Team Report CPSC 3710

Introduction

The Battle Hummer is an interactive game where the user can drive a hummer around the city and explore different functions implemented in the OpenGl environment. The Game begins with the hummer in a pre-defined position and a default camera setting. The player can use keys to perform different actions -

1. ‘a’ - To drive hummer forward.
2. ‘z’ - To drive hummer backwards.
3. ‘F1’ - To switch to the front view camera setting.
4. ‘F2’ - To switch to the right view camera setting.
5. ‘F3’ - To switch to the left view camera setting.
6. ‘F4’ - To switch to the default view camera setting.
7. ‘F5 - F12’- For other specific camera settings.

The project was started by implementing hummer and a temporary object (to be used as a reference for the movement of hummer). The design was improvised by applying more features to the hummer. The roads were added to the game environment corresponding to the position of the hummer followed by addition of the buildings. Buildings were designed as per the project requirements.

Team Member Contributions

The team members worked very well during the difficult phase(where we were refrained from using computer labs). The team had meetings over different online platforms to discuss and acknowledge the work done by other team members. Work was divided among the team members and everyone did their part very well. The communication between team members was outstanding.

Liane Goritz:

She took the responsibility of designing the battle hummer. Using different OpenGl concepts, She made the battle hummer which met all the requirements of the project. Moreover, she worked on the camera settings and movement of the battle hummer.

Kevin Gao:

He took the responsibility of designing the buildings and game environment. He was able to make the buildings and streets as required by the instructor and worked on improvising design to make the project more attractive.

Amijot Aujla:

He took the responsibility of writing the report and OpenGl functions to be used for movement and camera settings. After the group meeting, He created the central repository so that project implementation could be done smoothly.

OpenGl Concept Learned

Due to limited access to the computer labs and in-person lectures, the team focussed on implementing already learned concepts in a better and efficient manner rather than focussing on a new one. The Project was constantly upgraded with better features. The team had a better understanding of using vertices to create different shapes. Camera settings were implemented using LookAt function. Concepts covered in class and assignments were mostly used for the project.

Assumptions

The team assumes that the user running this code must have OpenGl settings in their compiler. We assumed that the median of the road would be at (0, 0, 0) with the primary road drawn along x-axis. The intersection and turning feature of the hummer was to be implemented at the last as the other important features like movement and game environment were given the priority. The Colours were selected randomly to save time for implementation of other important features.