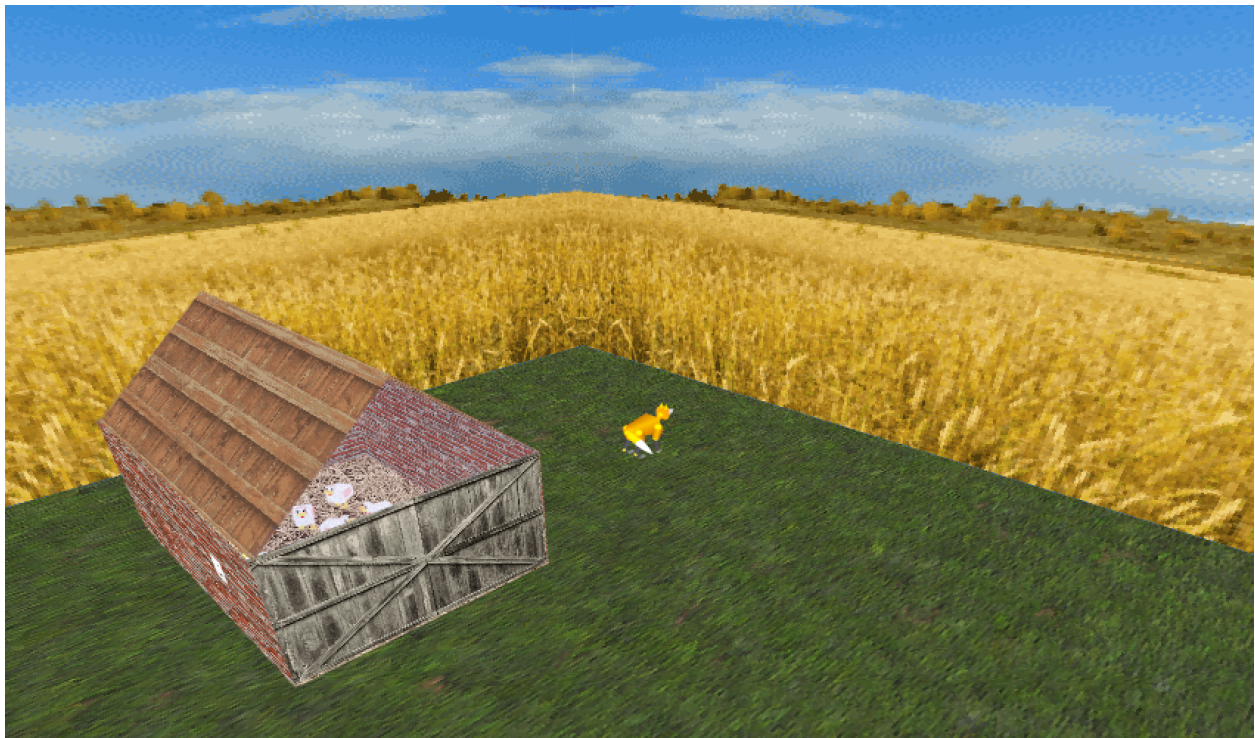



Final Project Description

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Project objective

The main objective of the project was to create a farm with several animals using the animals that we had already created in other practices. We had already created a fox and a chicken, so we still had to position them in the farm, create the farm, walls, floor, landscape background, lighting, textures and camera movement along with the fox, which will be our protagonist as it is the one that allows movement and vision of the scene.

Division of the project

As previous practices, we have the project divided into the next classes:

cgvCamera

The implementation of the zoom and the changes in the camera type between parallel and perspective are in this class.

cgvColor


Default class for the color objects.

cgvInterface

This class manages the pressing keys' actions and the selection, with other important methods.

cgvLight

Class for managing lights, extract data for debugging, apply changes and change parameters of all the lights.



cgvMaterial

Similar to Color and Light class, this class manages all data related to the materials used in the project.

cgvPoint

Class to represent a point in the project.

cgvScene3D

In this class we have all the animals, the render method with all the lights and the creation of the farm with its textures for the wall, floor, door and roof.

cgvSphere

Class to represent a sphere in the project.

cgvTexture


It has the required methods to use textures in our project, such as constructors, destructors and a method to apply.

lodepng

Class for the insertion of the photos to create textures and backgrounds in the project.

pr4

Main class for running the project and establishing the name of the window and its height and width.



Animals

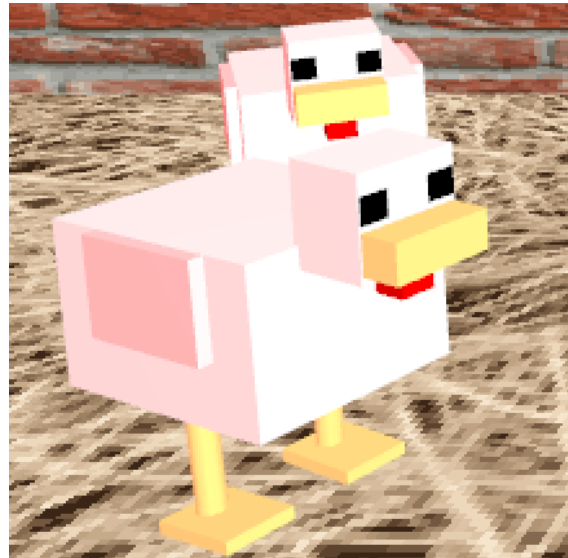
In our project we have 2 different animals, one fox and a small number of chickens:

Chicken

The chickens were created inspired by the chickens in the minecraft video game, they have their own animation moving the head and the legs.



Inspiration



Recreation

Fox

The fox have its own animation moving the ears and the tail:



Cameras

We have implemented 4 cameras with different views, which can be changed by pressing the “v” key as the user guide document says.

First camera (general view)



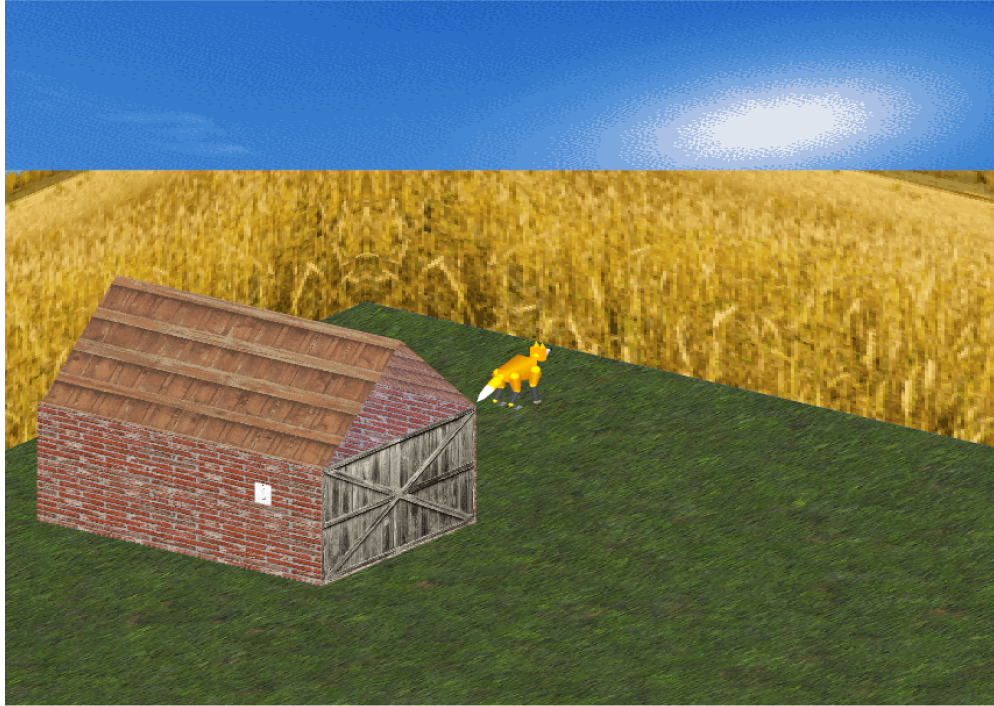
Second camera (chickens view)



Third camera (fox view)



Fourth camera



Textures

As we can see in previous pictures, we have the brick walls in the chicken yard, the wood door, the roof and the floor of the chicken yard, and outside we have the grass, the limits of the farm and the blue sky.

Movement

All the movement that the user can do is indicated in the user guide with its respective key guide sheet.

For example, the fox can move around the farm and inside the chicken yard, the user can change the cameras, zoom in and out, change the projection, change the animation mode...

Conclusion

In this project we have been able to discover first hand how difficult it is to carry out a graphic project that includes camera changes, walls, movement, different animals, several lights, textures, etc. It has been quite a complicated job but it has been comforting to see the final result.

