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**Advanced Computer Graphics:**

**Individual Coursework Report**

# Brief

* Explain given problem (100 words or less)

# Proposed Solution

* Explain how I plan on solving the given problem
* Insert \*expected\* result images

# Concept

* Explain the concept of Texture Blending to a non-knowledgeable person (high level, no code/ shader details)
* Insert diagrams for Texture Blending
* Images

# Before & after

* Show box using phong & using texture blending (images, brief description)

# Walk through

* Walk through the steps/ method of creating this project

# Video

* Insert video link here

# Implementation:

Firstly, I created 2 new shaders called “textureBlender.frag” & “textureBlender.vert” inside these files I created code based on the multi-texture section of the OpenGL Programming Guide book by Dave Shreiner which takes two separate textures and takes the position & colour of each texel of the image & blends them together to create a new image.

To allow the two images to blend together I had to implement the SDL\_image library which is an extension to SDL itself allows the loading of non-bitmap texture files. This was implemented to allow the loading of texture files which support transparency, namely .PNG files.

I had to modify the loadBitMap function given to us in the labs to allow the loading of all texture files instead of just being used to load Bitmap files.

I initialised 2x .PNG files and blended them together using my newly created texture blending shader and applied this to a box.

# How to Use:

To switch between the texture blending shader & the phong shader for the box, press 3 on your keyboard for texture blending & 4 for the phong shader.

WASD allows the user to move around the level freely.

# Video:

* Insert link