Assessment Submission Coversheet:  
Computer Graphics

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

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| **Student Name:** | Connor Mills |
| **Student Number:** | 12563179 |
| **Student Email** | S182214@students.aie.edu.au |
| **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:** | 02/04/2023 |
| **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: Connor Mills Date: 02/04/2023

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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:   
   I have submitted the source files as well as a release build. The release build is a stand-alone executable that that demonstrates the following:
   * 3D Models Rendered With Custom GLSL Shader:
     + A provided Bunny that uses ambient and point lights to create its custom shader.
     + A provided spear that uses a diffuse and specular texture as well as ambient and point lights to create its custom shader.
     + A sourced dagger that uses a diffuse texture in conjunction with ambient and point lights to create its custom shader.
   * Texture Mapping:
     + The provided spear uses a diffuse, specular and normal textures along side the lights to create the overall texture.
     + The sourced dagger uses a diffuse and normal textures along with lights to create the overall texture.
   * 3D Lighting:

There are three point lights with in the scene. A point light that is moving in a figure eight around the centre. Two point light that are a few steps away from the centre of the scene opposite each other.

* + Follow Good Coding Practices:
    - The use of #region to improve the code readability and management.
    - The use of comments to help improve understanding of code.

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Name: Connor Mills Date: 02/04/2023