Assessment Submission Coversheet:

Physics for Games

Task 2 – Document Your Custom Physics Engine

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Course Stream:	10702NAT – Advanced Diploma of Professional Game Development
Assessment Name:	Physics for Games
Units Covered:	ICTGAM556 – Develop and implement physics in 3-D digital games
Teacher/s:	Jesse James Donlevy
Due Date:	20/02/2023
Date of Submission:	*Will be automatically recorded on Canvas*
Assessment Work Location	Canvas/Drive location/file path

*For more information on these parts, please click on the **Subject and Assessment Guide** link in the course **Game Programming Year 2** under the subject **Physics for Games** on https://aie.instructure.com and read the **2023 Subject & Assessment Guide – Physics for Games** and go to **Assessment Tasks – Engine Documentation.***

Naming Convention

- Yourname_PfG_CPP_Doc.pdf

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: Jack Aylward Date: 21/02/2023

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Work Submitted:

Tick to acknowledge you have submitted this part of the assessment.

1. ☒ Class Diagrams:

   Create class diagrams for the Custom Physics Simulation that includes the physics system's classes, their properties, relationships and how they interact together. Your class diagrams should be included in your documentation.

   In a few short sentences or dot points, please describe what you submitted for this part of the assessment

- I have submitted a class diagram using UML 2.0 that consists of every unique class and script that is involved in the creation of the customs physics system. They have been properly linked together with the correct arrowheads and relationship types. All inheritance has also been correctly linked together

2. ☒ Documentation:

   Write documentation for your physics system that includes:
   - References and research material used to influence the creation of the Custom Physics Simulation
   - What the Custom Physics Simulation is demonstrating and how the physical bodies are interacting together
   - Third-party libraries used to create the Custom Physics Simulation, if any
   - What improvements could be made to the Custom Physics Simulation to support further features and more accurate simulations

   In a few short sentences or dot points, please describe what you submitted for this part of the assessment.

- I have submitted a document that dives deep into the creation of the physics simulation and the specifics about all the types and shapes of the physics bodies implemented. I have also provided a detail explanation on how I have made my visualization of the physics sim. The document also talks about potential improvements on the physics simulation such as adding torque and additional shapes and talks about how it could be implemented.

Name: Jack Aylward Date: 21/02/2023