**CS 308 Computer Graphics Programming**

**Individual Project Report**

Department of Statistics and Computer Science

Faculty of Science

University of Peradeniya

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| Date | 2022/2/8 |
| Degree | Computer Science (Hons) |

1. **Project title:**

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| Provide the title for the project. |
| 3D Model of St Sylvester’s College Building |

1. **Introduction:**

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| Provide a brief introduction. State the project objectives and scope |
| This building is build based on the architecture of the catholic church. It consists of two  floors and a courtyard. The following figures will give the basic idea of the building and the  courtyard.  GitHub link : <https://github.com/ravinduu/3D-Model-of-St-Sylvesters-College-Building>    **Figure 2**: Side view of the building.  **Figure 1**: Front view of the building.    **Figure 3**: The courtyard and the two floors.  **The objectives of the project:**   * Build the 3D model of the building * Build the 3D model of the courtyard   **Project Significance:**   * Visualize the detailed 3D model of St. Sylvester’s College building   **Project Scope:**   * The building and the courtyard will be modelled with their original details as possible. * Camera will be able to freely moved around. |

1. **Methodology:**

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| Provide a brief description about the implementation of your project |
| The model was developed using the OpenGL library with C++ as the developing language and the Visual Studio IDE used as the development environment. The GLUT utility toolkit is used to create a simple windowing application programming interface (API). To get the realistic feel of the model texture mapping, lighting, and animation features were used. Keyboard functions are used to control camera motions and light sources.  First, the basic structure was sketched on a rough paper with the coordinates then it was modelled using cubes. To get the 3D to feel the buildings were built using columns and rows. Then applied different colours to the six faces. |

1. **Results and Discussion:**

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| Provide screenshots of the results obtained and discuss highlights and limitations. |
| **Highlights:**   * Key bindings to turn on and off lights. * Key bindings to move the camera * Textures mapped to provide a realistic look.   **Limitations:**   * Some of the complex details of the building will not be modelled * There are two statues in the courtyard, they will not be modelled * The water movement in the pond will not be modelled |