

## Assessment Cover Sheet 2019-20

Module Code:	Module Title:	Module Team:
CS3S665	Game Engine Design	<a href="#">Gaius Mulley</a>
Assessment Title:		Assessment No.:
Embrace and extend the functionality of a RPC library.		1
Date Set:	Submission Date:	Return Date:
23-Sep-2019 23:55	13-Dec-2019 23:55	08-Jan-2020 23:55

**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

*Awarded mark is only provisional: subject to change and / or confirmation by the Assessment Board.*

# Assessment Task

## 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 add labelled waypoints.
- (ii) changing light placement.

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. (For example providing python access to the labelled waypoints).

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

	<b>Fail (0/29)</b>	<b>Narrow Fail (30/39)</b>	<b>3rd Class / Pass (40/49)</b>	<b>Lower 2nd Class / Pass (50/59)</b>	<b>Upper 2nd Class / Merit (60/69)</b>	<b>1st Class / Distinction (70/100)</b>
Complexity of the implementation changes (40%)	<input type="checkbox"/> Very poor Complexity of the implementation changes	<input type="checkbox"/> Poor Complexity of the implementation changes	<input type="checkbox"/> Satisfactory Complexity of the implementation changes. A single feature was changed. Some obvious code weaknesses exist, but the overall direction was sensible	<input type="checkbox"/> Good Complexity of the implementation changes. Sensible changes attempted, code contains some errors but is along the correct path	<input type="checkbox"/> Very good Complexity of the implementation changes. Interesting and effective changes made either visually or structurally	<input type="checkbox"/> Excellent Complexity of the implementation changes. Code contains independent ideas and is well crafted
Documentation of your changes to chisel and doom3 (30%)	<input type="checkbox"/> Very poor Documentation of your changes to chisel and doom3	<input type="checkbox"/> Poor Documentation of your changes to chisel and doom3	<input type="checkbox"/> Satisfactory Documentation of your changes to chisel and doom3. Documentation might contain minor omissions and errors	<input type="checkbox"/> Good Documentation of your changes to chisel and doom3. Documentation contains weaknesses in some areas	<input type="checkbox"/> Very good Documentation of your changes to chisel and doom3. Well written and sensible comments made	<input type="checkbox"/> Excellent Documentation of your changes to chisel and doom3. Well written documentation with very relevant screenshots and excellent use of git to highlight changes
Commentary on the usefulness and future improvements (30%)	<input type="checkbox"/> Very poor Commentary on the usefulness and future improvements	<input type="checkbox"/> Poor Commentary on the usefulness and future improvements	<input type="checkbox"/> Satisfactory Commentary on the usefulness and future improvements. The commentary addresses some of the areas with errors and omissions	<input type="checkbox"/> Good Commentary on the usefulness and future improvements. The commentary addresses the majority of areas with a few errors or omissions	<input type="checkbox"/> Very good Commentary on the usefulness and future improvements. The commentary addresses the majority of areas with no major errors or omissions	<input type="checkbox"/> Excellent Commentary on the usefulness and future improvements. The commentary contains a high amount of independent thought and also all the major areas are covered without errors
Global:						