Closing Kit

GDV5001, PORT1

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2025

Contents

[API Versions 2](#_Toc198207674)

[Instructions 2](#_Toc198207675)

[Repository 2](#_Toc198207676)

[Video Link 2](#_Toc198207677)

[Credits 2](#_Toc198207678)

[Other IP 2](#_Toc198207679)

[Asset Creation/Optimisation 3](#_Toc198207680)

[Issue List 3](#_Toc198207681)

[Sign-Off Sheet 5](#_Toc198207682)

# API Versions

GitHub Desktop

Microsoft Visual Studios 2022

OpenGL

3DS max 2024

GIMP 2.10.38

# Instructions

Controls:

W/A/S/D = movement

Click and Drag Left Mouse = rotate camera

Left Shift = Change Camera

# Repository

<https://github.com/Liamuk789/RTG3DCodebase>

<https://github.com/Liamuk789/RTG3DCodebase.git>

# Video Link

https://youtu.be/99FTobZyCMU

I allow Cardiff Met to use this video.

# Credits

Original repository provided by Dr.Simon Scarle

Further works completed on repository/project by Liam Hancox

Within the normal.frag and portal.vert Co-pilot was used to help with the maths and the use of sin wave

# Other IP

Textures :

Wall Texture : <https://www.deviantart.com/zachvance/art/Dungeon-Wall-Classic-683642029>

Portal Texture : <https://uk.pinterest.com/pin/841328774140587602/>

Glass Texture : https://www.freepik.com/free-vector/flat-design-stained-glass-background\_37369083.htm#fromView=keyword&page=1&position=5&uuid=854c2e8f-404c-4e1e-a910-f3972277ae2a&query=Vitral

Models : (and base textures that came with)

Alien/Dog : <https://free3d.com/3d-model/alien-animal-update-in-blender-28x-953251.html>

Ghost : <https://sketchfab.com/3d-models/ghost-3f2a9ed5293e4d648ae020d5ab89d69b>

Ogre : <https://free3d.com/3d-model/ogro-90005.html>

# Asset Creation/Optimisation

A number of assets were edited to help improve running time performance and loading times, these are listed below :

* cube\_lowpoly.obj was created within 3ds Max, this was a low poly cube to replace the highpoly.cube provided and is used across many of the project
* Normal Maps created in GIMP :
  + dungeon\_wall\_normal.jpg
  + beast\_texture\_norm.jpg
  + Glass-Norm.png
  + torchNorm.jpg
  + ghost-norm.jpg
  + Alien-Animal-Base-Color-Low-Norm.jpg
* Textures with added alpha channel in GIMP :
  + ghost.png
  + Glass.png
* Lowered Resolution textures in GIMP :
  + Alien-Animal-Base-Color-Low.jpg
  + SkinColorMostro\_COLOR-Low.png

# Issue List

* No collision detection on player/AI/Walls
* An attempt to have a model attach to the first person camera (DogCam) but couldn’t get it to move
* Spotlights do not load as effectively as other lights with origins etc
* Floor is just a stretched lowpoly cube
* Portal has been made quickly just to frame the portal shader object
* Amount of pointlights, torchlights and spotlights does not update to the current number of lights and is hard coded in the shaders
* Transparency of textures relies on the image used to have an alpha channel
* Repetitive function calls due to poor inheritance patterns

# Sign-Off Sheet

A piece of paper with writing on it

AI-generated content may be incorrect.