

# Closing Kit

GDV5001, PORT1

ST20235597 LIAM HANCOX

## Contents

API Versions .....	2
Instructions .....	2
Repository.....	2
Video Link.....	2
Credits .....	2
Other IP .....	2
Asset Creation/Optimisation .....	3
Issue List .....	3
Sign-Off Sheet .....	5

## 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=Vital](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=Vital)

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

## Progress Report Sign Off Sheet

Module	GDV 5001 Real Time Graphics
Name	Liam Hancox
Student Number	ST20235597

Date	Progress Report	Suggestions	Signed
28/01/25	<ul style="list-style-type: none"> <li>Got the FP+ ortho cam in, Texture on high poly cube. Working on lvl generation, passing position but they aren't rendering</li> </ul>	Location of Duff from file	
01/04/25	<ul style="list-style-type: none"> <li>Dungeon walls/Room's loading from manifest</li> <li>Torch models made from cube + textured and also loading in from file</li> <li>Beginning of Point light started taken inheriting from directional light</li> </ul>	<ul style="list-style-type: none"> <li>Point light added above Torches + Ambient effect added to each</li> <li>Replace Dungeon caps with opaque objects as windows</li> <li>WANDERING MONSTERS</li> </ul>	
06/05/25	<ul style="list-style-type: none"> <li>Wandering monsters</li> <li>Transparent obs in, like ghost</li> <li>Currently working on controllable dog</li> </ul>	<ul style="list-style-type: none"> <li>make vert shader for effects for a portal DBJ</li> <li>NOTE Lights while DATA DRIVEN WANDERING</li> </ul>	