



SCHOOL OF ENGINEERING, UNAM



FINAL PROJECT

# USER MANUAL

Computer Graphics and  
Computer-Human Interaction

**Student ID:**

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**Group:**

13

**Course:**

2024-2

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## INTRODUCTION

This project constitutes a comprehensive challenge that merges theoretical learning with the practical application of skills in the field of computer graphics. Under the premise of recreating a three-dimensional environment inspired by an iconic toy store of the renowned American chain Toys 'R' Us, the aim is to create a virtually dynamic and realistic space. This specific objective is framed within a broader purpose, which involves the application and demonstration of the knowledge acquired throughout the semester.

The task involves the selection of a facade and an interior space, whether existing or imaginary, as well as the compilation of reference images that will serve as a guide in the modeling and design process. Additionally, the incorporation of seven characteristic elements of toy stores is proposed, such as shelves filled with toy boxes, plush toys arranged on shelves, and scale figures that adorn the environment. These elements not only add authenticity to the recreated environment but also constitute animated elements that will contribute to the vitality of the space.

The challenge lies in the application of techniques in modeling, texturing, animation, and lighting in the three-dimensional environment. The pursuit of a high degree of realism or fidelity drives students to explore and experiment with the available tools and techniques, thereby raising the level of skill in the field of computer graphics creation.

## SOFTWARE USAGE

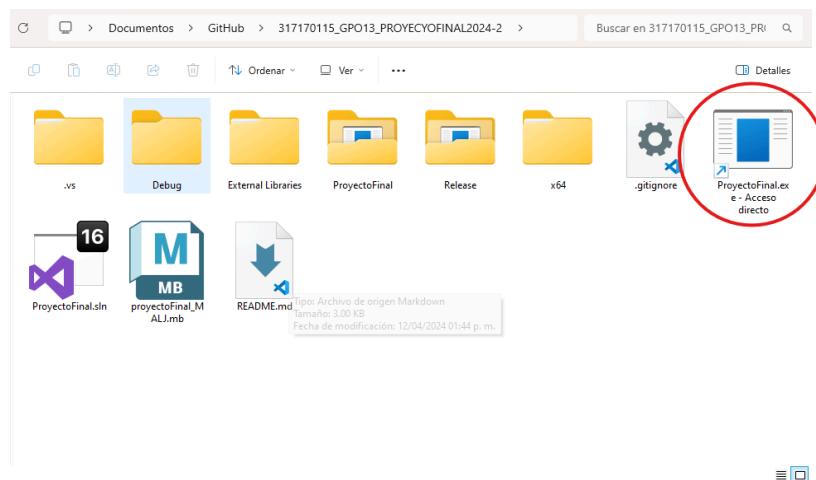
Thank you for your download!

These are the most relevant points for the installation and usage of this 3D environment.

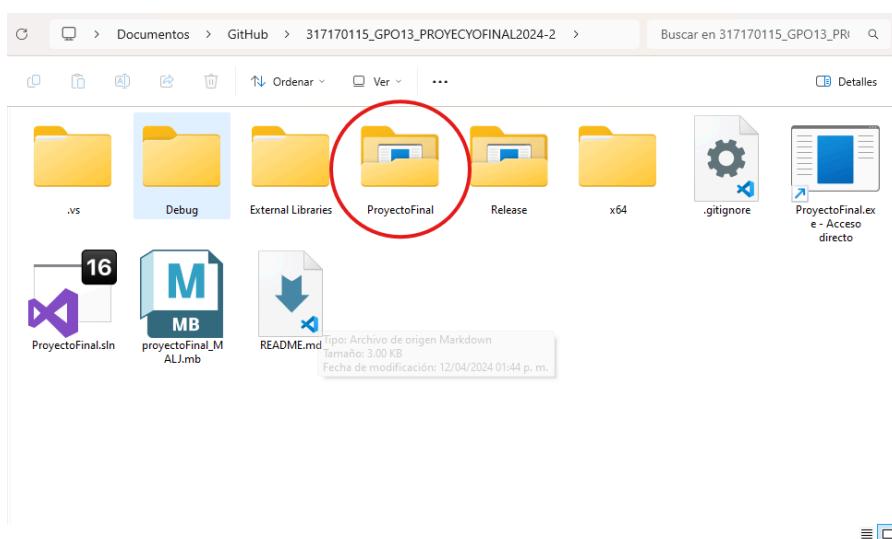
### Installation

Once the project is downloaded, unzip the file and within the main folder (317170115\_GPO13\_PROYECTOFINAL2024-2), there are 2 options to open the application:

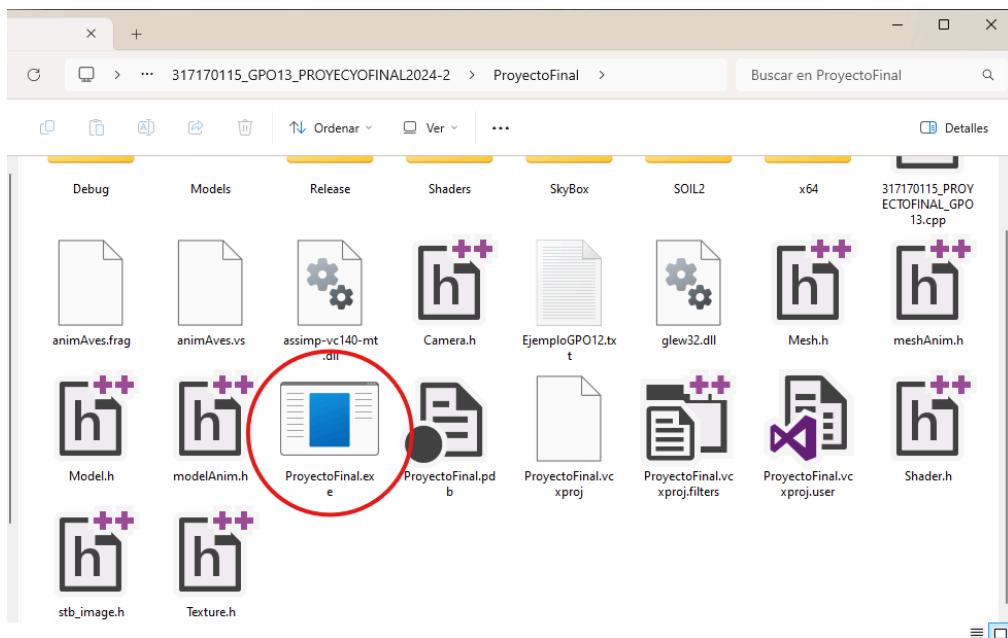
- Double-click on the shortcut to the application's executable:



- Select the **ProyectoFinal** folder.



- You will find a file with the extension .exe (i.e., an executable file) called **ProyectoFinal.exe**. Simply click on it to start the program (the time it takes to open depends on the characteristics of the computer). Once running, the environment is ready to interact with its various elements.



## Movement

- For movement, use the following keys:

- **W** o ↑ to move forward



- o **A** o ↓ to move backward



- o **S** o → to move to the right



- o **D** o ← to move to the left



- The camera moves according to mouse movement, so move in the desired direction for the camera to follow the same movement.

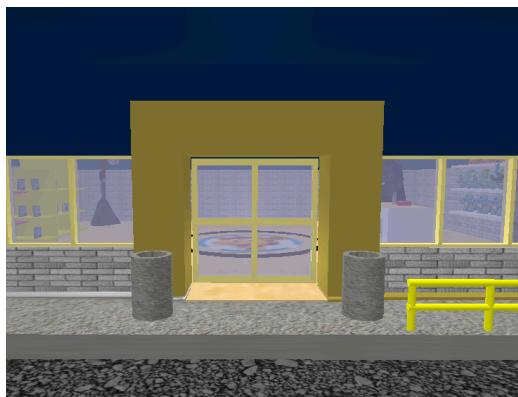


## Animations

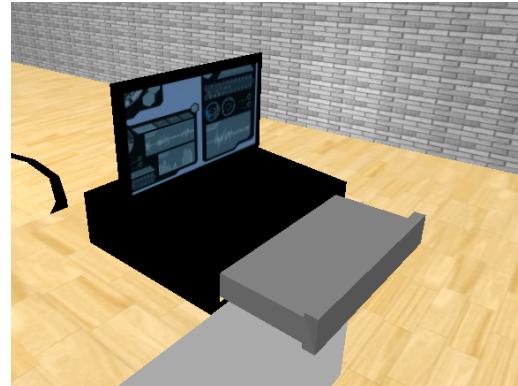
Some animations are automatic, such as birds flying over the store and the toy train running inside the toy store. Others, like opening doors, can be controlled by pressing certain keys.

### Animations that can be activated:

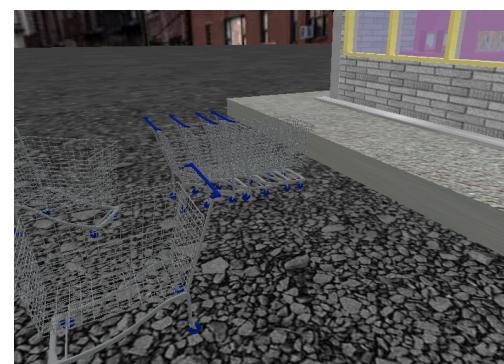
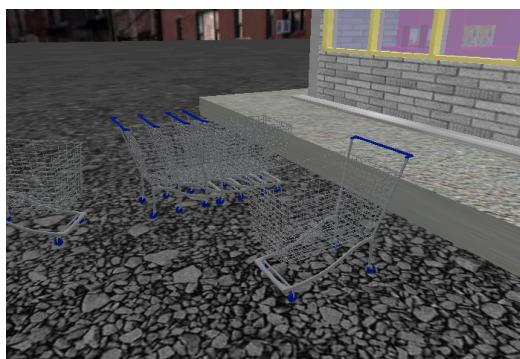
- **P** to open the toy store doors. If they are open, pressing the same P key will close them.



- **O** to open the cash register drawer. If it's open, pressing the same O key will close it.



- **I** to make the shopping cart move forward. Once this happens, it cannot move backward, only forward.



#### Automatic animations:

- Toy train advancing on the track located in the center of the store.



- Birds flying over the store.



These are all the necessary aspects for interacting with the environment. We hope you enjoy it!