Faculty of Computing, Engineering and Science

Assessment Cover Sheet and Feedback Form 2018-19

Module Code: CS4S765	Module Title: Game Engine Optimisation	Module Team: Gaius Mulley
Assessment Title and Tasks: Extend the functionality or realism of a physics engine.		**Assessment No.** 1
Date Set **07/01/2019**	**Submission Date** **15/02/2019**	**Feedback Date** **15/03/2019**

IT IS YOUR RESPONSIBILITY TO KEEP RECORDS OF ALL WORK SUBMITTED

Marking and Assessment
This assignment will be marked out of 100% This assignment contributes to 50% of the total module marks.
Learning Outcomes to be assessed (as specified in the validated module descriptor https://icis.southwales.ac.uk/): 1) Demonstrate the ability to analyse and critically evaluate techniques used to optimise game engines 2) Demonstrate the ability to analyse, create and evaluate game engine code
Provisional mark only: subject to change and / or confirmation by the Assessment Board

The aim of this coursework is fourfold:

(i) implement object interpenetration optimisation within PGE.

(ii) implement rotating polygons within PGE.

(iii) implement a tiny 2D game using at least one rotating polygon object.

(iv) provide an analysis of the effects of your optimisation made in (i).

Your changes to the engine should be mapped onto the Python API in PGE to allow for ease of use and testing.

For each improvement you make you should generate simple Python test cases to demonstrate your code is working.

Your report must consist of a program listing, a line by commentary of any changes made and appropriate screen shots.
The word count is 2000 words which does not include any code.

Marking Scheme:

	Fail	Narrow Fail	3rd Class / Pass	Lower 2nd Class / Pass	Upper 2nd Class / Merit	1st Class / Distinction
implementation of an interpentrating optimisation within PGE 30%	• Very poor implementation of an interpentrating optimisation within PGE	• Poor implementation of an interpentrating optimisation within PGE	• Satisfactory implementation of an interpentrating optimisation within PGE. A single feature was changed. Some obvious code weaknesses exist, but the overall direction was sensible	• Good implementation of an interpentrating optimisation within PGE. Sensible changes attempted, code contains some errors but is along the correct path	• Very good implementation of an interpentrating optimisation within PGE. Interesting and effective changes made	• Excellent implementation of an interpentrating optimisation within PGE. Code contains independent ideas and is well crafted
implementation of the new object within PGE 20%	• Very poor implementation of the new object within PGE	• Poor implementation of the new object within PGE	• Satisfactory implementation of the new object within PGE	• Good implementation of the new object within PGE	• Very good implementation of the new object within PGE. Using material presented in lectures sensibly	• Excellent implementation of the new object within PGE. Drawing from lectures and possibly other sources
implemention of a tiny 2D game using the new object 30%	• Very poor implemention of a tiny 2D game using the new object	• Poor implemention of a tiny 2D game using the new object	• Satisfactory implemention of a tiny 2D game using the new object. Basic game implemented using objects already in PGE	• Good implemention of a tiny 2D game using the new object. Game uses many existing objects found in PGE	• Very good implemention of a tiny 2D game using the new object. An interesting game using a new object	• Excellent implemention of a tiny 2D game using the new object. An excellent implementation utilising well the game engine changes made
analysis of the effects your optimisation made in PGE 20%	• Very poor analysis of the effects your optimisation made in PGE	• Poor analysis of the effects your optimisation made in PGE	• Satisfactory analysis of the effects your optimisation made in PGE.The analysis addresses some of the areas with errors and omissions	• Good analysis of the effects your optimisation made in PGE. The analysis addresses the majority of areas with a few errors or omissions	• Very good analysis of the effects your optimisation made in PGE. The analysis addresses the majority of areas with no major errors or omissions	• Excellent analysis of the effects your optimisation made in PGE. The analysis contains a high amount of independent thought and also all the major areas are covered without errors