COMP120

TRANSITIONING TO UNREAL 4 & C++

Creative Computing

Objectives for Today

After this session, you should be able to:

- **Recall** all of the outstanding assignments
- **Recognise** your role in the next game development project
- **Outline** the purpose of the next set of sessions
- **Explain** xxx

Objectives for Today

1. Your Assignments

- COMP110
- COMP120
- COMP150

2. Game Concepting

- Expectations
- Contributions
- Timeline

3. Transition to Unreal 4 and C++

- Next Steps
- Useful Resources

Your Assignments

The end run

Your assignments

- This week and next week have been tough, with many projects finishing and new projects beginning
- Maintain the effort for the foundation of the next project – the concepting stage is very important
- Get to know your new peers

COMP110

Principles of Computing

You still have **TWO** outstanding assignments for the COMP110 module. These are:

- Week 11: Research Journal
- Week 13: Worksheets

Please ensure that you do not neglect these assignments, as they are foundational to your future programming endeavours.

COMP120

Creative Computing

You have **NO** outstanding assignments for the COMP120 module. However, this module is not yet complete. Instead, you will:

- Use the time available to contribute to the concepting and prototyping phase of the COMP130 Multidisciplinary Game Development Practice module
- Get to know your new team!
- Start to learn C++ and Unreal 4 across the next few weeks ahead of the next study block

It is critically important that you act on feedback from your assignments to sharpen your programming skills. Utilise the winter holiday period to catch up on anything you don't understand as you *will* feel the burden of game development!

COMP150

Game Development Practice

You have **ONE** outstanding assignments for the COMP150 module. This is:

- CPD Report

Reflecting on your experience of game development will help you identify areas to improve in the next study block. Ensure you identify appropriate weaknesses and describe how you can overcome them.

Again, use time wisely. We'll cover more material across the next few weeks which will inform your next project. Providing a bit more space to enable you to contribute to your team.

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Game Concepting

Being creative

Game Concepting

- You are expected to contribute to the concepting phase of your next game development project
  - You are **NOT** assessed on this
  - You **DO NOT** do the concepting report
  - You **DO** need to attend the pitches, but you are **NOT** assessed on these
- Balance your time wisely

Game Concepting

- It is an absolute requirement that you attend team meetings, and in particular **PO Meetings**
  - Your project supervisor (your "PO") will mark your individual contributions to the group project
  - We use a peer feedback system to manage retrospectives, and these are shared with the external examiner
  - Attendance at PO meetings and your group's studio practice will be *mark bearing*

Game Concepting

- The course has been structured like this due to student feedback
  - Computing students wanted to feel like members of the Games Academy
  - They didn’t like being parachuted into teams after the concepting had been completed
- It is reasonable to expect a strong contribution, even if it isn’t assessed

Game Concepting

- The time you would otherwise have been using to do coursework in COMP120 and COMP150 is now time to support your team
- You get out what you put in
- You're here to learn how to make games, and how to secure a role in the games industry
  - Your portfolio is critical, so please exercise your creative agency and pour in considerable effort
  - The industry wants team players – people who can communicate and collaborate effectively
  - These team projects enhance your employability quite significantly – but are frustratingly tough

Game Concepting

- You aren't escaping the writing
  - Your peers on the BA have an extra concepting essays in study block 1
  - You instead have an essay in study block 2, the 'software engineering essay' where you analyse the architecture and engineering of your group game project
- It is reasonable to expect a contribution, even if it isn't assessed
  - Don't contribute to the write-up
  - I suggest prototyping something in Unreal which the team can use in their report to illustrate their core game mechanic

Timeline

- Week 11: Concepting & Prototyping
- Week 12: Pitching
  - There will be a peer-review in the PO meeting which will be used to inform assessors of contributions in the next study block
- Week 13: Assessment & Feedback
- Week 14: Work on First Sprint in Studio and go to Workshop Festival
- Week 15: Complete work on First Sprint in Studio and go to Workshop Festival
- Week 1 (SB2): PO Meeting is a ‘sprint review’ looking at work done in early January

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Transitioning to Unreal 4 and C++

Next Steps

Next Steps

- C++ is a more challenging language to learn compared to Python
  - Greater room for error
  - Exposure to lower-level concepts
- Unreal 4 is considerably more complex that PyGame
  - The official documentation is also quite bad, but we can guide you through it
  - You need to practice, practice, practice, practice, practice!
  - Use resources on Pluralsight over winter – you need to secure access from our technicians

Next Steps

- **Lectures**
- 2x 1-hour lectures
- I will cover basic constructs in C++, compared to similar constructs in Python
- I will also place greater emphasis on object-orientated principles which you will need to use to take advantage of C++

Next Steps

- **Workshops**
- 2x 2-hour workshops
- John will cover C++ basics, helping your to implement a console application
- By the end of the second session, you will hopefully have implemented the Fallout hacking mini-game in C++

Next Steps

- **Extended Workshops**
- 2x 4-hour workshops
- Jamie will introduce you to Unreal 4, setting up a project and implementing some gameplay
- In the second workshop, Jamie will get you to integrate a C++ library for level editing into the Unreal engine – showcasing, in a modest way, the power of programming 'under the hood' of the engine

Next Steps

- **Winter Holiday Assignment**
- The threshold criterion for your first assignment in COMP140 will be successful completion of the Unreal battery collector tutorial
- You can find the materials here: https://api.unrealengine.com/INT/Videos/PLZlv_N0_O1gYup-gvJtMsgJqnEB_dGiM4/index.html
- Brian has some errata for these tutorials which he will share with you

Next Steps

- Familiarise yourself with Unreal Engine and Visual Studio on the university computers
- Setup the FPS tutorial and have a play around with the settings