



AMERICAN INTERNATIONAL UNIVERSITY BANGLADESH (AIUB)

Course: Computer Graphics

Section: F

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Project Topic: The Old Castle Scenario

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1.INTRODUCTION

The project we are working on is the view of the old castle scenario. The goal was to recreate a view of an old castle, river, crocodile, air ballon , windmill, cannon, watch tower, bench, sun, cloud and flag in the scenario. Open Graphics Library is used to create different 2D object of the scenario. Code blocks (IDE) is used for programming.

2.BACKGROUND

The project is created utilizing OpenGL. Open Graphics Library (OpenGL) may be a cross-language (dialect-free), cross-platform (platform-independent) API for rendering 2D and 3D Vector Design (use of polygons to speak to pictures).

OpenGL API is planned for the most part in hardware.

Design-This API is defined as a set of functions which may be called by the client program. Although functions are like those of C language, but it is language independent.

Development -It is an evolving API Group regularly releases its new version having some extended features compare to previous one. GPU vendors may also provide some additional functionality in the form of extension.

Implement -Mesa 3D is an open-source implementation of OpenGL. It can do pure software rendering and it may also use hardware acceleration on BSD, Linux, and other platforms by taking advantage of Direct Rendering Infrastructure

3.OBJECTIVES

Where we achieve our goal through our project is the objectives. Different types of objects of our projects are:

- i)What we learned in our computer graphics course, we tried to implement in it.
- ii)To create a realistic view of Old Castle.
- iii)To apply the process of moving objects.
- iv)To include different nodes of our scenario :

. Sky View

.Cloud View

v)To include the control systems of keyboard.

4.METHODOLOGY

The see of the old castle scenario is made utilizing different 2D objects such as lines, triangles, quads, and polygons. To make all these protests different strategies of (Open Graphic Library) OpenGL with C++ Programming language are used. OpenGL may be a cross-language, cross-platform application programming interface (API) for rendering 2D and 3D vector graphics. The project is isolated into four different areas considering the working sequence.

i) GL_POLYGON is used to create polygons. A polygon is created by specifying a series of vertices.

ii) GL_QUADS is used to create quads. A quad is a 4-vertex quadrilateral primitive. The four vertices are expected to be coplanar; failure to do so can lead to undefined results.

iii) GL_LINES is used to create lines. Vertices 0 and 1 are considered a line. If the user specifies a non-even number of vertices, then the extra vertex is ignored.

iv) glColor3f() is used to add color on different object. It takes 3 arguments: the red, green and blue.

v) GL_TRIANGLES is used to create a triangle. A triangle is a primitive formed by 3 vertices. It is the 2D shape.

5.SIGNIFICANT OF THE PROJECT

The project was almost making different questions by coding, so it too makes a difference to create our creative ability. To create the extent a bunch is shaped. So, through this venture, we have learned almost group work as well. The project makes a difference for us to upgrade a few developments information around

OpenGL. It is a cross-platform API, it can be utilized on various stages such as windows, Mac, and a few handheld gadgets. It is more extensible as modern hardware highlights are uncovered rapidly. It includes a steady interface until a few bigger changes are made. So, a few development pieces of information on OpenGL will be supportive in the future.

6. CONCLUSION

Our project title was the view of the old castle scenario. The project was done by OpenGL in Code blocks. There was some scenario in our project such as moving objects, Moving clouds, and so on. We are almost able to Understand our supervisor Dr. Md Taimur Ahad Sir. Our Group members contain four members. Everyone tried to help each other very much.

7. REFERENCE

- <https://www.daniweb.com/programming/software-development/code/216266/projectile-game-in-c-cannon-ball>
- <https://stackoverflow.com/questions/43494563/draw-a-triangle-with-opengl>

8.SCREENSHOT OF PROJECT

