



UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

FACULTAD DE INGENIERÍA

DIVISIÓN DE INGENIERÍA ELÉCTRICA

INGENIERÍA EN COMPUTACIÓN

LABORATORIO DE COMPUTACIÓN GRÁFICA e
INTERACCIÓN HUMANO COMPUTADORA



User Manual

○ 317344376

Main Project

In the application to be executed you will be able to visualize a "Diorama of Everyday Life" environment in which different 3D models related to the Naruto series will be presented:

- kunai
- Bijudama
- Shuriken
- Bijus
- Bandana
- Katana Sasuke Uchiha
- Crimson 4-leaf clover
- Kubikiribōchō
- Naruto
- Kama
- Tobi Character
- Piece of furniture
- Globe of the Earth
- Restaurant

On the other hand there will be animations not linked to this TV series such as:

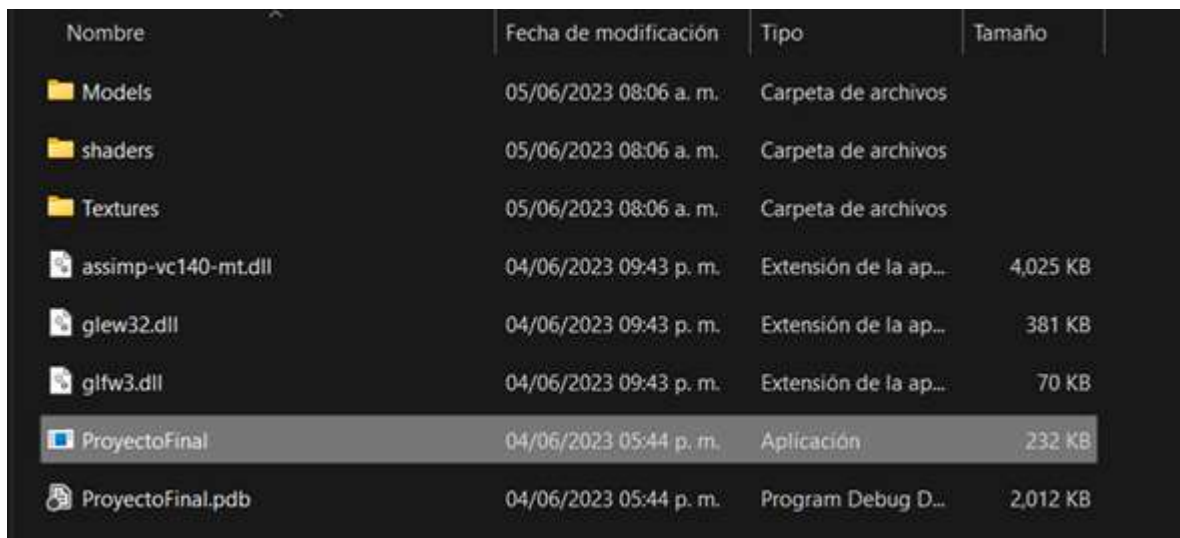
- The death star (Star Wars)
- The golden snitch (Harry Potter)
- Throat (Interstellar)

RUN

To be able to work with the executable, the first thing to do is to download all the information found in the repository's release folder:

<https://github.com/AlexisDanielCote/ProyectoFinal.git>

Or download the entire repository in a ZIP file and work only with the release folder. If you download the information from the above-mentioned folder, you should do it in such a way that it looks like this on your computer.



Nombre	Fecha de modificación	Tipo	Tamaño
Models	05/06/2023 08:06 a. m.	Carpeta de archivos	
shaders	05/06/2023 08:06 a. m.	Carpeta de archivos	
Textures	05/06/2023 08:06 a. m.	Carpeta de archivos	
assimp-vc140-mt.dll	04/06/2023 09:43 p. m.	Extensión de la ap...	4,025 KB
glew32.dll	04/06/2023 09:43 p. m.	Extensión de la ap...	381 KB
glfw3.dll	04/06/2023 09:43 p. m.	Extensión de la ap...	70 KB
ProyectoFinal	04/06/2023 05:44 p. m.	Aplicación	232 KB
ProyectoFinal.pdb	04/06/2023 05:44 p. m.	Program Debug D...	2,012 KB

Figure 1.1 Release Folder in Document Manager

If you download the whole repository in a ZIP file you must unzip the zip file in a folder of your choice; right click on the file to unzip, then left click where it says "Extract all..." and at the end just select the folder where it will be extracted and click on the extract button.

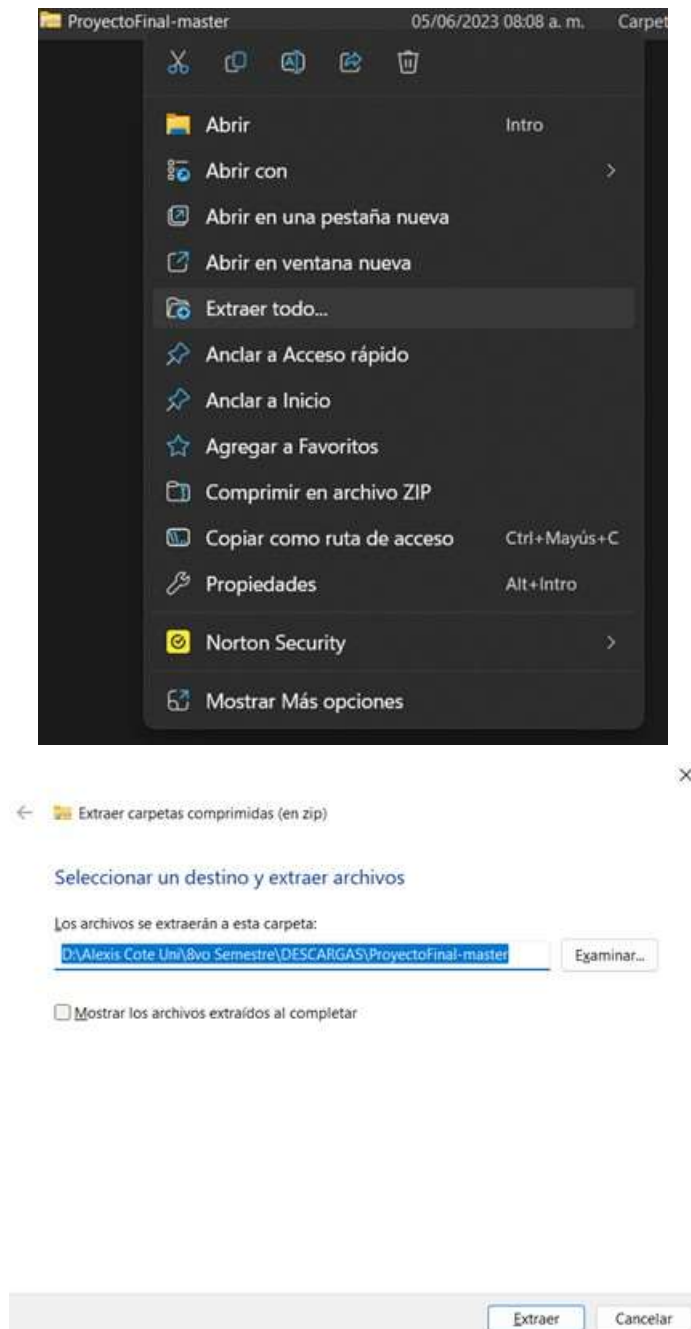


Figure 1.2 File Extraction

We wait for it to finish extracting the documents and when it is finished, entering the folder, you should see something similar to the following image.

Este equipo > 2do disco (D:) > Alexis Cote Uni > 8vo Semestre > DESCARGAS > ProyectoFinal-master >

Nombre	Fecha de modificación	Tipo	Tamaño
Documentación	05/06/2023 08:18 a. m.	Carpeta de archivos	
ProyectoFinal	05/06/2023 08:18 a. m.	Carpeta de archivos	
Release	05/06/2023 08:18 a. m.	Carpeta de archivos	
.gitattributes	05/06/2023 08:18 a. m.	Archivo GITATTRIB...	3 KB
.gitignore	05/06/2023 08:18 a. m.	Archivo GITIGNORE	7 KB
ProyectoFinal.sln	05/06/2023 08:18 a. m.	Visual Studio Solut...	2 KB
README.md	05/06/2023 08:18 a. m.	Archivo MD	1 KB

Figure 1.3 Extracted files

After that, you should look for the file that has the extension .exe or says that it is an **Application**.

Nombre	Fecha de modificacion	Tipo	Tamaño
ProyectoFinal	04/06/2023 05:44 p. m.	Aplicación	232 KB
ProyectoFinal.pdb	04/06/2023 05:44 p. m.	Program Debug D...	2,012 KB

Figure 1.4 Executable file.

Double left click on the file and wait for the execution, at the beginning you will see a black window followed by a blank one, do not be alarmed, it is normal, just wait for the animation to appear in the blank window as shown in Figure 1.6.

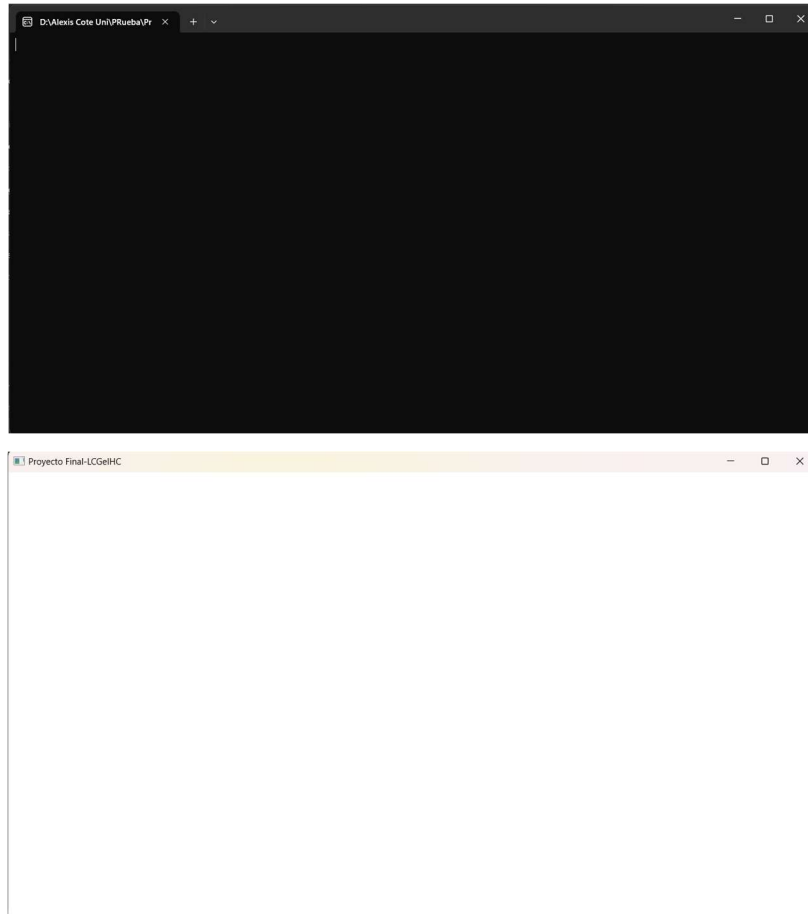


Figure 1.5 First execution windows



Figure 1.6 Program loaded and running

It is recommended that you deactivate your antivirus when you want to run the program because, as it is an application with **.exe** extension without any certificate, the antivirus may block it or even delete it as it would consider it a threat; in case you delete it, you will have to deactivate your antivirus and extract the files again.

INTERACTION WITH THE PROGRAM

To start manipulating/interacting with the program you must understand the following:

- Is a program that has preset animations running automatically and some others waiting to be activated.
- It has a synthetic camera that allows us to move over the environment, this camera has a light that simulates the flash of the same.
- Its navigation is with the WASD keys allowing us to move from side to side with AD while with WS we will be approaching or moving away in the direction of the light.
- The mouse pointer will allow us to position the camera light in a different direction, this light indicates where we will be moving when interacting with the WS keys.

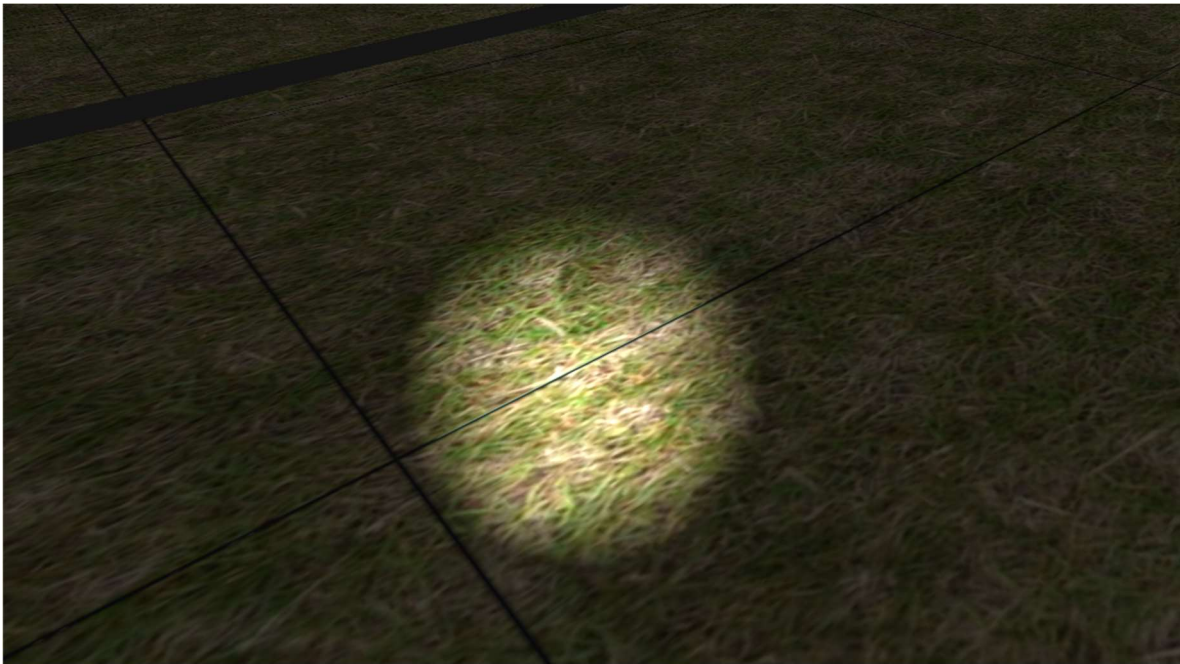


Figure 2.1 Synthetic camera light

You will be able to move within the whole animation without any problem using only the mouse pointer and the WASD keys, if at a moment you feel that the mouse does

not allow you to make the turn or the movement you want you can position the pointer outside the application and then reintroduce it where you want in the application window to continue moving the synthetic camera.

As a user you can only interact directly with the synthetic camera and Tobi (to be explained later).

STATIC OBJECTS

In the application you will be able to position yourself, with the synthetic camera, on the objects created and placed, these objects do not have any animation or interaction since they are only static.

You will be able to see tables, chairs, a restaurant, the character Naruto, furniture, globes and weapons from the Naruto series in the same animation..

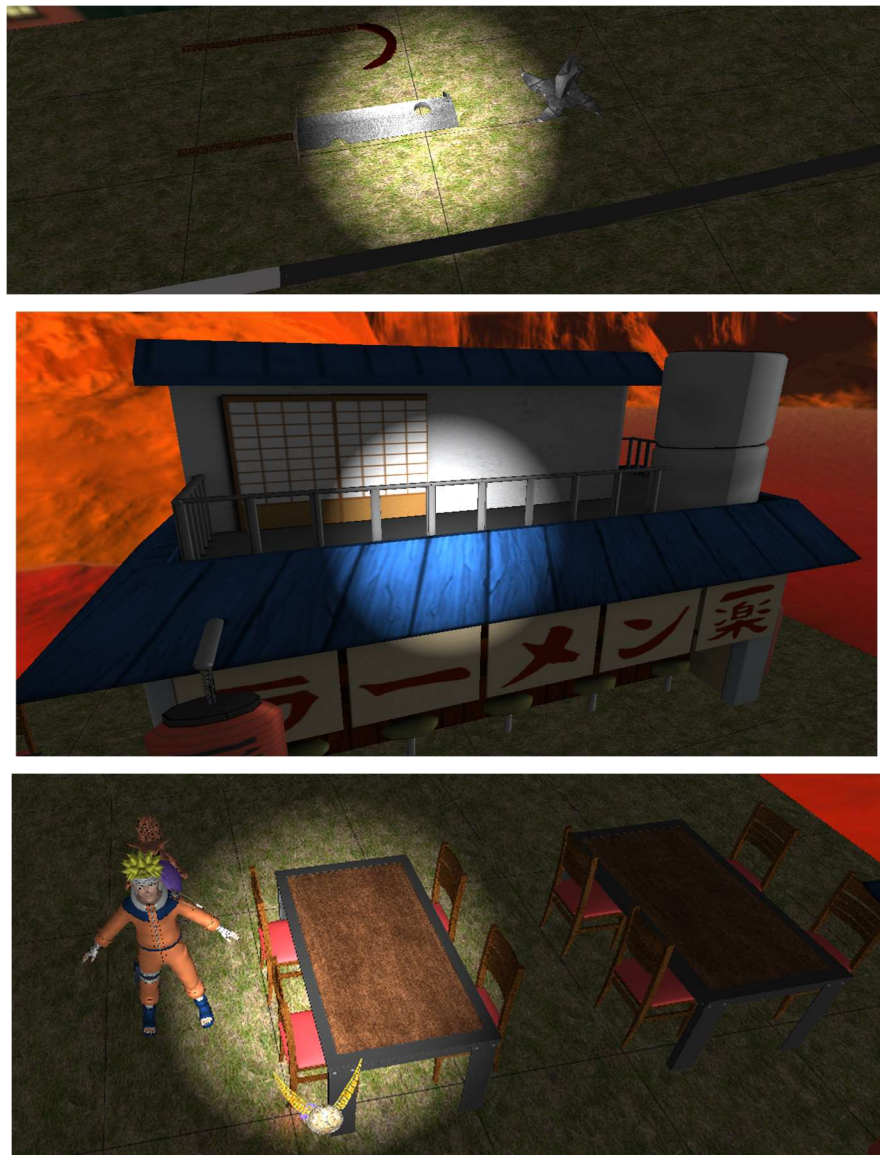


Figure 3.1 Static objects of the program.

CONTINUOUS ANIMATED OBJECTS

These objects, as you will see in the execution of the program, have a predefined animation which will be executed continuously or when you press a key on your computer.

These animations do not interact with the user (with the exception of keyboard activation), they only run from start to finish without the need to intervene during execution.

The animations that are already activated automatically correspond to the movement of the object called Gargantua, this moves, rotates and grows as time passes and at one point of the animation "absorbs" everything on the stage to subsequently restart the entire animation. We also find a golden snitch which flies with sinusoidal movement; the DeathStar has an animation which consists of "creating" a laser beam to shoot it, there is a figure of a Biju which moves creating a Bijudama and throwing it.

Finally we have an animation which requires user interaction, this animation is located above the restaurant tables, it consists of placing empty plates on the tables and then simulate serving the food and remove it. In order to see this animation the user must press the P key to place the plates and then press the O key to remove them.

TOBI

This is the avatar/main character of the program, you can control it in such a way that it moves with the arrows of your keyboard, you can also rotate it using f1 and f2, it should be clarified that with the up and down arrow you can only move in direction -z or +z while with the left and right arrows it will move in direction -x or +x. Using f3 and f4 you can move the head up and down while with f5 and f6 you can rotate it.



Figure 5.1 TOBI

END OF EXECUTION

To end the execution of the program just press the "Esc" key, this will cause the two windows opened at the beginning to close automatically.

Two other ways to terminate program execution are:

- Positioning in the console window (black, Figure 6.1) and pressing ctrl+c at the same time.
- Clicking on the "X" of the application (Figure 6.2).

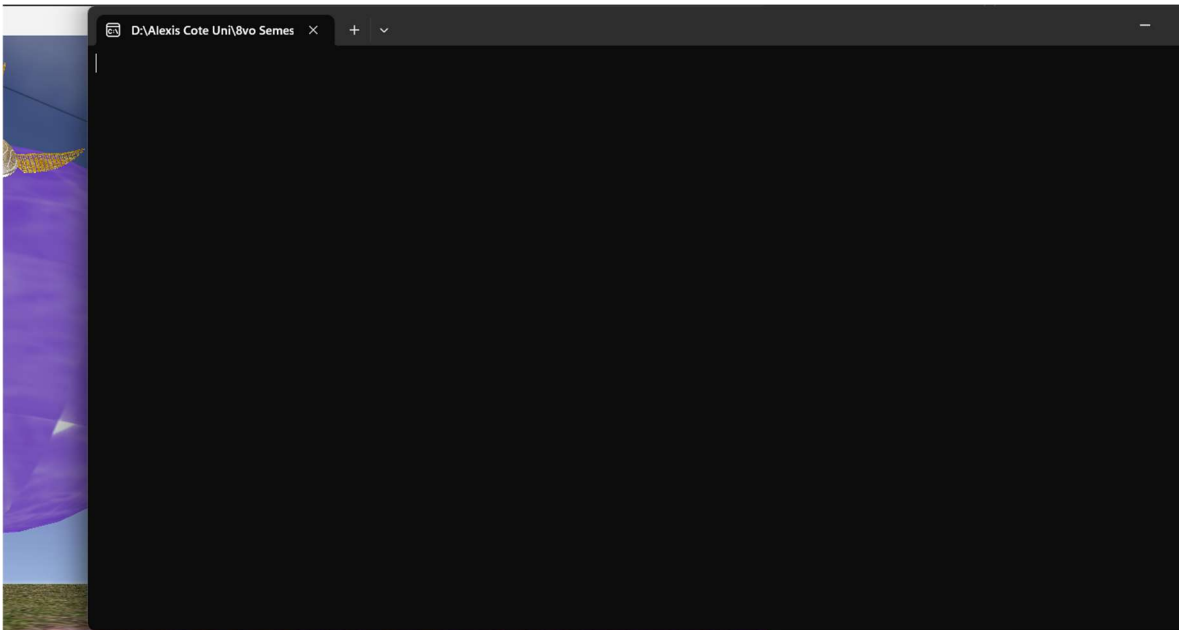


Figure 6.1 Console Window



Figure 6.2 Closing the window with close button