

Teams, Project Brief

Workshop 1

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Today's Workshop

- Introduction + Project Brief (20 min)
- Form your team (~30 mins)
- Set up team repo on Github (60 mins)



Meet the Team

Lecturers



Ruzanna Chitchyan



Jon Bird



Pete Bennett

Lab Support



Alex
Cockrean



Leifan
Lei



Guoda
Laurinaviciute



Ahmed El
Ashray

Senyi Luo

Purpose of Unit

Previous units aim to improve your knowledge as computer scientists

This unit helps package this knowledge as employability skill-sets

This is achieved by targeting the following industry-relevant issues:

- Transferable skills: Management, Collaboration, Communication
- Platform skills: applying your prior programming language knowledge
- Scalability skills: Development “in the large” at industrial scale

Grade breakdown

- 50% - Project and Report in Github repo
 - We have split assessment up into these "bite sized" elements that correspond to the topics covered within the module.
 - 30% Code and Report
 - 10% Demo
 - 10% Video
- 50% - Written exam

Week	Lecture (Mon 2-3pm) CHEM BLDG LT2	Lab (Tues 2-4pm) MVB 2.11	Discussion/Guest Talk (Thurs 10-11am) QUEENS BLDG F.101a/b/c (Bill Brown Suite)	Homework (~10hrs per person)
1	Introduction & Process [slides]	Form Teams, Project Brief & Setup Repo [slides, exercises] Tools Unit	Jobs Post MSC: meet past graduates: Dr Dan Bennett , lecturer, UoB (2018 graduate) Ali Jardine , Data Platform Engineer at Depop, UK (2024 graduate)	Research games and create a list of inspiration on team repo (including game mechanics). Develop possible game ideas
2	Agile Software Development	Intro to P5.js & Deploy Game to Repo		
3	Requirements Engineering	Review Your Two Projects, Paper Prototyping & Requirements Gathering		Refine Paper Prototype (translate to digital wireframe) & Collect additional requirements
4	Object Orientated Design	Object Orientated Activity (Classes)		Add requirements section to report (repo)
5	Project Management	Planning Poker, Ethics (Information Sheet, consent form)		Develop a working prototype over reading week!
6	Reading Week, no lecture	Reading Week, no lab		Games Jam (sprint over reading week)
7	HCI Evaluation - Qualitative	Think Aloud and Heuristic Evaluation		
8	HCI Evaluation- Quantitative	Quantitative		
9	Software Quality & Testing	Software Quality & Testing		
10	Sustainability & Accessibility	Add Accessibility & Sustainability Sections to Report		
11	Privacy, Security & AI	Add Privacy, Security & AI Sections to Report	Dr Pauline Anthonysamy , Senior Staff Privacy Engineer at Google Zurich, Switzerland	
12	Coursework Feedback & Marking Scheme	Game Demo	Project Report Hand in at 1pm (no talk)	

Coursework

- You get to work on one big project – for the whole term
- Apply all of the knowledge you have gained previously...to a significantly sized, real project
- Work on the project is structured, We won't just leave you to get on with it!
- Each week you will be given a structured activity, and support will be provided to complete that work
- You will be working as part of an integrated development team.



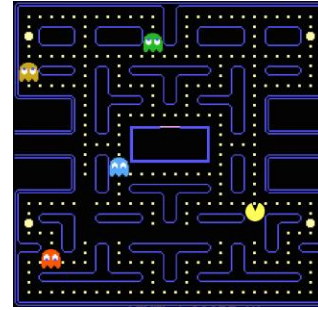
Coursework Brief – Games Project

- The aim of this group coursework is to **design and develop a game**, applying and reflecting on the software engineering methods you have learnt in the taught component of this module.
- Each team of 6 will develop a novel computer game based around adding **a twist** to an existing game or game archetype.
- We would like your team to identify and discuss **two major software development challenges** in developing your game.



Pac-man Example

- Pac-man, *but* the ghosts can rearrange the map
 - Challenge 1: The ghost's AI
 - Challenge 2: Data structure for storing the map



Asteroids Example

- Asteroids, *but* you play as the asteroids rather than the spaceship.
 - Challenge 1: Asteroid fragmentation (physics)
 - Challenge 2: Spaceship AI



Tetris Example

- Tetris, *but* the blocks have different physical properties.
 - Challenge 1: Development of physical simulation
 - Challenge 2: Documentation and onboarding for block properties



Any Game Genre? Sure!

- Action
- Platformer
- Shooter
- Beat 'em up
- Stealth
- Survival
- Rhythm
- Puzzle
- RPG
- Simulation
- Tower Defense
- Arcade
- Sports
- Party Game
- Horror
- Social Deduction
- Serious
- Generative
- Metroidvania
- Roguelike
- Dungeon-crawler
- Deck-builder
- One-button
- Text-based

... and many many more

<https://www.theguardian.com/games/2021/oct/11/modern-video-game-genres-explained-metroidvania-dungeon-crawler>



https://en.wikipedia.org/wiki/List_of_video_game_genres

That sounds like a lot!

- Remember that the primary aim of this module is to **learn**, **apply** and **reflect** on the principles of **good software engineering**.
- The quality of your process is the primary focus of assessment and not your game idea, though we hope that a quality game will be the outcome of a good process!
- We aim that by following the workshops this should be a straightforward coursework to pass, but with plenty of opportunity to excel and achieve higher grades.



But, what language?



- **P5.js:** <https://p5js.org>
(*not Unity!*)
- It's Javascript! (with some extras) You'll be learning Javascript in Software Tools
- Designed for use by artists, designers, creative technologists (designed to be straightforward, excellent documentation)
- Has a simple Integrated Development Environment (IDE)
- Many useful libraries!
- Why? We want to give you the experience of working as a team in learning a new language / environment (useful for summer project)
- But also, we want it to be a simple and enjoyable experience so you can focus on the software development process.
- Will be hosted on Github Pages, so will be up and running from next week!

Some tips

- We will not be teaching you P5.js, your team will be expected to engage and learn from online resources available.
- P5.js has many libraries which you are free to use, but remember that you need to identify and overcome **two challenges**, so if you use a library (for say physical modelling) then this may negate the challenge.
- Please note that this is a software engineering module and not a game design module, so although good narrative/artwork/levels/content will elevate a game, we are ultimately interested in your team's ability to develop software.
- We recommend sticking to 2D games (unless 3D is one of your challenges!)

Team Formation

- Aim:
 - To get into well balanced teams of 6 people over the next ~30mins
- Rules:
 - Teams of **6 people**. There may be a few teams of 5, but absolutely none of 7.
 - Each group forms around a table 1-30
 - Sit down if you are in a group – stand up if you need a group! Raise hand for TA support
 - Be polite, friendly and welcoming!



Team Formation

- What mix of skills do you want in your ideal team? Discuss with person next to you.
- But, as well as a good balance of skills, it's important that your team has considered how **motivated** each member is.

Dream Team Skillset – top 5 skills

- Project Management (plan the work, keep to schedule, organize)
- Communication (talk to each other/agree on way forward)
- Creativity (come up with ideas to make the game fun and/or good with artwork creation)
- Problem Solving
- Writing (Report does need to be written)
- Coding

Team Formation

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Dream Team Skillset – top 5 skills

- ...
- ...
- ...
- ...
- ...

Your Profile

- Write a percentage of how motivated you are at the top of the paper 0-100%
 - Note: this figure is purely for group formation purposes and isn't recorded. However, be truthful! This should act as a contract between group members.
- Write your top two skills
- Make sure to write **large** and with a **thick pen**

80%

Coder

Artist

Formation Process

- Now **go and find** people to form a group with!
- Sit down when in a group, stand up if you need to be in a group!
- **Yes**, you can sit together in a premade group with friend, but... please do consider your mix of skills and your level of motivation!

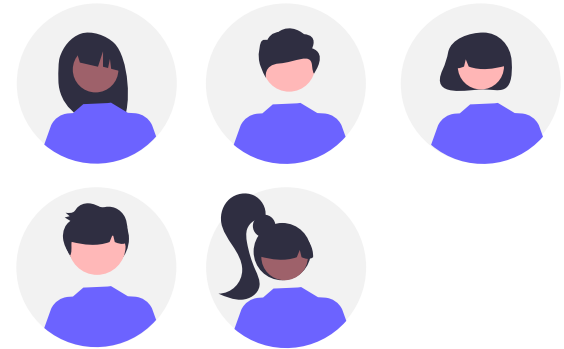
80%

Coder

Artist

Meet your Team

- Your team number is the number on the table that you are sitting at.
 - You can find your group's repository here: <https://github.com/UoB-COMSM0166>
 - TAs will help adding you all to your team's repo.
 - If you don't already have a Github account, please create one no: www.github.com
- Get together in your group and introduce yourself (10mins) ... *last book you read, favourite music... last game you played.*



homework / groupwork

- Alex will make your project repo - you can start this homework once you have confirmation (later this week)
- Then take and upload a team photo!
- Research games, create a list of games inspiration on your team's repo. Make sure your team has plenty of options. Consider adding notes to each game (what makes it great?) and perhaps even ranking them by suitability and interest.

