



NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO

FACULTY OF ENGINEERING

ELECTRICAL ENGINEERING DIVISION

COMPUTER ENGINEERING



COMPUTER GRAPHICS and HUMAN-COMPUTER INTERACTION

Binnacle

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THEORY GROUP: 04

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DEADLINE DATE: 12/01/2023

QUALIFICATION:_____

The final project has been created in two different parts and integrated at the end in order to cover the different points requested. This is because with the laboratory teacher it was done individually and for theory it was done as a team. Therefore, the log will be divided into the part of Colón Palacios Emmanuel, Roldán Sánchez Alexis and a last where it will be of both, as a team.

Colon Palacios Emmanuel

The experience began from the laboratory project, moving the floor because of the difficulty that seemed to have to make a project of such magnitude. To my surprise it was not all complications from the beginning, although it was beginning to understand a new paradigm, computer graphics interested me enough to inhibit that psychological weight that could generate having a project of such magnitude.

As a first activity, I modeled the objects that my space to represent should have. Choosing a game from my childhood was something that made me enjoyable the hours I spent learning to use Maya tools and that somewhat uncontrolled my mania for symmetry in things. In the end, I managed to model and texture more of the models that were required for the final project in the laboratory.

Accommodating everything was something that only required time, I did not consider it to be something heavy, it was even satisfactorio. In the end I had to make some modifications to the façade from the inside, thus making it more similar to the initial reference image.














During all this time what has cost the most in this project is to organize, sometimes I did not have enough time to do this project, at least I thought, I had to sacrifice a couple of hours of sleep, but every effort has its fruits, and in this case it is reflected in this project.

Roldán Sánchez Alexis

Carrying out the project was very complicated and laborious, which is why dividing activities made the work more tolerable and not so heavy.

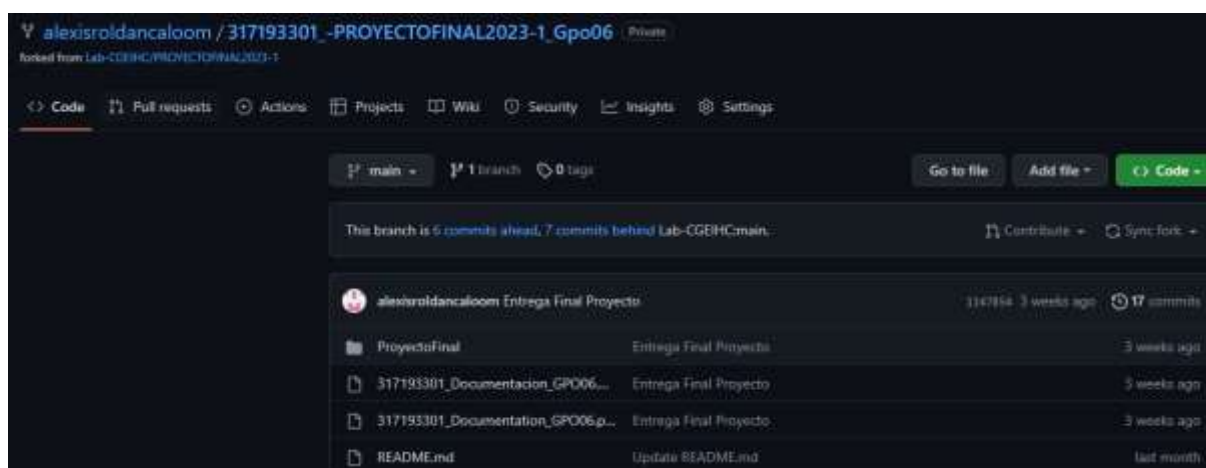
In the early stages of the project, I had to learn how to handle Maya 3D, because I had no knowledge of the software and we were going to see very little in the laboratory, so in what was about a week I saw the bases.

The design of each of the models took me from September 21 to October 31, as there were several and I tried to make them very detailed. At the same time I was watching more Maya tutorials to be able to correctly make each model and what I needed. I learned a lot in this process, for example the antenna has parts that are like mesh, so seeing how to do it was very advantageous. Using Maya during this time gave me the experience to know shortcuts and be able to manage the software more efficiently.

 AntenaDanny.mb	14/11/2022 08:41 a. m.
 barraslaterales.mb	07/11/2022 10:13 a. m.
 casaDanny.mb	26/12/2022 08:26 p. m.
 computadora.mb	07/11/2022 10:42 a. m.
 DannyPhantomCharacter.mb	27/11/2022 07:34 p. m.
 faro.mb	17/10/2022 03:49 p. m.
 osciloscopioDanny.mb	30/10/2022 03:24 p. m.
 plataformaProyectoDanny.mb	02/11/2022 08:07 p. m.
 pokebola.mb	20/10/2022 10:30 p. m.
 portal.mb	18/11/2022 10:53 a. m.
 tanquebarril_DannyProyecto.mb	14/11/2022 08:45 a. m.
 tiburon.mb	17/10/2022 10:27 p. m.
 tren3D.mb	17/10/2022 01:51 p. m.

The texturing of each model became very slow, especially because of the orientations of the models. It took me from October 26 to 31. I consider that at least it took me two hours for the model, textured and everything necessary.

The use of a repository was important, both for work safety and to deliver avances to the teacher, so it was created and worked on all the time the code was used.



The animations were delayed and it was also done progressively, because as they were learned in the laboratory they were also implemented in the project, that is why it may be one of the most delayed points from December 16 to 4.

The integration of the models to OpenGL could be slow and laborious, especially because it was necessary to calculate at the test, modifying pivots for animation and rotating, which made it not a very effective process.

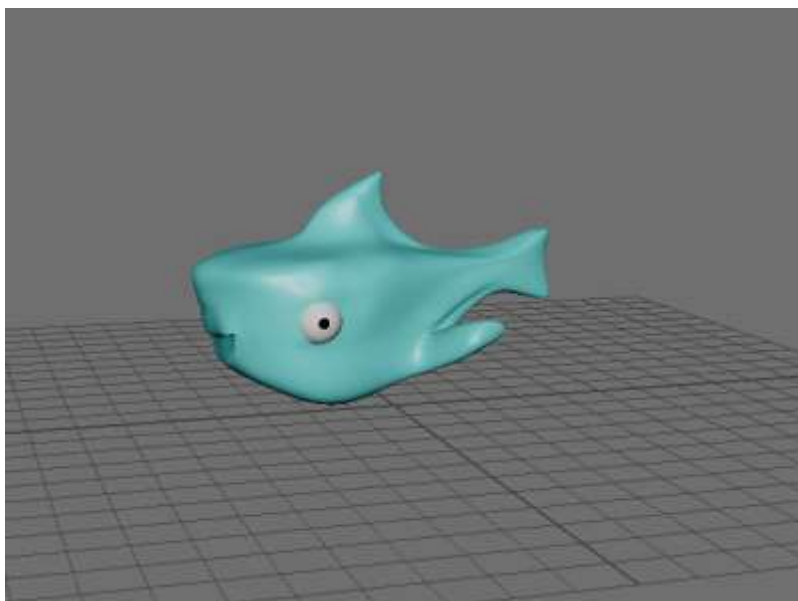
The lighting had its joke and I consider it a weak point in my project, maybe I burned the stage with a lot of light, but the implementation of point lights for animations was the right one.

Making the executable file I thought was going to be more complicated but Visual Studio gives you a very powerful tool to create it.

Collaborative

One of the main challenges of our project was the integration of Alexis' initial project to Emmanuel's, that's why it was a bit late, because giving a sense of why things are there and trying to tell a story of how both universes come together could bring ups and downs. With the creation of a repository we were able to add constant improvements and mutual support to unite both projects.

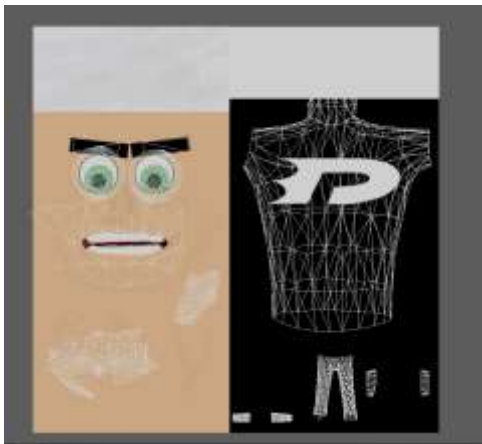
The realization of the model was done separately, "carving" it with Maya's tools we started testing by making a model of a whale to make the Danny Phantom later, who would be the protagonist in the project.



Danny Phantom Pre-textured



UV curves



Model



The realization of this log we had to create it separately at the beginning of the project and join it constantly and with regular updates.

Cleaning the code was something important, because joining two projects brings with it problems of a lot of garbage or extra constants or a little spaghetti code, something important was to try to eliminate or make everything more efficient.

The User Manual was made at the end as well as the technical manual, once the project was finished, we were able to do it.