

Seneca

GAM537 – Game Development Fundamentals

Professor: George
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Assignment 1 of 3

Total Weight: 10%

Notes for the Student: This Assignment is one of three that is designed to give you practical experience in building Games using the Unreal 4 Game Engine.

Background: You will need to have access to the latest edition of the Unreal Editor. You will also need a thorough understanding Game Genres, Level Design, Blueprints and Pawns.

Assignment Submission Requirements

- An electronic copy of your work (project and a written report), should be uploaded to the Blackboard by midnight on the deadline date.
- **This Assignment WILL NOT BE ACCEPTED VIA EMAIL.**
- The written report must be in pdf format and must contain the following: -
 - A cover page.
 - A table of contents.
 - Screenshots of your game, with relevant descriptions, detailing whether the functionality was met or not met, as specified below.

Assignment Regulations

- **This assignment can be done in groups of two or individually.**
- **Please review Seneca's policies on Academic Integrity, specifically:**

*"Each student should be aware of the College's policy regarding Cheating and Plagiarism. Seneca's Academic Policy will be strictly enforced. To support academic honesty at Seneca College, all work submitted by students may be reviewed for authenticity and originality, utilizing software tools and third-party services. Please visit the Academic Honesty site on <http://library.senecacollege.ca> for further information regarding cheating and plagiarism policies and procedures. **Thus, ensure that your code or any part of it is not duplicated by another student(s). This will result in a percentage of zero (0%) assigned to all parties involved.***



Technical Requirements

- All back-end functionality **MUST be done on Blueprints**.
- All the Level Design should be done in Unreal Editor.
- All the assets can be designed or imported from any source.

Detailed App Specification

You have been hired as a Game Developer and you are tasked to develop a game with basic 2D or 3D graphics using only Blueprints. The project will be developed in rounds (iterations) and this assignment is part of the first round.

The game should be completed in 3 Assignments (Iterations). For this assignment you should focus only on the specified requirements.

Specifically, you are **ONLY** required to implement the following:

Features

- Two well-designed levels (though you can create multiple levels).
- A number of 10 objects designed in the Editor or designed in any other application or imported by any source.
- The objects should be blueprints with basic colliders and some functionality (your call).
- A Pawn Character with fully working keys using Key Binding, camera and colliders.
- Fully implemented lighting that includes at least a skydome, a directional light, and a number of other lights (a exception could be an internal – underground world, where the skydome – directional requirements are dropped). The lights should have some kind of functionality implemented with Blueprints.
- A simple terrain that can host a game level.

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Rubric

Criteria	Not Implemented 0	Partially Implemented 1	Fully Implemented 2
Level Design (20%) <ul style="list-style-type: none">• Interesting Outline.• Good-looking background.• Well-designed environment.	Not included	Included but not functionally or visually acceptable.	Included. Visually and functionally acceptable.
Objects (20%) <ul style="list-style-type: none">• Number of objects.• Blueprints.• Well-designed.• Functional.	Not included	Included but not functionally or visually acceptable.	Included. Visually and functionally acceptable.
Pawn (20%) <ul style="list-style-type: none">• Design.• Controls.• Camera.	Not included	Included but not functionally or visually acceptable.	Included. Visually and functionally acceptable.
Lighting (10%) <ul style="list-style-type: none">• Number.• Functionality.	Not included	Included but not functionally or visually acceptable.	Included. Visually and functionally acceptable.
Map (10%) <ul style="list-style-type: none">• Well designed.• Sizable to fit the levels.	Not included	Included but not visually acceptable.	Included. Visually acceptable.
Overall look and feel (20%) <ul style="list-style-type: none">• Overall game level is polished• Used pleasing color palettes,	Poor	Average	Exceeds

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materials, and imagery. <ul style="list-style-type: none">• Color and layout.			
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Total : 100 MARKS

THE END