AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Faculty of Science and Information Technology

Department of Computer Science

CSC 3224: Computer Graphics

Semester: Spring 2017-18	Group No: D

Project Information (Fill-up by Student)

Project Title:
Dynamic Sea Beach view

Features & Description
- It will contain a beautiful sea side view.
- There will be some different scene: Day, Night and Evening along with rain effect.
- Each effect will contain sound in background. e.g. Rain and sea wave.
- Rain effect will appear/disappears by button press.
- During rain effect birds and balloon will disappear.
- Synchronized object animation e.g. Sun and Moon.
- Moving objects e.g. Sun, Moon, Balloon, Ships, Clouds, Birds and sea wave.

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)
17-35860-3	Shourav, Tanvir Tanjum	A						
18-36101-1	Limon, Zishad Hossain	A						
17-35800-3	Chowdhury, Ashfaq Afzal	A						
17-35852-3	Tina, Anika Tahsin	A						
Demo Submission Date: Final Submission Date: 02.01.2021								

External Information

Faculty Name	Signature

1. INTRODUCTION:

The project will demonstrate a minimal look of a sea shore scene. We implemented a scenario of three view which are day, night and evening; there will be rain feature in all of the views by the button press. There will sound effect of each difference scene. All together it would render an eye pleasing sea beach scenario. Our program provides fast and accurate rendering of the objects. as well as a landscape to simulate a sea beach. In this paper, we explain the motivation for this model, then describe the algorithms used. We finish up with some ideas for future work and some of the bugs we encountered.

2. BACKGROUND:

The process of implementation of the views are mainly relying on the vector graphics. They are based on mathematical formulas that define geometric primitives such as polygons, lines, curves, circles and rectangles. Using this formula OpenGL is an API that is highly usable for rendering basic 2D/3D graphics. Vector graphics are composed of true geometric primitives, they are best used to represent more structured images, like line art graphics with flat, uniform colors. The GL primitives are using C/C++ programming language. Many Opengl primitives were used to develop the objects.

3. OBJECTIVES:

Our objective is to develop a sea beach containing sea water with running sea wave, an amazing sky with sun moon and clouds pleasingly animated. All these objects will show up in both night view and day views with raining effect including sound. Moreover, the sea shore would have seating places for tourists. Our goal is to render a minimal look of a sea beach.

4. SYSTEM IMPLEMENTATION METHOD:

In the entire project we used OpenGL primitives for rendering the sea beach. Speaking of OpenGL, it is a cross-language, cross-platform application programming interface for rendering 2D and 3D vector graphics. The API is typically used to interact with a graphics processing unit, to achieve hardware-accelerated rendering.

5. SIGNIFICANCE:

The key feature of the project is implemented using the OpenGL primitives. It renders every object faster than typical new graphics rendering. Our project would be simple enough to run on any device including windows and macs. The sound play feature will also play the sound effect of each views that provides a user the best experience.

6. CONCLUSION:

We have implemented an automatic view of sea-beach scenario where day night and evening are automatically time lapsing. The rain feature is implemented using the Line primitives. The color of the sand and other object is variable with the views of the scene. The program runs everything with some relevant sound effect regarding the view effect of the scene. In future we would like to develop this project into a 3D architecture which can turn this into more eye soothing to the user.
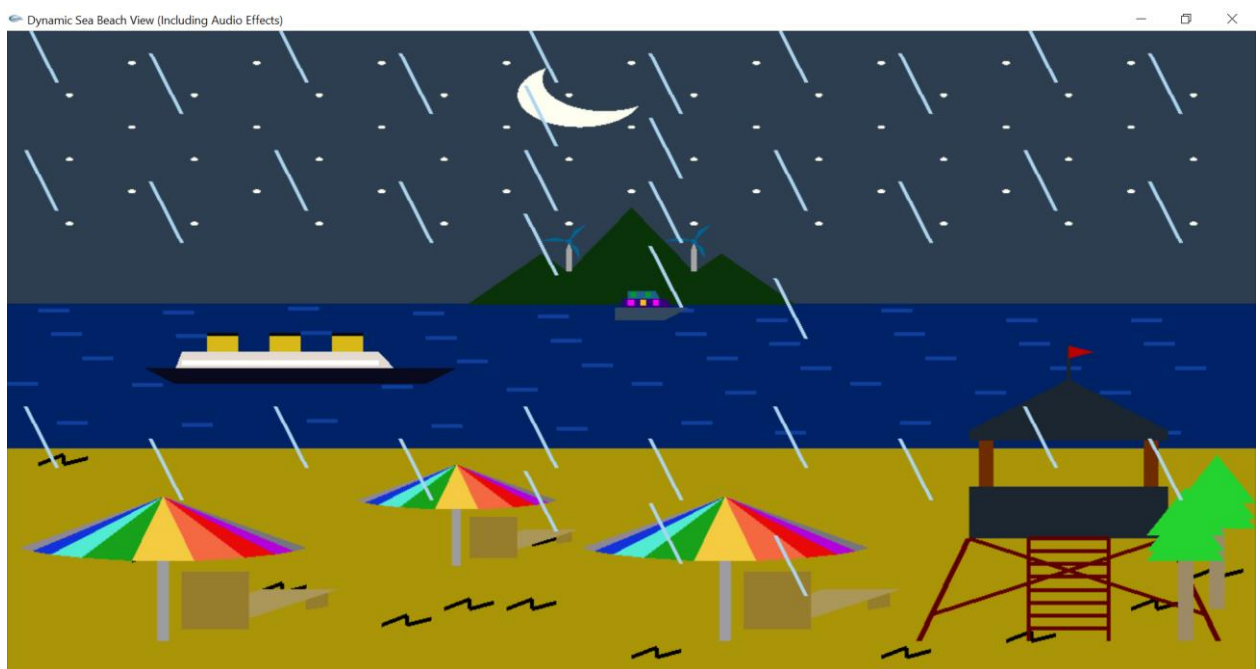
7. SCREEN SHOTS:

7.1 DAY VIEW WITH AND WITHOUT RAIN:

7.2 EVENING VIEW WITH AND WITHOUT RAIN

7.3 NIGHT VIEW WITH AND WITHOUT RAIN

SOURCE LINK: https://github.com/tanvirtanjum/Dynamic-Sea-Beach-View