of Java resources out there
  - See what you can find
  - If you find something useful, please post a message on help1001 so others can benefit

BlueJ

- Programming activities in the CITS1001 labs will be based on the BlueJ IDE:

  a free Java development environment designed for beginners

- You can download BlueJ for your home machine for free at http://www.bluej.org
  - It is available for all major platforms
- You can use any Java system you like at home

  But all work submitted for assessment should work using BlueJ

Assessment

- Assessment is based on both understanding concepts and on creating systems
  - Mid-semester test
  - Two programming projects
  - Final exam
- Everyone here should be capable of passing CITS1001:

  make sure you use the resources available, and seek help if you need it.

Seeking help

- There are many avenues for getting help in CITS1001
  - Ask questions in or after lectures
  - Ask lab facilitators
  - The Friday afternoon workshop
  - help1001
  - Lecturer consultation times (Arran: Tues 4-5pm, office G.08 in CSSE)
  - http://www.student.uwa.edu.au/learning
  - Other resources on the web
- The only bad question is the one that isn't asked –

  in a group this size, if you don't understand something, certainly there will be others in the same situation

UWA compulsory online modules

- All students are required to complete three online learning modules:
  - Academic conduct essentials
  - Communication and research Skills
  - Indigenous study essentials
- http://www.student.uwa.edu.au/learning/resources has the details of these modules

Things to do this week

- Activate your UWA computer account - see http://www.ecm.uwa.edu.au/students/itsupportnew
- Sign up for a lab class (labs start on Monday, week 2)
- Read and review the lecture notes
- Get a copy of the text –
  and start reading it
- Familiarise yourself with the unit web-site
- Bookmark the video lectures for the text book:
  https://www.youtube.com/playlist?list=PLYPWr4ErjcnzWB95MVvIKArO6PIfv1fHd
- Install BlueJ on your home computer –
  and if you will be using your laptop on UWA's Wi-Fi, set up Unifi wireless access