Faculty of Computing, Engineering and Science

Assessment Cover Sheet and Feedback Form 2018-19

Module Code: CS3S665	Module Title: Game Engine Design	Module Team: Gaius Mulley
Assessment Title and Tasks: Embrace and extend the functionality of a RPC library.		**Assessment No.** 1

Date Set **24/9/2018**	**Submission Date** **14/12/2018**	**Return Date** **11/1/2019**

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) To critically evaluate the techniques that underpin modern game engines 2) To be able to justify techniques used in the design, development and evaluation of game engine and gameplay code
Provisional mark only: subject to change and / or confirmation by the Assessment Board

Assessment Task:

The aim of this coursework is twofold, firstly extend the chisel free software package which allows doom3 maps to be built from the command line and secondly enhance the python bot capability in the modified doom3 engine presented in lectures. Your modifications will typically show you how to build a penguin tower mod for doom3.

Part 1. Chisel changes

Your extensions to this package should primarily be directed towards the tool pen2map.py. This will transform a simple pen map into a doom3 map. It can be extended in any way you feel appropriate.

For example you might choose to work on any of the following:

(i)   you might choose to change the steps between rooms or have this switchable from the command line.
(ii) implementing a beams cleanly in the roof line - or changing them.

The chisel software can be obtained using git:

 git clone https://github.com/gaiusm/chisel

Part 2: doom3 changes

Download the SouthWales modified doom3 engine using git:

 git clone https://github.com/gaiusm/pybot-dhewm3

You should enhance the Python bot RPC mechanism in any way you wish - there should be changes to the Python and game engine components.

Your report should include a git diff and also a commentary of the changes you made and justification with respect to doom3. You should include relevant screenshots within your report.

Finally your report should comment on the success or otherwise of using this tool for the creation of maps for doom3 and future improvements you might make.

Your report should not exceed 3000 words (excluding code).

Marking Scheme:

	Fail	Narrow Fail	3rd Class / Pass	Lower 2nd Class / Pass	Upper 2nd Class / Merit
Complexity of the implementation changes 40%	• Very poor Complexity of the implementation changes	• Poor Complexity of the implementation changes	• Satisfactory Complexity of the implementation changes. A single feature was changed. Some obvious code weaknesses exist, but the overall direction was sensible	• Good Complexity of the implementation changes. Sensible changes attempted, code contains some errors but is along the correct path	• Very good Complexity of the implementation changes. Interesting and effective changes made either visually or structurally
Documentation of your changes to chisel and doom3 30%	• Very poor Documentation of your changes to chisel and doom3	• Poor Documentation of your changes to chisel and doom3	• Satisfactory Documentation of your changes to chisel and doom3. Documentation might contain minor ommisions and errors	• Good Documentation of your changes to chisel and doom3. Documentation contains weeknesses in some areas	• Very good Documentation of your changes to chisel and doom3. Well written and sensible comments made
Commentary on the usefulness and future improvements 30%	• Very poor Commentary on the usefulness and future improvements	• Poor Commentary on the usefulness and future improvements	• Satisfactory Commentary on the usefulness and future improvements. The commentary addresses some of the areas with errors and omissions	• Good Commentary on the usefulness and future improvements. The commentary addresses the majority of areas with a few errors or omissions	• Very good Commentary on the usefulness and future improvements. The commentary addresses the majority of areas with no major errors or omissions