Assessment Submission Coversheet:  
Computer Graphics

Task 1 – Create a Real-Time 3D OpenGL Application

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| **Student Name:** | Justin Green |
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| **Course Stream:** | 10702NAT – Advanced Diploma of Professional Game Development |
| **Assessment Name:** | Computer Graphics |
| **Units Covered:** | ICTICT427 – Identify, evaluate and apply current industry-specific technologies to meet organisational needs |
| **Teacher/s:** | Jesse James Donlevy |
| **Due Date:** | 31/03/2023 |
| **Date of Submission:** | *Will be automatically recorded on Canvas* |
| **Assessment Work Location** | Canvas |

*For more information on these parts, please click on the* [***Subject and Assessment Guide***](https://aie.instructure.com/courses/1027/files/723185?wrap=1) *link in the course* ***Game Programming Year 2*** *under the subject* ***Computer Graphics*** *on* [*https://aie.instructure.com*](https://aie.instructure.com) *and read the* ***2023 Subject & Assessment Guide – Computer Graphics***

**Naming Convention**

* Yourname\_CG\_CPP\_SourceFiles.zip
* Yourname\_CG\_CPP\_ReleaseBuild.zip

**Declaration**

By submitting this work under my name, I declare that my submission is my own work with respect to plagiarism and does not violate any copyright laws. I have retained a copy of this assessment material that I can produce if requested.

Tick to acknowledge you have read and agree with this declaration.

Name: Justin Green Date: 02/04/23

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Computer Graphics

Task 1 – Create a Real-Time 3D OpenGL Application

**Work Submitted:***Tick to acknowledge you have submitted this part of the assessment.*

1. Completed Real-Time 3D OpenGL Application:

* Submitted a 3D real-time executable application implementing the OpenGL Library. The application presents just what OpenGL can offer in terms of 3D model rendering, texture mapping and 3D Lighting.
  + 3D Models Rendered With Custom GLSL Shader
    - Shaders include:
      * Simple
      * Coloured
      * Phong
      * Normal Lit
      * Textured
      * Post effects
      * particle
  + Texture Mapping:
  + The application loads in the 3D models using a mix of the AIE C++ bootstrap and GLSL fragment and vertex shaders, which maps any texture onto a obj that has an associated MTL file.
  + 3D Lighting:
  + The Application include directional lighting and point lights in 3d space which affect shaders in real time.
  + Follow Good Coding Practices:
  + Ensured proper coding standards were met in regards to coding practices and documentation.

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Name: Justin Green Date: 02/04/23