G54GAM Coursework 2: Prototype Game

Summary

This coursework is worth 40% of the overall module assessment and is to be **conducted individually.**

> Design and implement a prototype computer game using the Unreal Engine, demonstrating an appropriate progression of challenges, and providing a short description and set of instructions for playing it.

Your game should be submitted no later than:

3pm Monday 8th May 2017

Submission should be made electronically via moodle (http://moodle.nottingham.ac.uk). Standard penalties of 5% per working day will be applied to late submissions.

Your game should be submitted as a .zip or .tar.gz file containing an Unreal project folder including all relevant blueprints, levels, assets and related files, with a readme file in the root of this folder. Do not submit RAR files.

There is a hard limit of 250MB for file uploads to moodle that is outside of my control, and it is likely that your project will legitimately exceed 250MB. Detailed submission instructions to work around this will follow nearer the time.

Requirements

The game must be your own work, including the game design and implementation. Any exceptions to this must be clearly identified and acknowledged in either in the readme file or inline as comments:

- You may make use of pre-existing (e.g. found) images, sprites, models and other media, either via the Unreal marketplace or online, but these must be clearly identified and acknowledged in your report, and they must be available under a license that allows their reuse in this context.

- You can make use of existing code libraries, blueprint samples and fragments within your game but these must be clearly identified and acknowledged within your project.

You should design a game within a genre of your choice, with challenges appropriate to that genre. Your game should demonstrate the practical implementation of a difficulty curve appropriate to the implemented challenges, ensuring that there is an appropriate introduction to the mechanics of the challenge, and then at least two challenges of increasing difficulty. The core mechanic and style can be chosen as you see fit.

You should submit a complete Unreal Engine project including all associated assets and project files. There is no requirement to use a specific sub-version of Unreal, nor target a particular platform or operating system.

You should also submit a short text readme file that gives a brief overview of the game, instructions on how to play the game, and a brief description of the components of the game, in no more than 500 words.

Hints

Your game should allow the player to play towards a clearly defined objective, comprising of representative challenges, for example, exploration, pattern recognition, knowledge etc. The game should be appropriately balanced, and demonstrate an appreciation of the concept of progression and increasing difficulty and challenge.

The emphasis of this coursework is about thinking about structured game play, and demonstrating your understanding of the course material, so try not to get too bogged down designing assets and sprites - you'll get more marks for a simple looking game that has a well thought out game design than for an aesthetically beautiful game that is shallow.

Feel free to use the simple games from the lab sessions as a starting point that you then develop into a more sophisticated game by adding challenges and progression. Coming up with a unique form of game play is very difficult, so you can also draw inspiration from existing games. However, you should aim that your game is suitably unique, whether this is in terms of core mechanics, premise or challenges.

NB – games that are simple derivations or clones of online Unreal Engine tutorials are not acceptable, and will be heavily penalized. Similarly, it is not acceptable to submit just one of the lab session exercises without modification. You are being assessed on your understanding of the course content, and you should specifically attempt to introduce higher level game design concepts, such as particular challenges, difficulties and balanced relationships into your game that demonstrate this.

Try thinking of a premise for your game. What is the narrative behind the game? Defending the earth from aliens or ghosts? Racing a tank or a car? What is the core mechanic?

Consider the formal and dramatic elements of game play. What are the goals and objectives, rules, resources, conflict and challenges, amongst others? How are they related to one another?

NB – You are required to submit a prototype of a game, not a complete game. Again, remember that you are being assessed on your understanding of the course content. It is better to submit a prototype that demonstrates a few points well, than attempting to construct a full game. No additional marks will be given to large games that do not demonstrate specific additional game design elements (e.g. multiple similar levels that do not change in difficulty).

Assessment Criteria

	Marks Available
Quality of the proposed game design	
Choice of a core game mechanic	5
Choice and design of challenges	15
Choice and design of difficulty or progression mechanic	15
Balance of game objects	5
Quality of the implementation	
Implementation of the core mechanic	10
Implementation of challenges	15
Implementation of difficulty or progression mechanic	15
Appropriate use of Unreal Engine functionality	10
Construction style	
The game project is easy to understand, with comments, correct formatting, meaningful object, function and variable names	5
Generalisation (Blueprints are reusable, variables likely to require editing are exposed)	5
Total	100

Each element of your coursework will be assessed against the standard criteria[1]

The following areas will be taken into account for each part of the assessment:

- Demonstrating knowledge of the area

- Quality of the concept, including appropriateness and novelty

- Quality of the technological design, including appropriate use of software design concepts, and appropriate good coding practice (abstraction, commenting, naming)

- Quality of the realization, including how well it works and elaborations over and above the basic requirements

- Including all of the above aspects, clarity of structure, quality of argument / evidence, and insight / novelty

Plagiarism

Plagiarism or other academic offenses will be dealt with using the standard University procedures[2] , and may result in a mark of zero for the entire assessment, module or year.

---

[1] https://workspace.nottingham.ac.uk/display/CompSci/Marking+Criteria
[2] https://www.nottingham.ac.uk/academicservices/qualitymanual/assessmentandawards/academic-misconduct.aspx

N.B. Use of third party assets (images, example code, libraries etc) MUST be credited or referenced, and you MUST be able to demonstrate that they are available under a license that allows their reuse.

Making significant use of tutorials AND referencing it will merely result in a lower mark. Failing to attribute to the original source will result in a mark of zero.

Copying code from other students, from previous students, from any other source, or soliciting code from online sources and submitting it as your own is plagiarism and will be penalized as such – potentially resulting in failure of coursework, module or degree.