PROJECT:

Fest Of Harmony (FOH)

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Introduction

This project is about a village fair. Basically, a village fair is a crowded place of many people and stalls with interesting staffs. We also tried to make an environment like a village fair. We added Catherine Wheel, Carts, Many Stalls, Circus tents etc. which are the most attractive things for a village fair. We also tried to show the change of the day gradually. In every fair there is a common term that where kids can play video games. We also created a screen where we can play game. So, with a view to make a festival theme we planned this project and named our project **"Fest Of Harmony"**.

Problem statement/Background

The project **FOH** will be a nature-based project. There will be user control in some of the objects of the project. As it is a nature-based project, the main condition of the project was it should be more genuine and it should look real. There will be some Tents, Carts, A wheel, Stalls etc. Besides these, there will be some sound system of each and every component based on their real-life sounds. Rain and Snow can be added to make nature view more realistic and attractive. There should be a screen in this project to play a game. The game can be controlled by the user and there will be a term of point deduction, winning and losing.

Objective of the Project

Here we tried to make a village fair natural view. In a village fair the main attractive thing is the crowd of the fair. Some interesting ancient civilization is the interesting thing of these fairs. Our main motive was to hold up that glory. In this regard we have made a village fair named **"Fest Of Harmony"**. We used some objects like cart, Catherine wheel, Various stalls, Circus show tents etc. The moving Catherine Wheel is an example of ancient civilization. Besides this, we tried to make a screen to play game. We tried to move the cart through the key binds. So, with the objective to uphold the ancient civilization we made this project.

Methodology/System Implementation

"Fest Of Harmony" is a glut-based project. This project is created in C++ language. To complete this project successfully we have imported some library functions. They are **GL/gl.h, GL/glut.h, iostream, conio.h, windows.h, cstdio, math.h**. **GL/gl.h, GL/glut.h** are the glut library without which the project will not work. For taking the user input we used **iostream** library. To take enter as an input, **conio.h** is used here. In C++ language there is a term gotoXY by which we can place our text anywhere. So, to use gotoXY we imported **windows.h** library function. In our project there are many mathematical conditions such as we have to draw a circle and for that we used theta, pi (3.1416) etc. It will not be possible without **math.h** library function. To move the objects of this project we used a predefined function named **glTranslatef**. As a display mode we used double display mode to stop the flickering, to make the project smoother and faster. RGB was the main color model of this project. **glutKeyboardFunc()** is used for keyboard control, **glutSpecialFunc()** is used to get the access to the left and right arrow of the key board. There was a function **glutMouseFunc()** by which it was possible to fire in the game, that means it is used for mouse handling. It will not be possible to move a whole object if they are not in a block. So, to make a block of a particular object **glPushMatrix()** and **glPopMatrix()** is used here. These all functions helped to create a good project. In some of the cases we have used **Halftone**.

Significant of the Project

Our project is mostly user control based. The Catherine wheel, one of the objects of our project, can be rotated by the key binds. One of the carts can be moved horizontally through the keys. One can stop the car and the wheel at any time he/she wants to do so. For a festive nature, balloon is the most familiar thing. So, we have assigned a key by which the balloons can be lift upwards. The most interesting thing is the sound system. Every component movement is designed with a sound system based on their real-life sounds. One of the main parts of our project is the game system. We have designed a game which is basically a shooting game named "Galaxy Warriors". Here one can earn points and if the point is lower than or equal to -25 then he/she will lose the game. On the contrary if the point is 100 then the game will over and he/she will win the game. Deduction of point is based on the enemy. The sky is designed with cloud moving and tried to make the sky look more genuine.

Conclusion

With a view to make a nature project this **FOH** is created. In some of the ancient culture village fair is one of them. But in the wave of digitalization, this culture is on the verge of extinction. To focus on the festive mode of the village fair we created this project. Besides this, we tried to give an ancient view along with digitalization. Hope this project will give a positive vibe to all of the audience of this project.
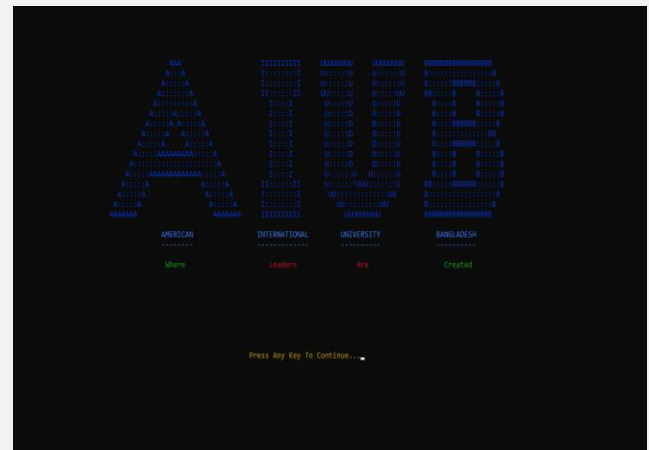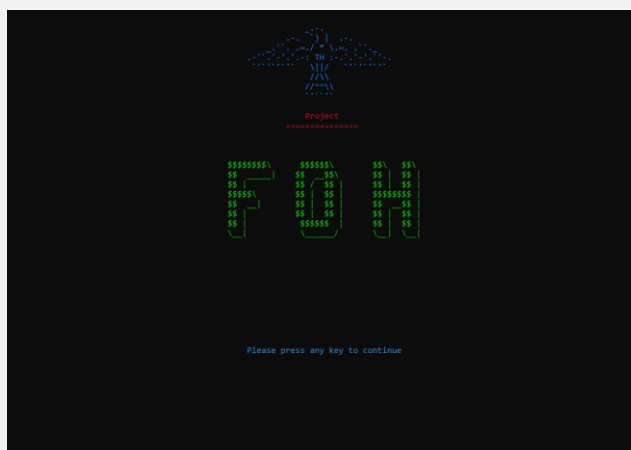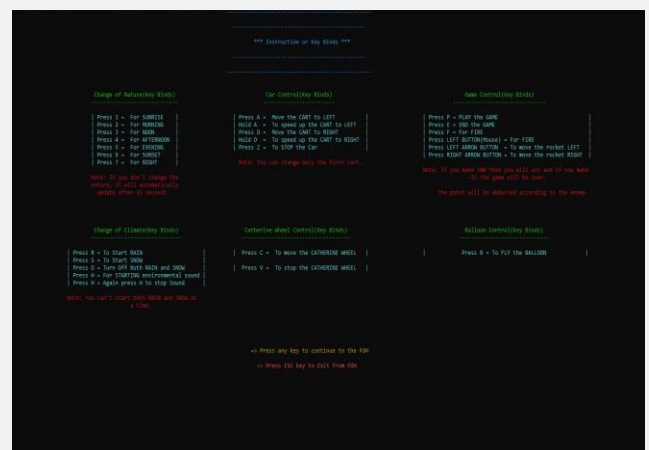
Screenshots of the Project
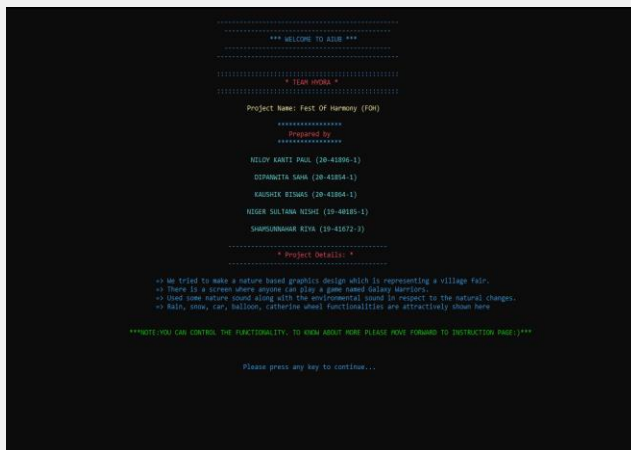
FOH member information and project details

FOH Cover Page 1

FOH Cover Page 2

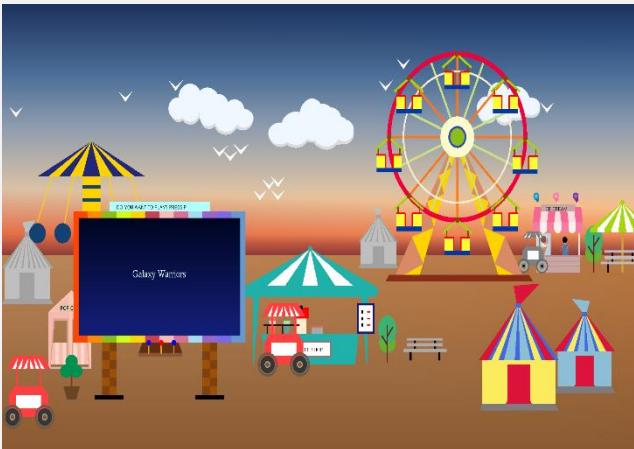
FOH Instruction or Key Binds

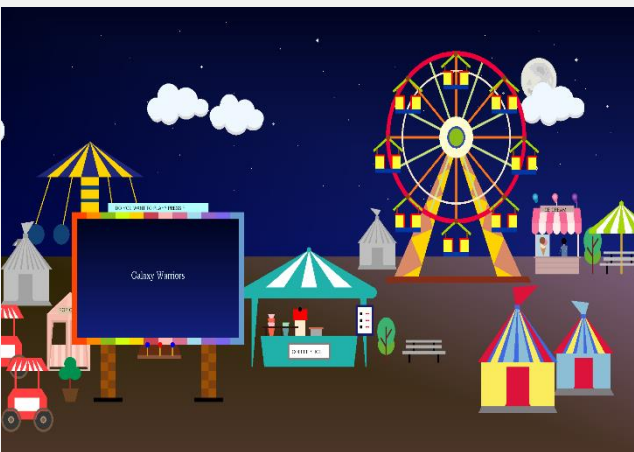**Nature View: Sunrise**

Nature View: Morning

Nature View: Noon

Nature View: Afternoon

Nature View: Evening

Nature View: Sunset

Nature View: Night

Game Screen

Climate View: Rain

Climate View: Snow

Balloons rising upwards

Thank You Page

Thank you

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