

American International University- Bangladesh

Computer Graphics

Project Report

Spring 2021-22

Project Title: **“Life In A Metro”**

Section: J

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Submitted To: Dr. Md. Taimur Ahad

Introduction:

The name of the project is **“Life In A Metro”**. The project is based on the busy lifestyle of a city. A metro journey is an exciting experience for everybody. It provides a student with relief from routine work. So, a journey is more attractive to a student. A journey by metro is especially pleasant and enjoyable for everyone. Our project is about the journey by metro from Dhaka to Chittagong.

Background:

The metro rail scene shown in the project is a mind-numbing scenario as the train snakes its way towards the destination, the sky takes different forms, and the busy lives of people surrounding it. Through animation, the train was brought to life as it is seen passing through the green fields. Dewdrops on green grasses were glittering like pearls, and trees and houses seemed to run behind. The ships sailed in the deep blue sea underneath. The sky was made realistic by adding floating white clouds and color change was done to the sky to portray how time flew by. The night sky, the bright morning sky were beautifully shown and the sky at dusk seemed to be put on a blazing fire. The train stopped at a few big stations. When the train reached Chittagong, mountains peaked from behind. At the bottom, the vast sheet of water of the Bay of Bengal can be observed. The animation added to the ships and train paints a vibrant picture in the mind of the user so that the user can imagine the story properly. Gradually the sun sets in the western sky. The golden rays of the declining sun fall on the water. This scenery carries a hidden message that our busy lives make the time go by so quickly, so we should take a moment to enjoy ourselves and live life to its fullest.

Objective:

The main aim of the **“Life In A Metro”** Computer Graphics Project is to illustrate the concepts and usage of pre-built functions in OpenGL. Computer graphics are used to display 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. This project simulated the metro where it was passing by over a bridge through the city, the mountains, and over the river. Firstly, the train crosses the bridge in the city keeping a beautiful cloudy sunny sky behind. Secondly, in the evening the sunsets and, in the night, the night view of the city and the mountain view. Finally, the project was built to understand the critical and aesthetic issues in computer graphics and mixed media.

Methodology:

Code blocks are the tool used to create the project. The members of the group divided the work and completed individual aspects of the project, as well as collaborating on other tasks. Both real-life observation and virtual data were used to gather information and ideas.

Conclusion:

In conclusion in this project, we constructed a running metro system that can simulate fully an outdoor environment. Using polygon mode, we have made a virtual environment for the metro. The same mode is used for making the quadrilateral parts of the train & the circles. We have given a key "d" which will give the day view of the train, key "E" for the evening view, and key "N" for the night view of the road scenario. For the river scenario, we gave a key "S" for day view, key "V" for evening view, and key "C" for night view.

Referencing:

* <https://getsetproject.com/info-project.php?id=315&name=Train+signal+Computer+graphics+mini+Project+using+OpenGL>
* <https://www.youtube.com/watch?v=DjnPrJRdvPY>

Screenshot:











