STAMFORD UNIVERSITY BANGLADESH

Department of CSE

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Course Title: Computer Graphics Sessional
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LAB REPORT

Project Title:Traffic Signal System

Submitted To:

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Aim:

To implement the given program,drawing the some cars moving in traffic signal is done.

Cars will move and stop depending on the traffic signal.

Description:

The main idea behind this project is to display the Traffic Signal with some cars, sky, plane, cloud, pond, house, tree and other scenario with Computer Graphics.

In this project , when we keyboard buttons press 'g'or 'G' to change the signal light to Green then the cars are moving one side to another side. In this project , when we keyboard buttons press 'y' or 'Y' to change the signal light to Yellow then the cars are slowly moving one side to another side. And when we press 'r' or 'R' to change the signal light to Red then the cars are stopped. In this project ,we want to see in the day scenario when we press 'd' or 'D' or we want to see in the night scenario so we press 'n' or 'N'. Press RIGHT MOUSE BUTTON To Display Menu : Select 'Aeroplane' to add moving Aeroplane.It's moving in the day and night are both time. Select 'Comet' to add moving Comet.In the night just it's moving one side to another side. Select 'Quite' to Exit the application.

Methodology:

The <GL/glut.h> header includes the necessary graphical functions of OpenGL, which we used for initializing the viewport, scaling the window and basically drawing all the shapes. <iostream>
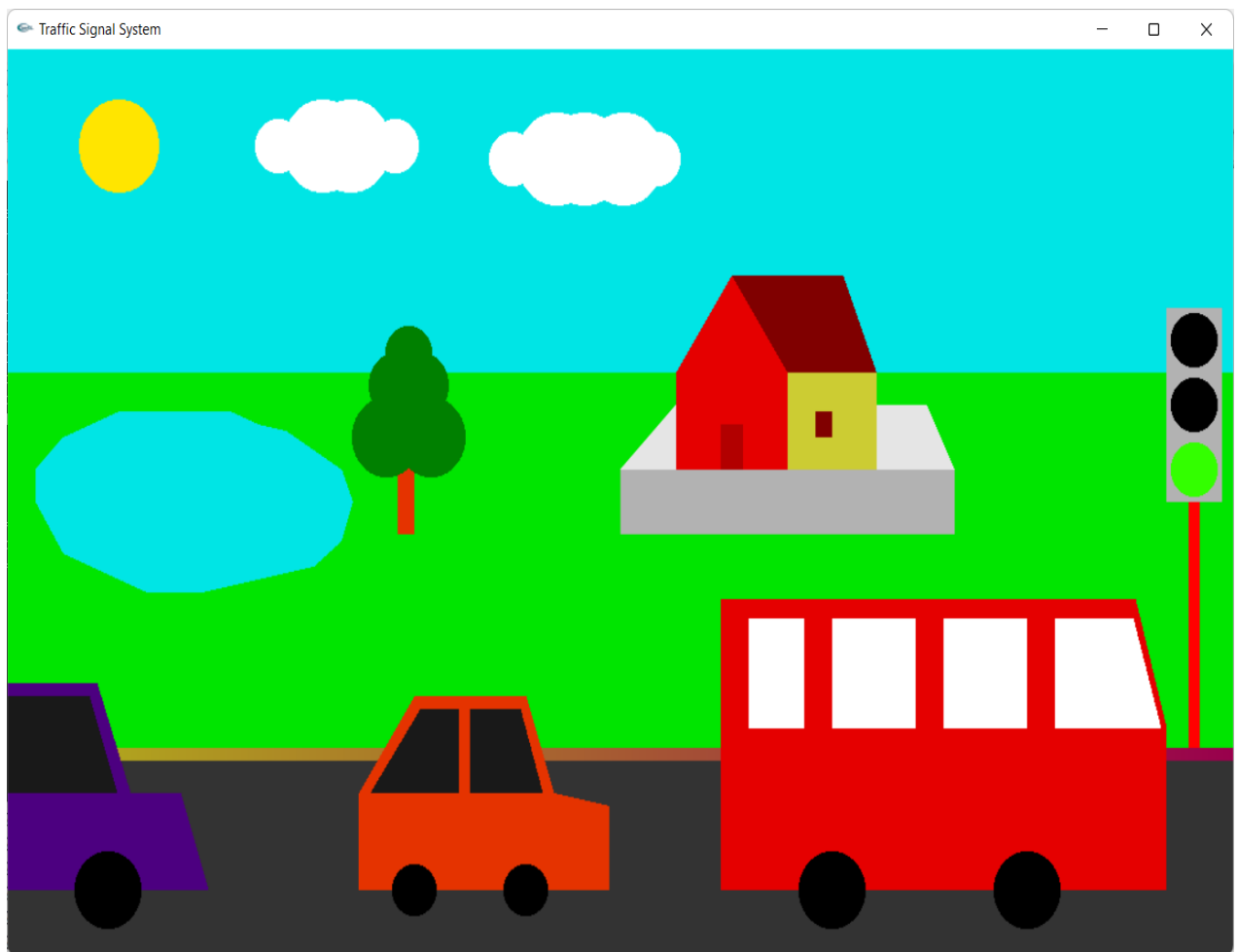
, <math.h> and other header help us doing various calculations and seemlessly handling the input-output.

Along with the main function, there are 8 more user-defined functions within the codebase. In this project,we were using static & dynamic both method .
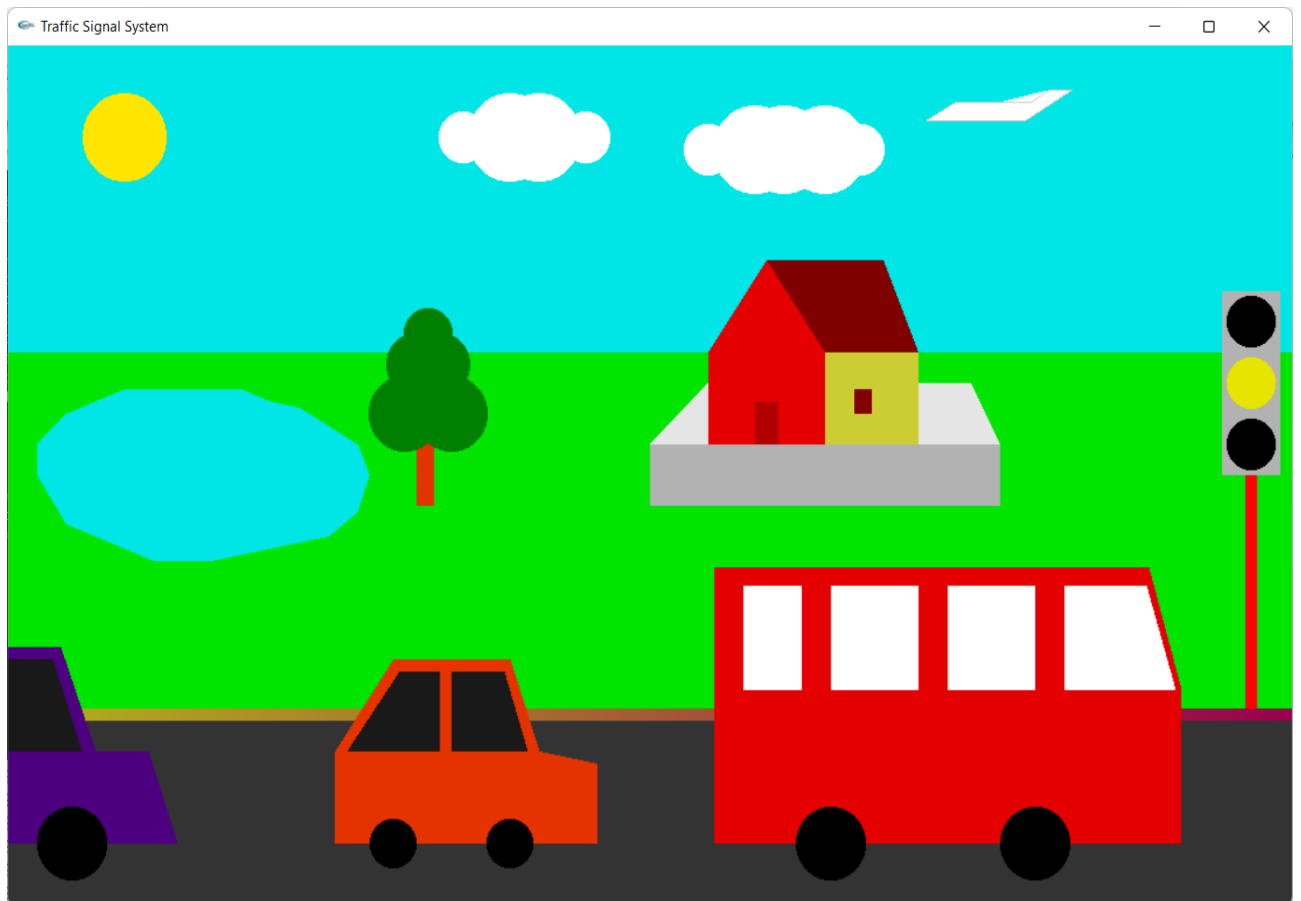
Results:

After the implementation, we observed every state. Among
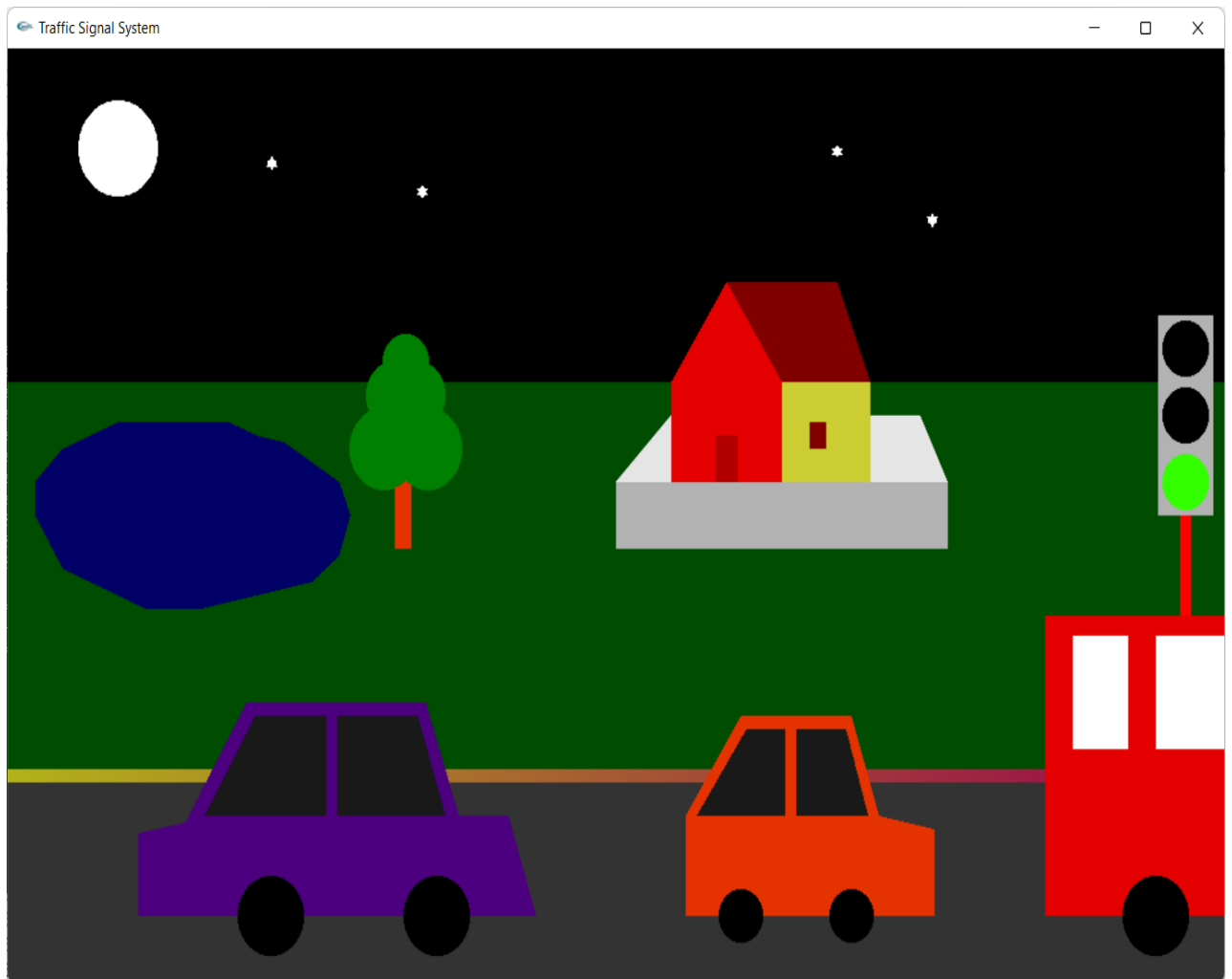
them, some observations are shown below.

i.In the Day Moment and when press 'g' or 'G' then the cars are moving:
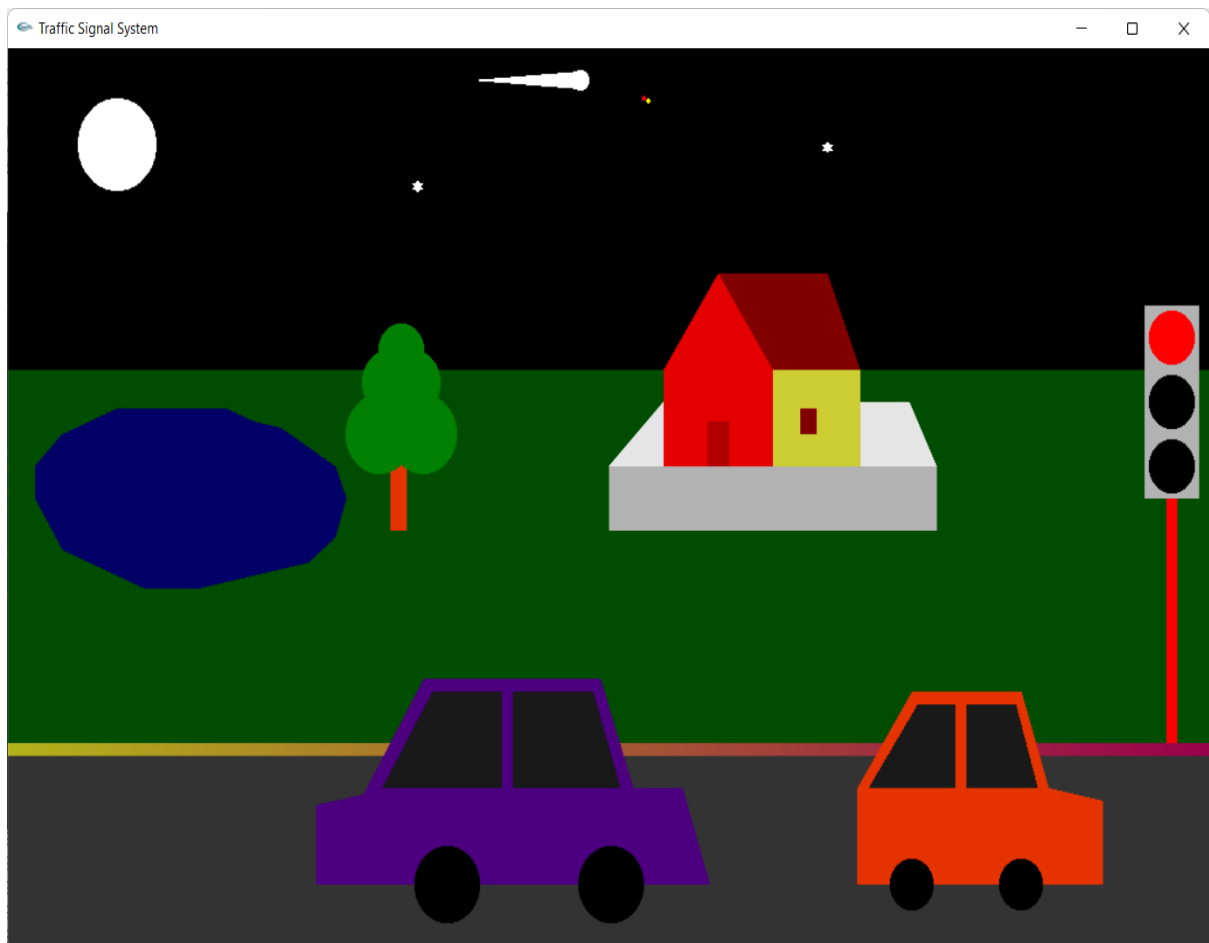
ii. In the Day Moment and when we press 'y' or 'Y' then the cars are slowly moved and also we saw Aeroplane:

iii. In the Night Moment and we saw Stars are falling:

iv. In the Night Moment and and we press 'r' or 'R' then the cars are stopped and also we saw Aeroplane & Comet:

Future Work:

In future, we will be adding some features in this project.. Like rain,compound, gate using mesh etc.

Conclusion:

In the beginning of the project, we learned the basics of OpenGL.

Then we drawing the different scenarios using OpenGL's functions & methods and we're tried our best to bring out the best output of it.