



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
Faculty of Engineering

SCSV3123-01 – REAL TIME COMPUTER GRAPHICS

Assignment 1 – Virtual Reality Application using Google Cardboard

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Project Description

For this task, I was assigned to create a virtual reality application and make a demonstration for the application that consists of three criteria. The first criteria are the application provide player to walkthrough in the virtual world. Then, the application should have a pointer interaction that player can interact with objects in the virtual world. The last criteria are I need to build a DIY virtual reality display from scratches.

To complete the task given, I created a virtual reality scene that based on a small village that consists of several houses. As for the 3D model and the texture, I obtained it from an asset package from Asset Unity Store. The name of the asset that I used is Village Houses Pack that were created by 'GBAndrewGB'. In the scene, player is needed to find six boxes that are located around the village. The box will be displayed in white colour before player found it. However, when the player found the box by aiming the pointer at the box, the box will turn green. After aiming the box, it will turn yellow to indicate player has founded the box. To create this interaction, I used `material.color` function in the script to modify the material of box.

Definition

Based on finishing this assignment, I have learned that people can easily get motion sickness when using Google Cardboard or other devices used in VR. This is due to low latency in VR that causes the delay in the application making our brain does not feel real from what we see or hear. High brightness display during experiencing VR may also cause motion sickness. To reduce the problem, it is recommended to stop using the VR after 30 minutes and prevent from using it while we are sick.