COMPUTER GRAPHICS

SECTION : J

Children's Game to learn Alphabet

SUBMITTED TO

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Introduction:

This project is basically a scenario of a city. In this project three type of transportation media was designed the first one was cars on the road, second one was ships and rivers and the last one of the transportation media is a plane. As it is well known that urban planning and graphics design is directly related. However, in this project we wanted to create a game that required urban planning. For designing a game, we need to find many details before designing. A game developer needs to think about the clients who are going to use the game and design in that manner. This game was developed for the kids. That's why a clean city view was used so that they can learn the alphabets effectively with joy.

Background:

This project was developed for the children. So, we needed to choose the background carefully so that we can avoid any kind of violence that can harm their mental health. We wanted to develop a game so that kids can have fun learning and they can learn something constructive. Also, we had to choose the color combinations so that it becomes less harmful for their eyes in case they spend much time in the game. Before developing the game, we had also kept it in mind that the clients who are going to use the software they become interested. In this case our clients are the children so we had to study about children's phycology so that we can implement the colors and scenario accordingly. To fulfill these conditions, we choose a city view. In this game children will be able to start and stop cars, ships and planes by pressing alphabets. They can also change the day mode to night, night mode to rainy day and so on by simply pressing the numbers on the key board. In this way the game will help them to learn the alphabets and numbers in an interesting way. Also they will gain knowledge about the keyboard of the computers. So this game will be a very helpful one for the children.

Objective:

- To implement the theoretical formulas and algorithms using openGl and codeblocks.
- To use and understand the pre-built functions of the openGl
- To develop a game which can help the children to learn their basic education such as alphabets and numbers.
- To develop such a project which can also be used in other projects (for example it can be said that city view can also be used in urban planning projects)
- To control the game manual input system (e.g., keyboard) were used.

Software Requirements:

- Code Blocks
- OPENGL

Significant of the Project:

We described how this project will be teachable for the childrens and how they will be able to know about alphabet using this system with more fun .So, here our target users are children to help them in learning in a interesting way .

Methodology:

We have used various openGL functions in this project .They are listed bellow:

• glutInit() : interaction between the windowing system and OPENGL is initiated.

• glutInitDisplayMode() : used when double buffering is required, and depth information is required.

• glutCreateWindow() : this opens the OPENGL window and displays the title at top of the window.

• glutInitWindowSize() : specifies the size of the window.

• glutInitWindowPosition() : specifies the position of the window in screen co- ordinates .

• glutKeyboardFunc() : handles normal ascii symbols.

• glutDisplayFunc() : this handles redrawing of the window.

• glutMainLoop() : this starts the main loop, it never returns.

• glFlush() : used to flush the pipeline.

• glBegin() : delimit the vertices of a primitive or a group of like primitives.

• glPushMatrix() : push and pop the current matrix stack.

• glVertex2f() : specify a vertex.

• glColor3f() : set the current color.

• glutPostRedisplay() : used to trigger an automatic redrawal of the object.

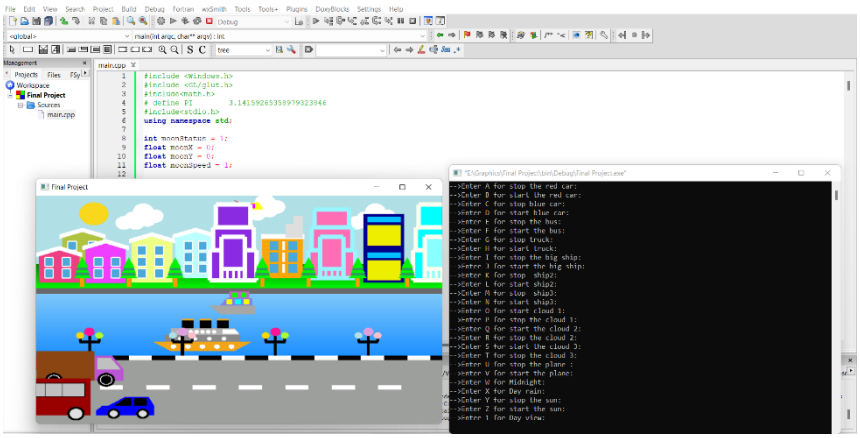
• glMatrixMode() : used to set up the required mode of the matrix.

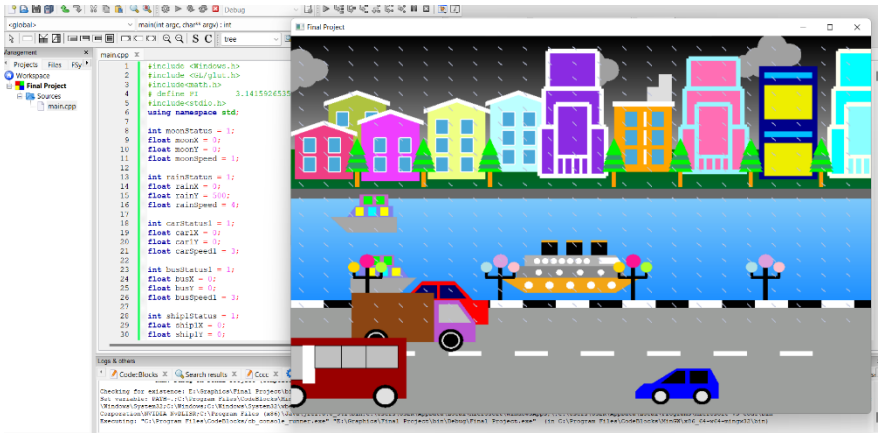
• glLoadIdentity() : used to load or initialize to the identity matrix.

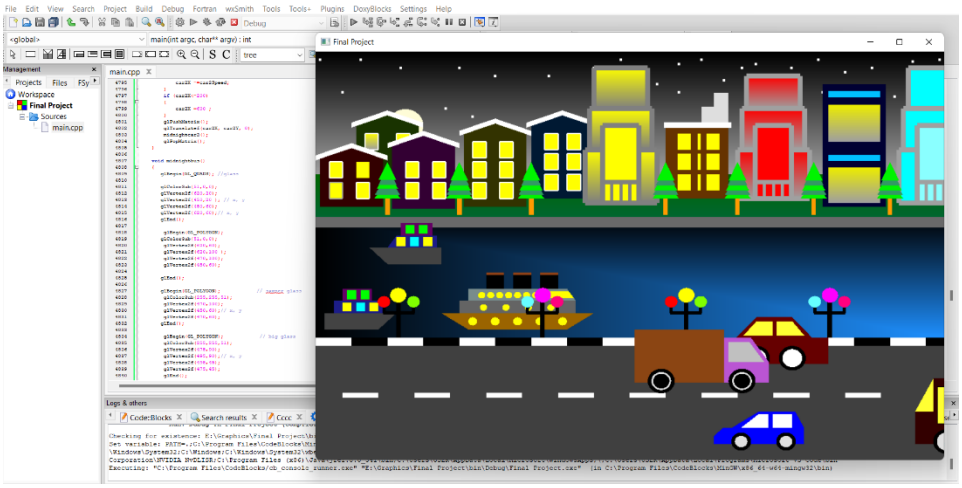
• glTranslatef() : used to translate or move the rotation centre from one point to another in three dimensions.

• glScalef() : multiply the current matrix by a general scaling matrix

Screenshot Of The System:







Conclusion:

The project has been successfully completed and we learnt a lot of new things while doing the project .Which is meant to be useful. The OpenGL software is very easy to use. And free learning is important and development of children in early childhood education is more . Through this project the problem was taken care of that anyone can get to know or learn alphabet with more interest and easily.