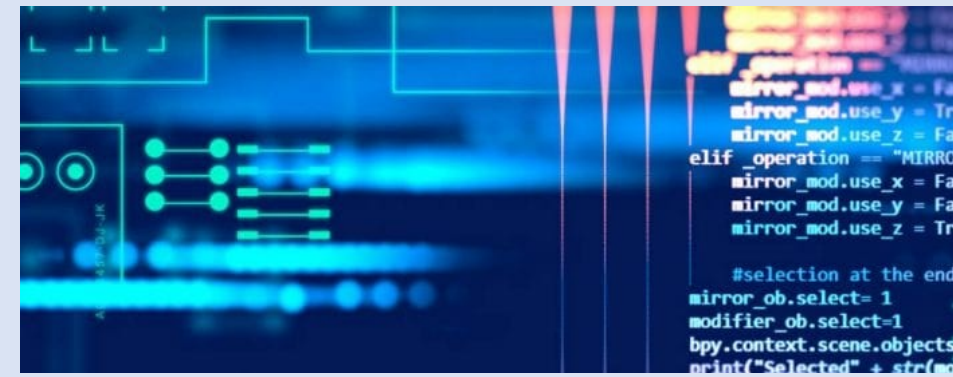# 2020 CI401
Introduction to programming

Welcome to CI401

Dr Roger Evans

Module leader

30th September 2020

CI401:Introduction to Programming

- Is the backbone of your studies during your first year

- Teaches an essential skill for all flavours of computer science

- Includes all our main Computer Science course students (as a single cohort – this year, that's about 160 students)

- Develops *transferable* and *industry-oriented* coding skills

Previous experience

- Very wide range of knowledge and experience
  - Never coded
  - Some coding experience
  - A level Computer Science (etc)

- *We know this*, and we design our teaching for it

- Two principles govern the way we operate our core teaching
  - *Feel secure* – we want you to know that you are in the right place
  - *Be challenged* – we want to challenge you (and for you to challenge yourself) to try and go a bit further – outside your comfort zone

Feeling secure

- This is not a year-long interview process – we are not trying to 'weed people out'

- We accepted you, because we think you are good enough

- We want to give you the best possible chance to succeed – we want everyone to pass, and everyone to get a good degree result

- Imposter syndrome (thinking you are here under 'false pretences') *is normal – lecturers and professors feel it too !!* 🏝️

Being challenged

- We want you to be *engaged, interested and challenged*, whatever level you are at

- You will learn better if you challenge yourself

- You need to allow yourself to take risks and sometimes not succeed – if everything is easy, you are not learning

- You learn a lot from working with fellow students, whatever level you or they are at

- We are *always* here to support you

What do you learn?

- You will learn about programming in general, and how to code

- More than that, you learn how to code *well*

- The programming language we use is called *Java*. It is very widely used for teaching, research and in industry

- But we always say this is not a 'Java programming' course – it is a *programming course that uses Java*

- You learn skills that are *transferrable* – to other programming languages in other modules

What do we do? Semester 1

- *Basic coding* – how to make a computer do something

- *Understanding data* – what does a computer 'know'? Is it just playing Top Trumps?

- *Algorithms* – how to design computer programs to do tasks

- *User interfaces* and *animations* – we aim to produce an animated snow-scene by Christmas!
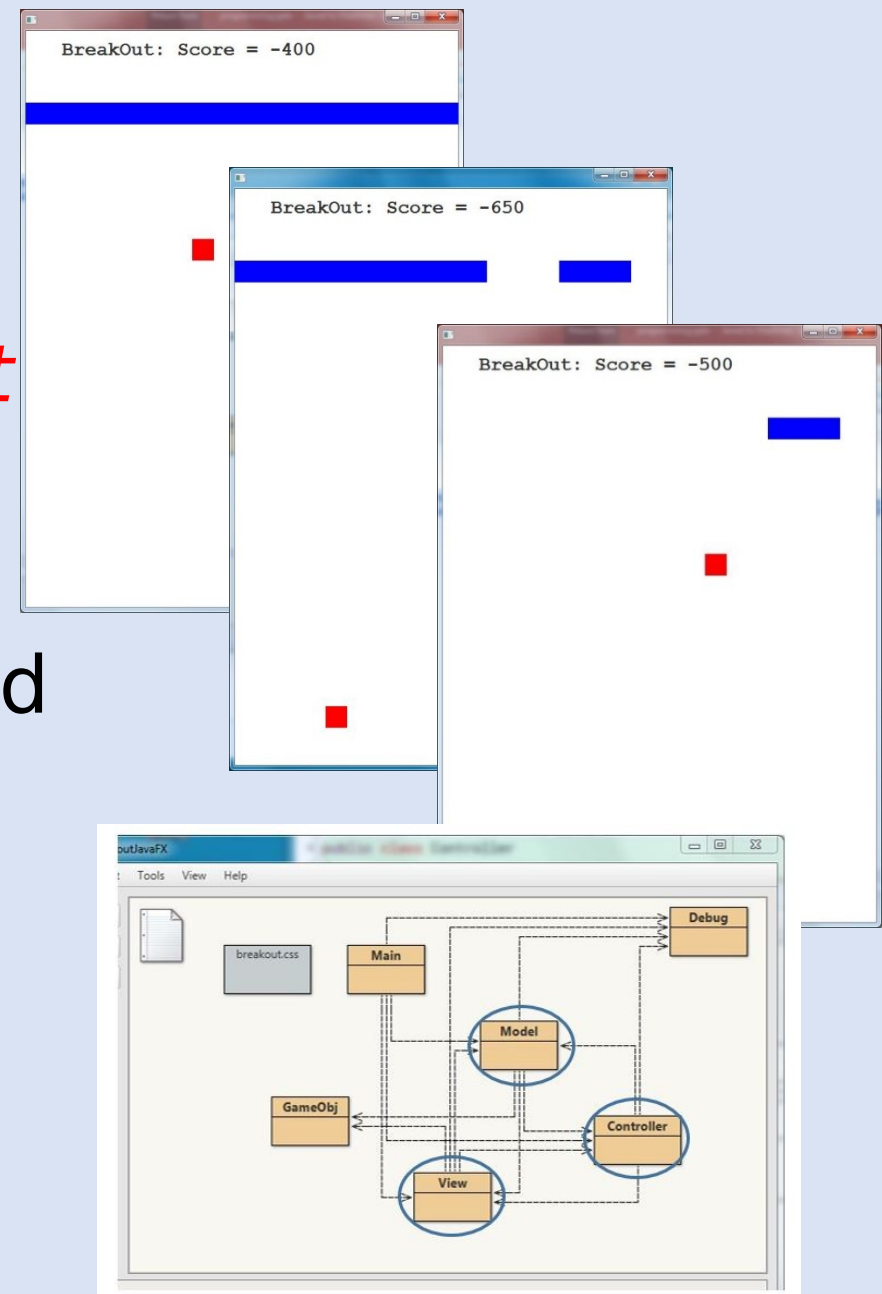

The snow scene animation

What do we do? Semester 2

- Based around a *coursework project* between February and Easter

- More advanced programming techniques (such as *inheritance* and *encapsulation*)

- The importance of *design*, *testing* and *documentation*

- Towards the end, we look briefly at *Python* and compare it with Java

The Breakout game project

How is it assessed?

- You get marks for this module in two ways:
  - *half* is based on the coursework project in February-March (semester 2)
  - *half* is based on an exam at the end of the year (June). It's an 'open book' exam, which means you can take notes or text books in with you.
- The pass mark is to get an average of 40% overall with at least 30% in each part

The project (February – Easter)

- Demonstrate your learning in *coding, data, development, using objects, testing* and *documentation*

- Modify code projects that we provide or develop your own

- Last year's provided projects were a *Breakout* game, a *Cashpoint* interface, and an *AI Maze* game.

- You can pass based just on what we cover in semester 1

- You can also do a more advanced project using things we cover in semester 2, or things you discover for yourself

How will you be taught? (2020 style 🔍)

- Live sessions
  - *Lectures* (1hr per week) – live session with lecturer, online
  - *Seminars* (1hr per week) – in course groups (about 40 students), guided activities and discussion, online
  - *Labs* (1hr per week) – individual lab work, with tutors present in labs on campus and available online for one-to-one support
- Independent learning
  - Lectures recorded for independent viewing
  - Additional pre-recorded learning topics for private study
  - Slides, notes and exercises

Module timetable – Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
0900			Lab W202/online		
1000			Lab C107/online		
1100					Lab 107/online
1200	Seminar online		Lab C107/online		
1300			Lab C207/online		
1400		Lecture online			Lab C107/online
1500			Lab C107/online		
1600			Lab C107/online		

Module timetable – First week

	Monday	Tuesday	Wednesday	Thursday	Friday
0900			Lab W202/online		
1000			Lab C107/online		
1100					Lab 107/online
1200			Lab C107/online		
1300			Lab C207/online		
1400		Lecture online			Lab C107/online
1500			Lab C107/online		
1600			Lab C107/online		

> No seminars in the first week!

Key module resources

- mystudies.brighton.ac.uk
  - *2020 CI401 Introduction to programming*
  - Main module area for announcements, resources, assessments, results etc.

- Microsoft Teams
  - *Group-2020 CI401 Introduction to programming*
  - Teams area for live online sessions (lectures, seminars and labs) and chat streams
  - Access code: *fjfsjqo*

Module team contacts (semester 1)

Name	Role	Contact
Roger Evans	**Module leader** Lectures, seminars, labs	C507 (Cockcroft 5th floor) R.P.Evans@brighton.ac.uk (email) @Roger Evans (teams) @rogerevansbton (twitter)
Course administrators	**General questions**	CEMUGComputing@brighton.ac.uk
Ali Hamie	Seminars, labs	
Stelios Kapetanakis	Seminars, labs	
Khuong Nguyen	Seminars, labs	
Jarod Locke	labs	

First lecture:
Tuesday 6th October, 2pm
Online (Microsoft Teams)

Group-2020 CI401 – Introduction to Programming
Access code: fjfsjqo