AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH
Faculty of Science and Technology
Department of Computer Science
CSC 3224: Computer Graphics

Semester: Summer 2020-21	

Project Information (Fill-up by Student)

Project Title: **Village Scenario**

Features & Description :

This project is about creating a village scenario.This scenario contains some houses,trees,river,boat,school,sun,clouds etc. Here we have included day and night mode also the auto day and night changes.We have included a train also in this project which can be move forward or backward and also can be stopped any position of the line. Color changes with day and night etc.

We will try to add all the features we have learned in the Computer Graphics course.

Evaluation: (ID and Student Name fill-up by Student)

ID	Student Name	Sec	Code (15)	Viva (15)	Idea (7.5)	Report (7.5)	Demo (5)	Total (50)
19-40156-1	Ekra, Nusrat Jahan	H						
19-40222-1	Tuli, Anamika Sarkar	H						
19-39984-1	Rahman, Mushfiqur	H						
20-42865-1	Islam, Hasibul	H						
Demo Submission Date: Final Submission Date:								

External Information

Faculty Name	Signature

American International University – Bangladesh

Project Report

Course Name	Computer Graphic
Section	E
Course Tutor	Dr. Md. Abdullah-Al-Jubair

Group Member	***ID***
RAHMAN,SABBIR	19-40858-2
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WALID BIN WAHID BADHAN	19-40845-2
API ALAM	19-40880-2

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Introduction:

Lalbaghkella is a historical place in Bangladesh. We have a lot of stories attached with this. I went there with my friends. The architectural monuments there touched our hearts. From that attachment we became interested to work with it. We tired how to make it more beautiful with the help of open GL.

Background:

Computer graphics is responsible for displaying art and image data effectively and meaningfully to the consumer. It is also used for processing image data received from the physical world, such as photo and video content.

There are two types of computer graphics: raster graphics, where each pixel is separately defined (as in a digital photograph), and vector graphics, where mathematical formulas are used to draw lines and shapes.

OpenGL is a software interface to graphics hardware. It considers points, lines, polygons, images, and bitmaps to be primitives. The latest version supported for OpenGL is 4.1 from 2011.OpenGL is a cross-language, cross-platform graphics API for rendering 2D and 3D scenes using a graphics card. 2D and 3D refer to the actual dimensions in a computer workspace. 2D is "flat", using the horizontal and vertical (X and Y) dimensions. 3D adds the depth (Z) dimension. This third dimension allows for rotation and visualization from multiple perspectives.

Object:

1. Sky
2. Sky N
3. Sky E
4. Plane
5. Sun
6. Moon
7. Clouds
8. Star

9. Grass
10. Tree
11. Lalbagh fort
12. Roadside
13. Road
14. House
15. Small tree

System Implementation:

Hardware uses:

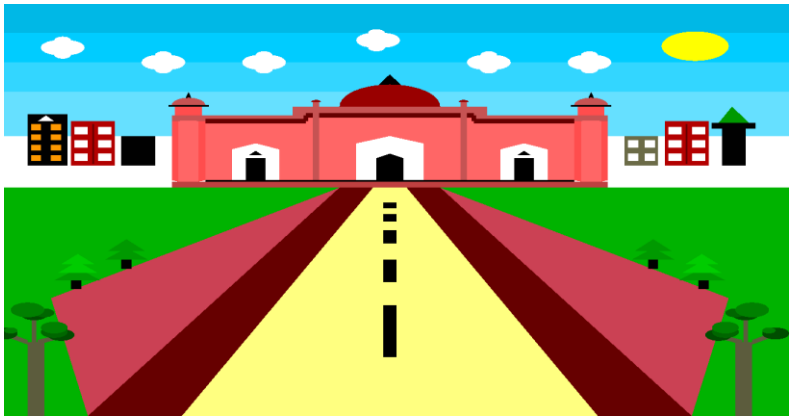
- CPU: intel core i5 7th generation
- GPU: 1050ti OC 4GB DDR5
- RAM: 4GB
- Motherboard: MSI Z170A GAMING M7

Software uses:

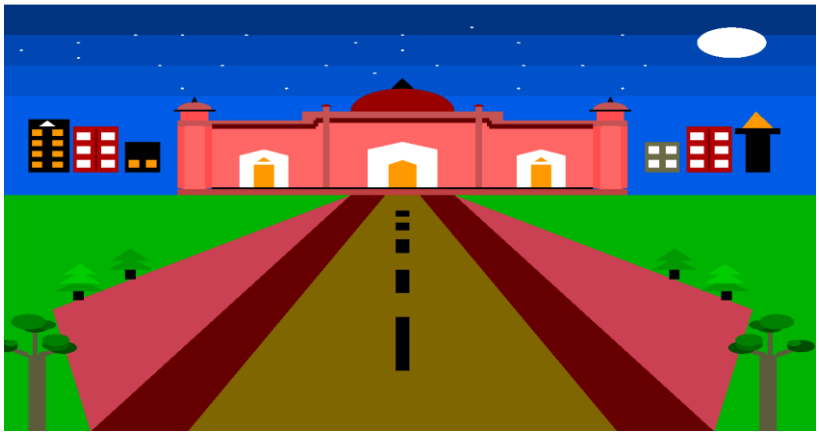
- OpenGL
- CodeBlocks

Feature:

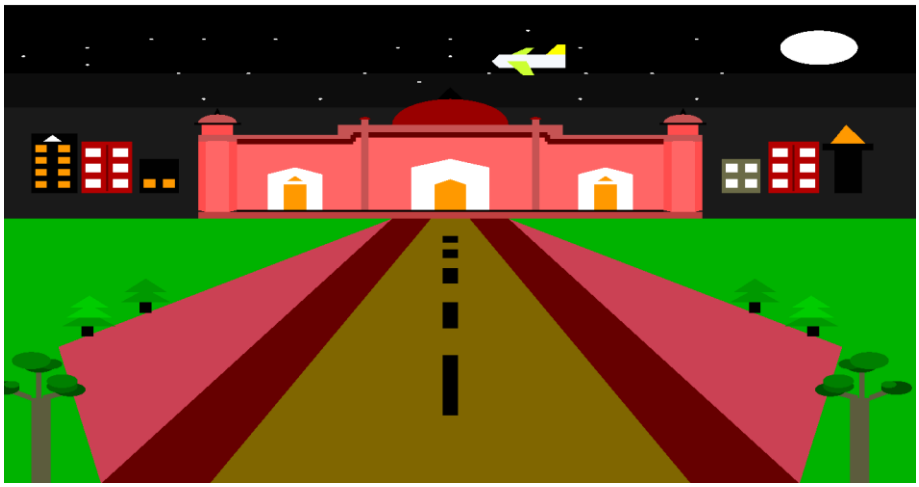
Day View



Evening view: press “e”



Night view: press “n”



Significant of the project:

Computer Graphics is the change of Visual and geometric information using computational techniques,typography, photography, iconography and illustration.The project which we select is to give visual of "Lalbagh Fort". Through the process we also got to know how we can easily make a 2D animation come to life with use of proper animation,features and colors.

We have put “Lalbagh Fort” place which is a colorful and simple mini project. And this project includes a lot of options in it. By doing this project we can understand how to design structure sky clouds and many more. We have given you the idea to implement the simple objects as we have used in this project you can also develop simple objects to this project and it will look even better. For the future implementations try to create a road and some vehicles moving in the road and etc.

Conclusion:

We have implemented a view of Lalbagh fort. We have shown using code blocks(version 17.12) and different functionalities where day night and evening view appears through keyboard interaction. We have used both keyboard (d,n,e) appears through keyboard interaction to change the view. We implemented the color of the object by the following RGB color code. The program runs everything perfectly as we planned I n future we would like to develop this project into a 3D architecture.

Reference:

https://www.cs.rice.edu/~jwarren/360/outline/subsection3_1_2.html

https://en.wikipedia.org/wiki/Lalbagh_Fort

http://www.cram.com/essay/The-Importance-Of-Computer-Graphics/FK9QCCSAZ799