Programming Fundamentals

An Introduction to the module

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http://www.wit.ie/

Agenda

- *Lecturers / Tutors*
- *Module Structure & Delivery*
- *Technologies*
- *Module Assessment (Assignments)*
- *Troubleshooting Labs*
- *Ethos*

Introducing your lecturers / tutors

Colm Dunphy

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Patrick Felicia

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Jonathan Brazil

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Module Structure

12 weeks of delivery

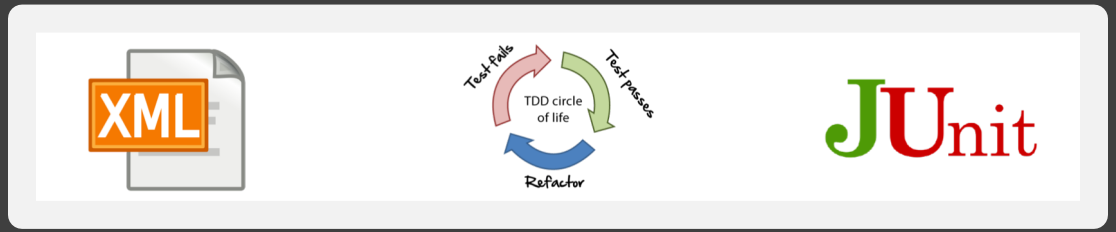
2 *Lectures / Talks (webinar/video)	2 * Labs	Lab Support on Slack
Mon 12:15 – 2:00 Wed 12:15 – 2:00	Mon Tues Wed Thurs	within 24 hours M-F

* Double Module (10 credits)

Learning Technologies

Programming Technologies

Programming Technologies



Semester 1		S	M	T	W
January	Week	6	7	8	9
	1	13	14	15	16
	2	20	21	22	23
	3	27	28	29	30
February	*4*	3	4	5	6
	5	10	11	12	13
	reading-week	17	18	19	20
	6	24	25	26	27
March	7	3	4	5	6
	8	10	11	12	13
	reading-week	17	18	19	20
	9	24	25	26	27
April	*10*	31	1	2	3
	11	7	8	9	10
	Easter-break	14	15	16	17
	Easter-break	21	22	23	24
	12	28	29	30	1
May	*reading-week*	5	6	7	8
	reading-week	12	13	14	15

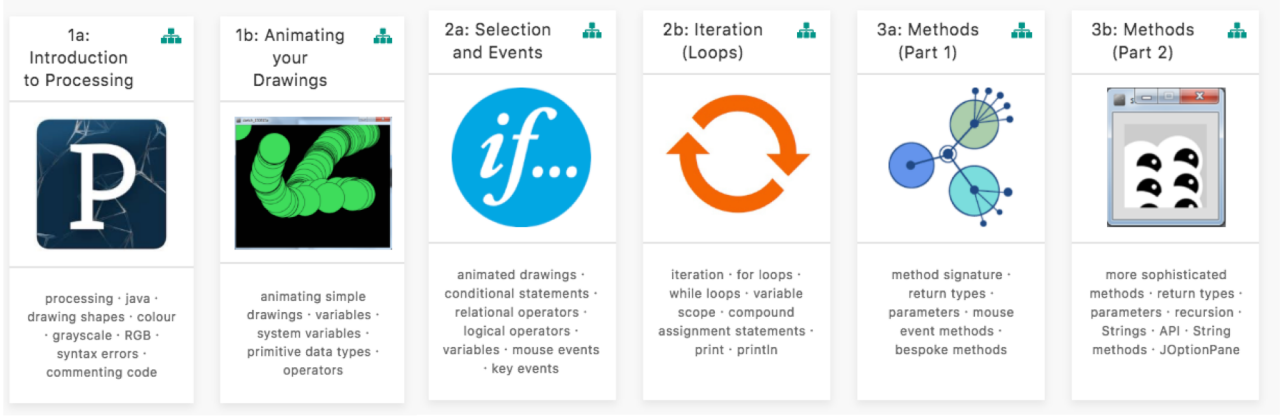
Week	Lecture
1	Intro to Processing Animate your Drawings
2	If statement and Events Iteration (for and while)
3	Methods More on Methods
4	Strings and Intro to Classes Classes and Encapsulation
5	Swing (JOptionPane) and Arrays Arrays and Classes
6	Pong Intro Pong Solutions

Week	Lecture
7	IntelliJ, JVM and I/O
8	Grouping Objects (ArrayLists)
9	Menu and CRUD
10	Persistence (XML) and Exceptions
11	Inheritance and Polymorphism
12	Collections (Map and Set)

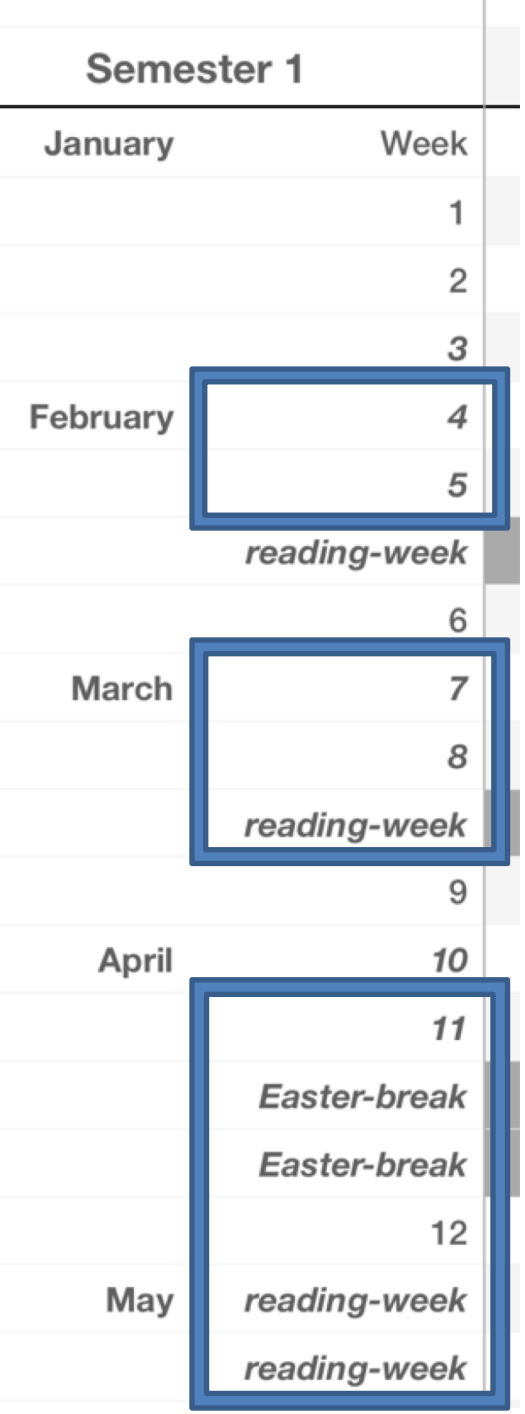
Assignment 1 (P1)

Assignment 2 (P2)

Assignment 3 (P3)



ASSESSMENT



P1 – 15%

P2 - 30%

P3 – 55%

% reflects difficulty and time required

Assignments

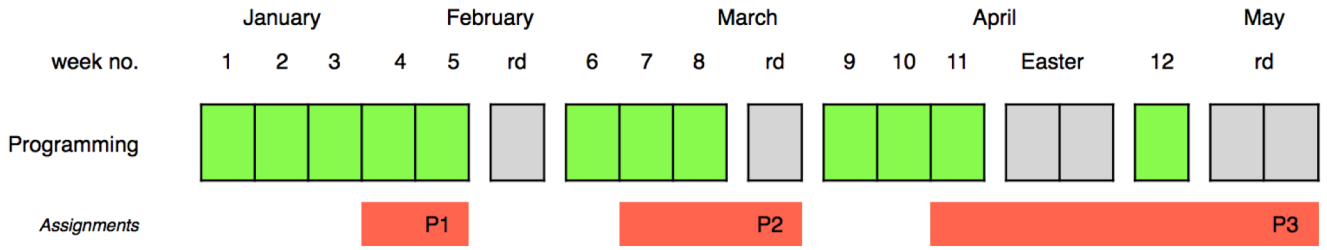
Programming

Assignment 1

Assignment 2

Assignment 3

moodle



Online
Interviews / Demos

slack

Assignments

- 100% Continuous Assessment (CA).
- All Individual assignments
  - (no team-based ones).
- Submit via Moodle assignment dropboxes.
- Hard deadlines;
  extensions only permitted if mitigating circumstances apply.
- Interviews

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 with solving the problem.

We encourage classmates to help each other (peer learning),
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.
for private issues, use DM in Slack

Troubleshooting labs
*…**outside** of the lab sessions*

Search **#Slack** Chatroom

Check Google / **StackOverflow** (or equivalent) for possible solution

Post the issue on **#Slack** programming channel

Ethos

- **Self-directed learning** outside of lectures / labs.
- Inquisitive and motivated.
- Help your **peers (use #Slack!)**.
- **Engage**ment and staying current with the module.
- All work submitted must be **your own work**.
  - 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/

Examples:

http://www.openprocessing.org/browse/

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?

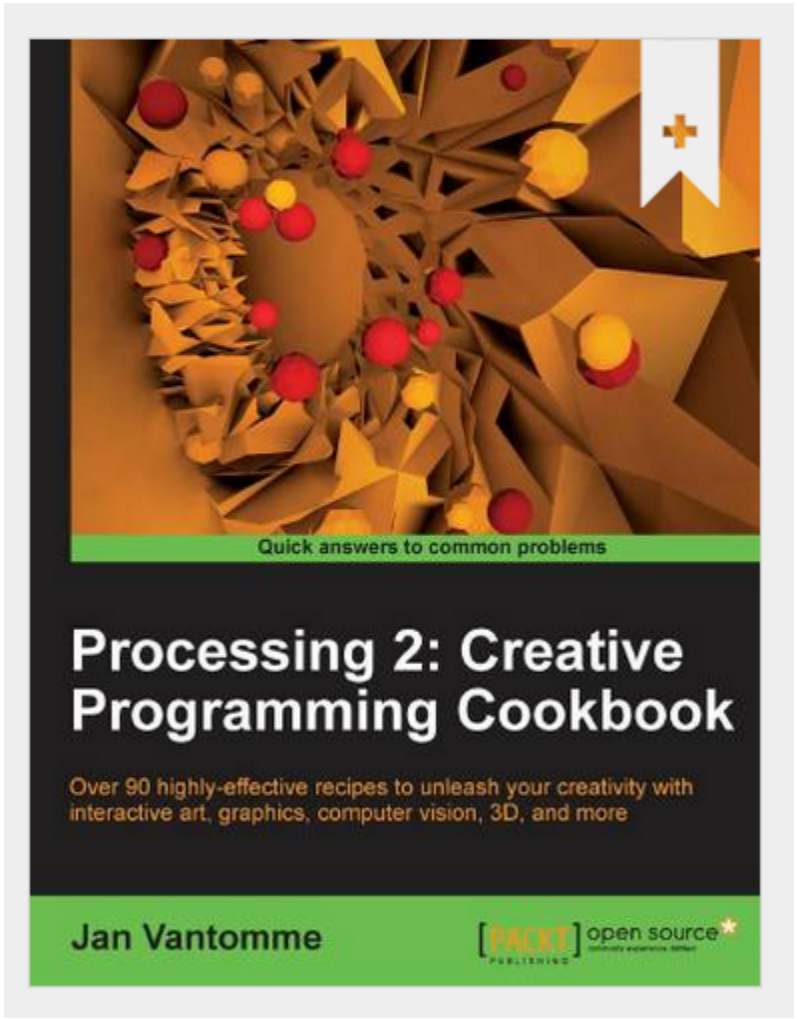
Processing is increasingly used

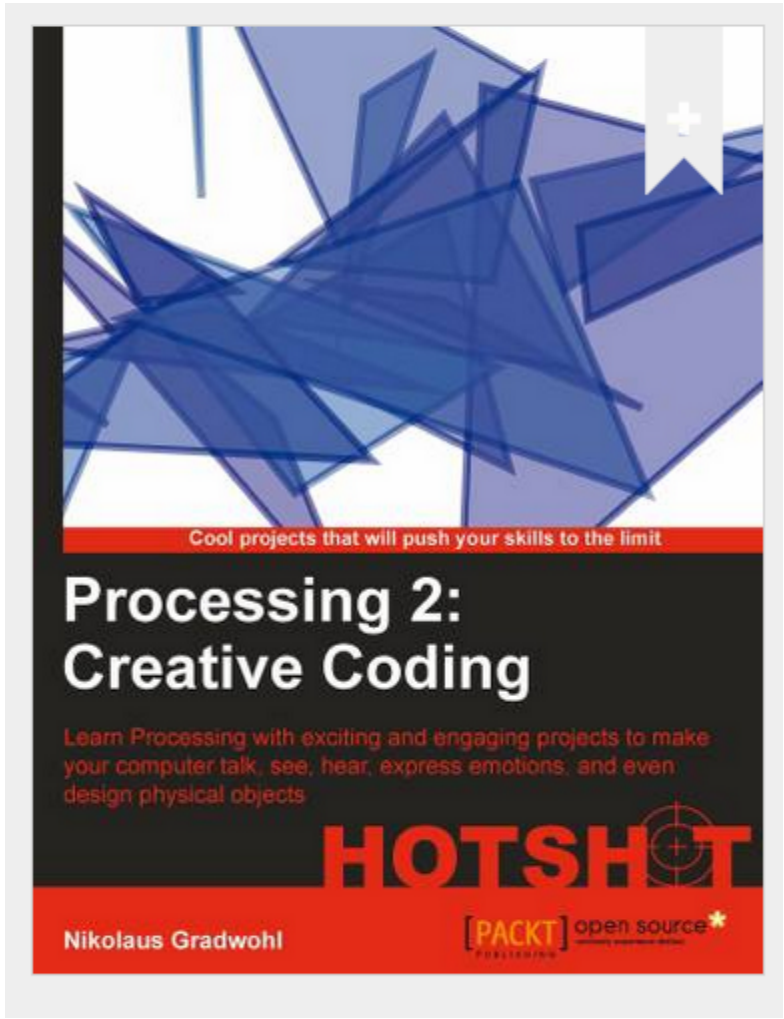
to teach computer

programming fundamentals

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

Some eBooks in WIT library





We will start coding in Processing
in the afternoon session

Questions?