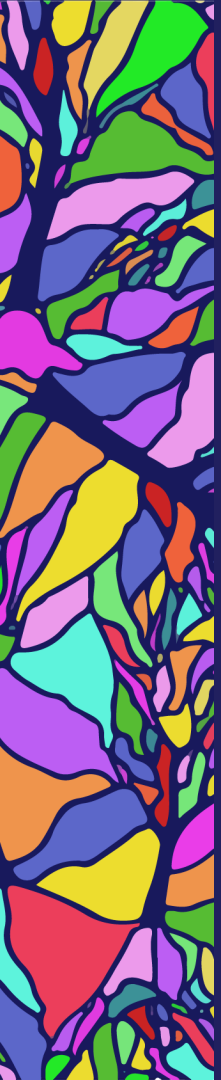
COSC1284

Programming Techniques

Haytham Fayek

What's next...



Welcome to COSC1284!

Outline

- Teaching Staff
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Teaching Staff

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Teaching Staff

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Teaching Staff

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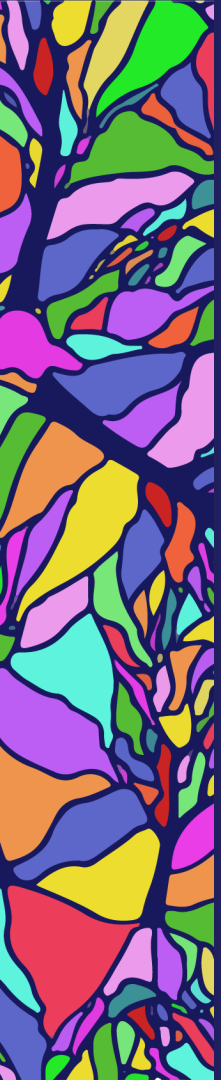


Class

COSC1284

One of the most important courses in Computer Science, Software Engineering, Games & Graphics Programming (and Information Technology).

It is very important to have a strong fundamental base. Strong fundamentals will develop your programming/modelling/analytical/critical thinking mindsets!

You will use the base to learn other languages/frameworks in your degree and career.

PT is a prerequisite of other core programming courses

- Further Programming – COSC2391
- Advanced Programming Techniques – COSC1076

COSC1284

Extremely important to learn by doing.

You will need 10 hours of practice per week,
4 hours with us and 6 hours on your own.

We'll use Java, but remember this is not about Java, this course is about programming techniques.

Recipe for Doing Well in PT

Practice writing programs from day 1.

Commence assignments as soon as they are released.

Read lecture notes and watch supplementary videos or other resources.

Attend practicals.

Attend mentoring sessions if needed.

Attend consultation hours if needed.

Follow the forums and ask questions.

Recipe for NOT Doing Well in PT

Reading programs like books.

Not writing programs.

Not doing enough work outside the classes.

Not starting assignments on time.

Listening to bad advice from others and following it.

Fear of programming.

Resources

This course requires you to use your computer.

Recommended Textbook. Think Java: How to Think Like a Computer Scientist (2nd Edition), Allen Downey and Chris Mayfield (published by Green Tea Press). The book is an open textbook, available both as a PDF and in an interactive format.

Consultations. Consultation times available on Canvas.

Discussion Boards. Please post any questions on Canvas Discussions.

Resources

Linkedin Learning (formerly known as Lynda.com)

- Lots of courses and individual Video tutorials for you to learn not only Programming in Java but also various other subjects
- We will be referencing some of the videos from various Java courses
- Not strictly necessary, but a great way to reinforce fundamental concepts

Syllabus

Week 1: Introduction to Java, Variables and Data Types
Week 2: Standard I/O
Week 3: Methods and Testing
Week 4: Conditionals and logic + Revision Control (GitHub)
Week 5: Loops and Strings
Week 6: Arrays and References
Week 7: Primitive vs Objects (Immutable vs Immutable)
Week 8: Designing Classes
Week 9: Arrays of Arrays
Week 10: Arrays of Objects and Objects of Arrays
Week 11: OOP Basics (extending class, interfaces, etc.)
Week 12: Final Review

Lectures

Lecture notes/videos will be available prior to the lectures. You should go through the notes and watch the videos before the lecture. Lectures will be for highlights, discussion, and Q&A.

Lectures start this week (Week 1) on Wednesdays, 2.30pm-4:30pm.

All lectures will be online live on Collaborate Ultra. Please go to Canvas>Collaborate Ultra to join the lecture. Note that links will only appear 30 minutes prior to the lecture.

All lectures will be recorded and the recordings will be available afterwards under Canvas>Collaborate Ultra>All Previous Sessions.

Tutorials/Practicals

Tutorials/Practicals start this week (Week 1) on Tuesdays, 12.30pm-2.30pm, Wednesdays, 12.30pm-2:30pm, and Thursdays, 3.30pm-5:30pm.

All tutorials/practicals will be run online live using Collaborate Ultra. Please go to Canvas>Collaborate Ultra to join the tutorial/practical. Note that links will only appear 30 minutes prior to the tutorial/practical.

Most but not all tutorials/practicals will be recorded and the recordings will be available afterwards under Canvas>Collaborate Ultra>All Previous Sessions.

Tutorial/practical attendance is strongly encouraged.

Assignments and Quiz

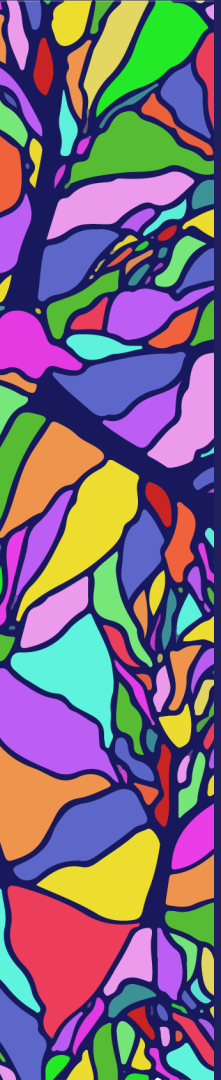
Assignment 1: 25% (due Week 5)

Assignment 2: 30% (due Week 9)

Assignment 3: 30% (due Week 13)

Quiz: 15% (Week 12)

We take plagiarism very seriously with zero tolerance. For more information please visit: http://www1.rmit.edu.au/students/academic-integrity/



Questions?