

# STUDY AND IMPLEMENT A CUSTOMIZED 3D REALISM ENGINE IN FIRST PERSON SHOOTING GAME

Prepared by: Lee Seng Yee

## ABSTRACT

---

This project mainly focuses on the development of 3D engine for a first person shooting game. The 3D engine will have features such as 3D and 2D coordination mapping, 3D transformation, basic lightning, basic shadow and shading. Besides the basic features, the 3D engine will incorporate advanced 3D transformation such as tapering, twisting, bending, and explosion. Double or triple buffering for off-screen drawing will be implemented to render the particular 3D model. Advance 3D rendering concept such as true form will be implemented. This project concentrates mainly on the research of 3D graphical rendering solution and algorithm for different 3D environment that is needed by different game. The best solution will be formulated for the first person shooting game. Eventually, a fully working prototype will be built based on the research. Ultimately, this project aims to build a 3D engine, which is flexible and versatile so that it can be easily incorporated into any other 3D game.