Programming Fundamentals

An Introduction to the module

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Agenda

- *Module Structure / Approach:*
  - *Introducing your lecturers*
  - *Structure of the module*
  - *Troubleshooting labs*
  - *Module assessment*
  - *Ethos*

Introducing your lecturers

Colm Dunphy

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- Email:cdunphy@wit.ie

Diarmuid O'Connor

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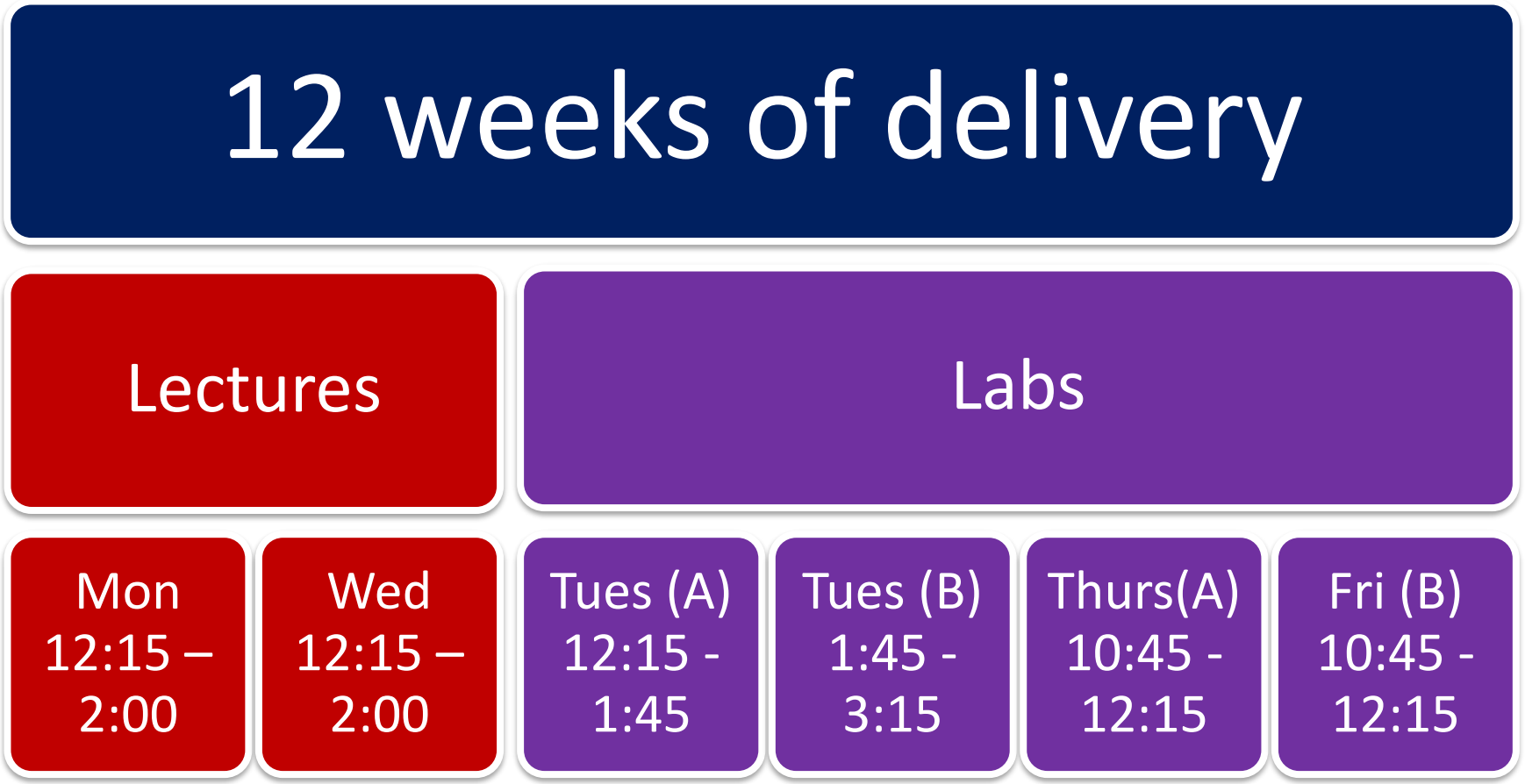
Structure of the module



Structure of the module

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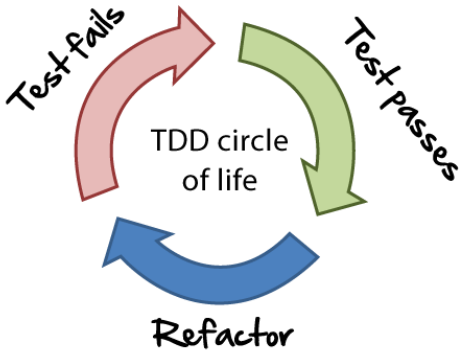


Week Starting…	Topic	IDE	Assessment (100% CA)
Week 1 (22nd Jan)	Static and Animated Drawings, Sequence, Data Types	Processing	
Week 2 (29th Jan)	Selection (if), Iteration (loops), Events	Processing	
Week 3 (5th Feb)	Using and Writing Methods	Processing	*Assign 1 spec released*
Week 4 (12th Feb)	Strings, Classes, Objects	Processing	
MIDTERM (19th Feb)	MIDTERM	MIDTERM	
Week 5 (26th Feb)	Primitive Arrays and More on Classes	Processing	
Week 6 (5th March)	Building the Game of Pong (released end of week 4)	Processing	*Assignment 1 due Sunday*
Week 7 (12th March)	IntelliJ, Basic I/O, Array Recap, Collections (ArrayList)	IntelliJ	*Assign 2 spec released*
Week 8 (19th March)	Collections (ArrayList), Menu Driven Apps, Persistence	IntelliJ	
EASTER (26th March)	EASTER HOLIDAYS	EASTER	
EASTER (2nd April)	EASTER HOLIDAYS	EASTER	*Assign 2 due Sunday*
Week 9 (9th April)	XML, Exceptions, Collections (Maps, Sets)	IntelliJ	*Assign 3 spec released*
Week 10 (16th April)	Inheritance, Polymorphism, Abstraction	IntelliJ	
Week 11 (23rd April)	TDD and JUnit	IntelliJ	
Week 12 (30th April)	Interfaces	IntelliJ	*Assign 3 due Sun 20th May*

Assignment structure

- 100% Continuous Assessment (CA).
- 3 assignments:
  - Assignment 1 (30%) – due Sunday 10th March, 5PM
  - Assignment 2 (20%) – due Sunday 8th April, 5PM
  - Assignment 3 (50%) – due Sunday 20th May, 5PM
- Hard deadlines; extensions only permitted if mitigating circumstances apply.
- Individual assignments (no team-based ones).
- Submit via Moodle assignment dropboxes.

Troubleshooting labs ...during the lab sessions

Post the issue in Slack; think of it as asking a question in a traditional classroom. Include any screen shots, screen recordings, etc you think might help solve the problem.

We encourage classmates to help each other, so if you know the answer to another student's issue, please do respond.

All our responses will be via Slack so that all students can see the resolution.

Note: for private issues, chat is also possible with us privately in Slack (or email).

Troubleshooting labs
…outside of the lab sessions

Search Slack Chatroom

Check Google / StackOverflow (or equivalent) for possible solution

Post the issue in Slack Chatroom

Ethos

- Self-directed learning outside of lectures / labs.
- Inquisitive and motivated.
- Helpful to peers.
- Engagement and staying current with the module.
- All work submitted must be your own work.
  - Note: all code/approaches given in the module by us can be re-used / re-purposed in your assignments.

Introduction to Processing

What is Processing?

"Processing is a programming language,
development environment,
and online community."

Source: https://processing.org/

- Some online examples developed using Processing:
  - http://www.thesheepmarket.com/
  - http://balldroppings.com/js/
  - http://www.openprocessing.org/browse/

What is Processing?

Processing…

…can be used to develop static or interactive online material and data visualisations.

…is often used by visual artists.

…produces visual and interactive representations of programming code.

What is Processing?

- Different programming languages can be used with Processing e.g. :
  - Java: we will use this language.
  - JavaScript
  - Python
  - CoffeeScript
  - Etc.

Why are we using Processing?

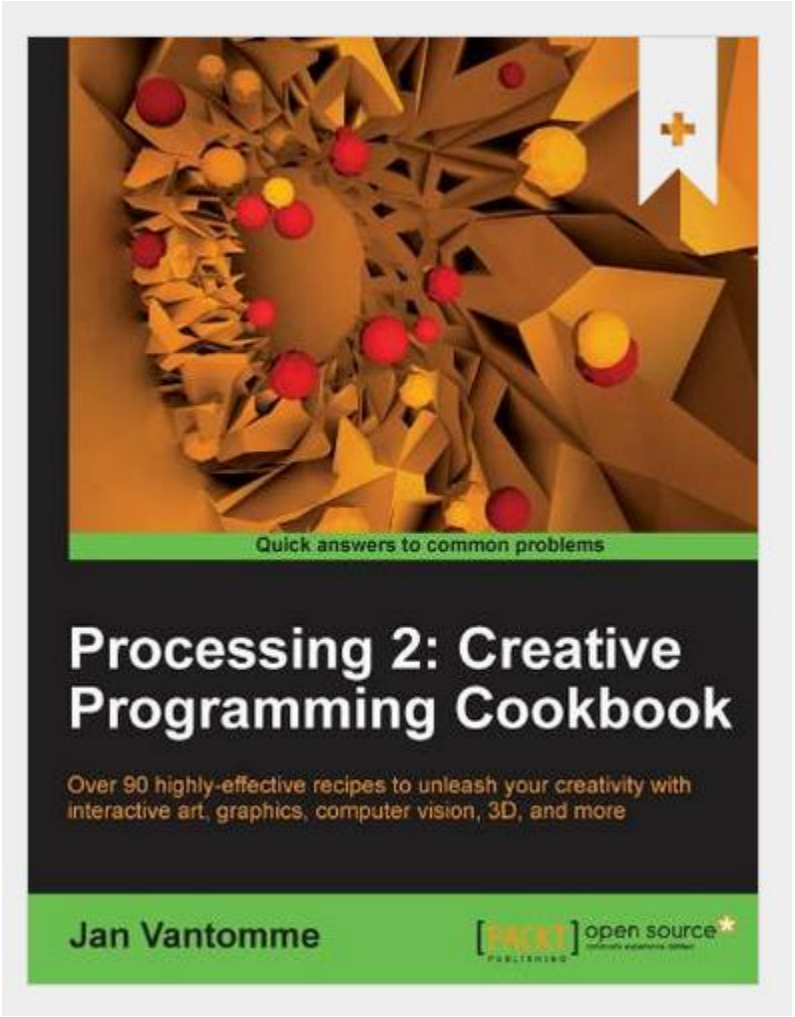
Processing is increasingly used

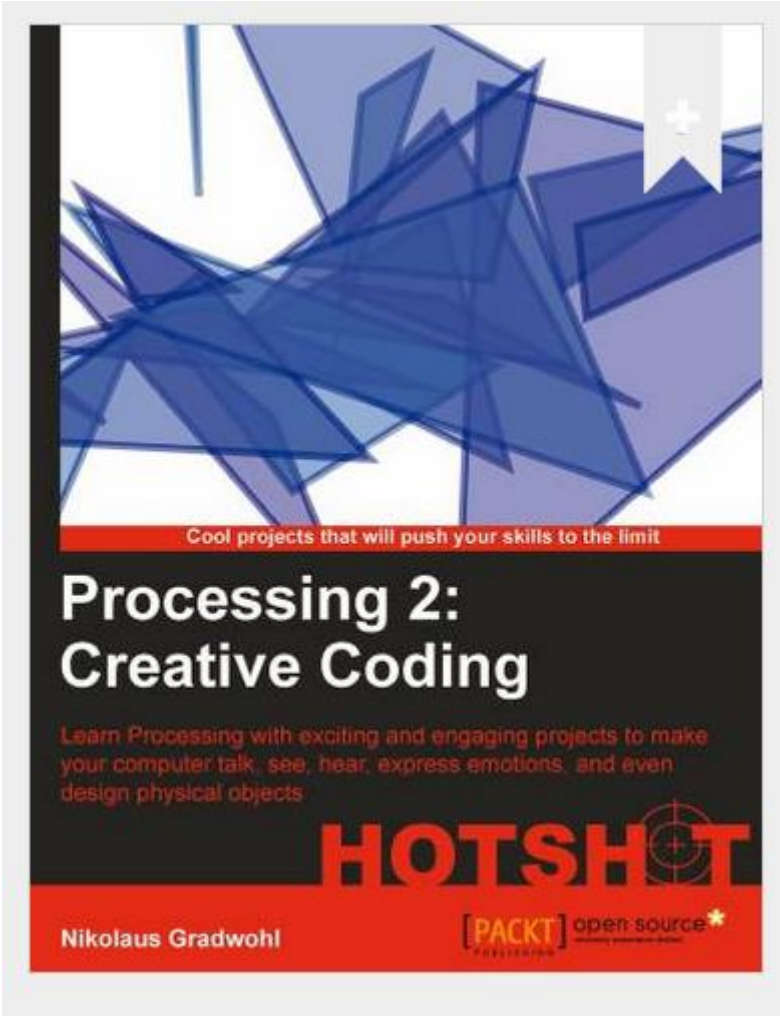
to teach computer

programming fundamentals

(https://processing.org/overview/)

Some eBooks in WIT library





We will start coding in Processing in the afternoon session

Questions?