Complex Game Systems

PGDGSP6006 – Develop complex systems for real time applications

Assessment brief

https://aie.instructure.com/courses/813/pages/complex-game-systems-assessment-tasks

This subject requires you design and implement a modular complex system. There are three stages: Design, Implementation and Integration and Evaluation.

Design Stage: *02/05/2022 - 04/05/2022*

In this stage you are required to undertake self-directed research to design the concept for a modular complex system. The system must be able to be added to various projects to serve its purpose, the system can be created as either a statically-linked library (.lib), dynamic-linked library (.dll) or a redistributable source code that compiles into the project (such as a package that could be held on the Unity Asset Store or the Unreal Marketplace).

You will need to:

- identify what your system is.
- outline the purpose of your system.
- *If applicable*, describe and reference any 3rd party libraries that your system relies on.

You will need to explain what is involved in your proposed modular complex system; this will include:

- The mathematical operations involve, allowing your system to function as intended.
- The advance algorithms that are required to be implemented (d*iagram/s could be used to help support your explanation*).
- Illustrating how you will design the system to be modular (d*iagram/s could be used to help support your explanation*).
- State how your system should be integrated into an application.

Please note: Your system must be approved by your trainer before you may commence the implementation stage.

National Registration Code: 88021
CRICOS Provider Code: 02406F
ABN 51 084 159 437

Implementation and Integration Stage: *09/05/2022 - 31/05/2022*

Once you have been approved, you will create and implement your modular complex system into a proof of concept/test application, you will simultaneously create these for showcasing purposes.

The modular complex system must be functioning in your proof of concept application as intended and specified in the brief. If you need to change part of your modular system during this stage, you should record the alterations for the evaluation stage of this assessment.

The modular complex system and the proof of concept application must function error free and compile without any errors.

The proof of concept application must run external to an IDE without errors.

Extension task (optional)

Create a Readme/ Instruction document to explain to a user how they can implement and use your modular system. This could include:

- Step-by-step instruction for a user to implement.
- Explanations of how to use the system features. Including diagrams and examples.
- XML comments to explains through hover over in the intellisense of functions, classes, etc where applicable. (this is included as part of writing your code).
- If working in an engine, custom inspectors created for usability.

Evaluation Stage: *01/06/2022 - 08/06/2022*

In this stage you will write an evaluation document.

The aim is for this document to be a stand-alone description and critical evaluation of the performance of your created system, so you may find it useful to introduce the reader to your work by providing a brief overview of the system (as stated in your original brief) and the purpose and functionality/design of your proof-of-concept application.

You will need to ensure that your evaluation, at a minimum, covers all the following points:

- Outline the performance of the implemented system, including supporting diagrams and graphics, the method of doing this will change on a system-by-system basis.
- Explain any issues you encountered when integrating the Modular Complex System and state how you either overcame, fixed, bypassed, or avoided each issue.
- Explain any required changes you had to implement into the system for it to function as you originally intended.