Graphics and Multimedia Lab Mini Project

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Blender:

Blender is a powerful and versatile open-source 3D computer graphics software that is used for creating animated films, visual effects, 3D games, and more. Developed by the Blender Foundation, Blender boasts a comprehensive suite of tools for modeling, sculpting, texturing, lighting, rendering, rigging, animating, and even video editing. It supports a wide range of file formats and is compatible with various operating systems, including Windows, macOS, and Linux.

Here's a brief overview of some key features and aspects of Blender:

1. User Interface (UI): Blender has a unique and customizable interface. The UI includes panels, editors, and various workspace layouts that cater to different aspects of 3D content creation.

2. Modeling: Blender provides a range of modeling tools for creating 3D objects, whether through traditional mesh-based modeling or more organic sculpting techniques.

3. Texturing and Materials: Artists can apply textures and materials to objects, giving them realistic surfaces. Blender supports a variety of texture types, including images, procedural textures, and more.

4. Animation: Blender excels in animation, allowing users to create complex character animations, simulate physics, and even handle particles and fluids. The timeline and graph editor are essential components for animators.

5. Rigging: Rigging involves creating a skeleton structure for 3D models, enabling them to move realistically. Blender's armature system makes rigging relatively straightforward.

6. Lighting and Rendering: Blender has a powerful rendering engine called Cycles, capable of producing high-quality images. It also includes Eevee, a real-time rendering engine suitable for interactive previews and faster rendering.

7. Compositing and Video Editing: Blender features a node-based compositor for post-processing effects and adjustments. Additionally, it includes a video editor for assembling and editing video clips.

8. Add-ons and Python Scripting: Blender's functionality can be extended through add-ons, and it supports Python scripting for users who want to automate tasks or create custom tools.

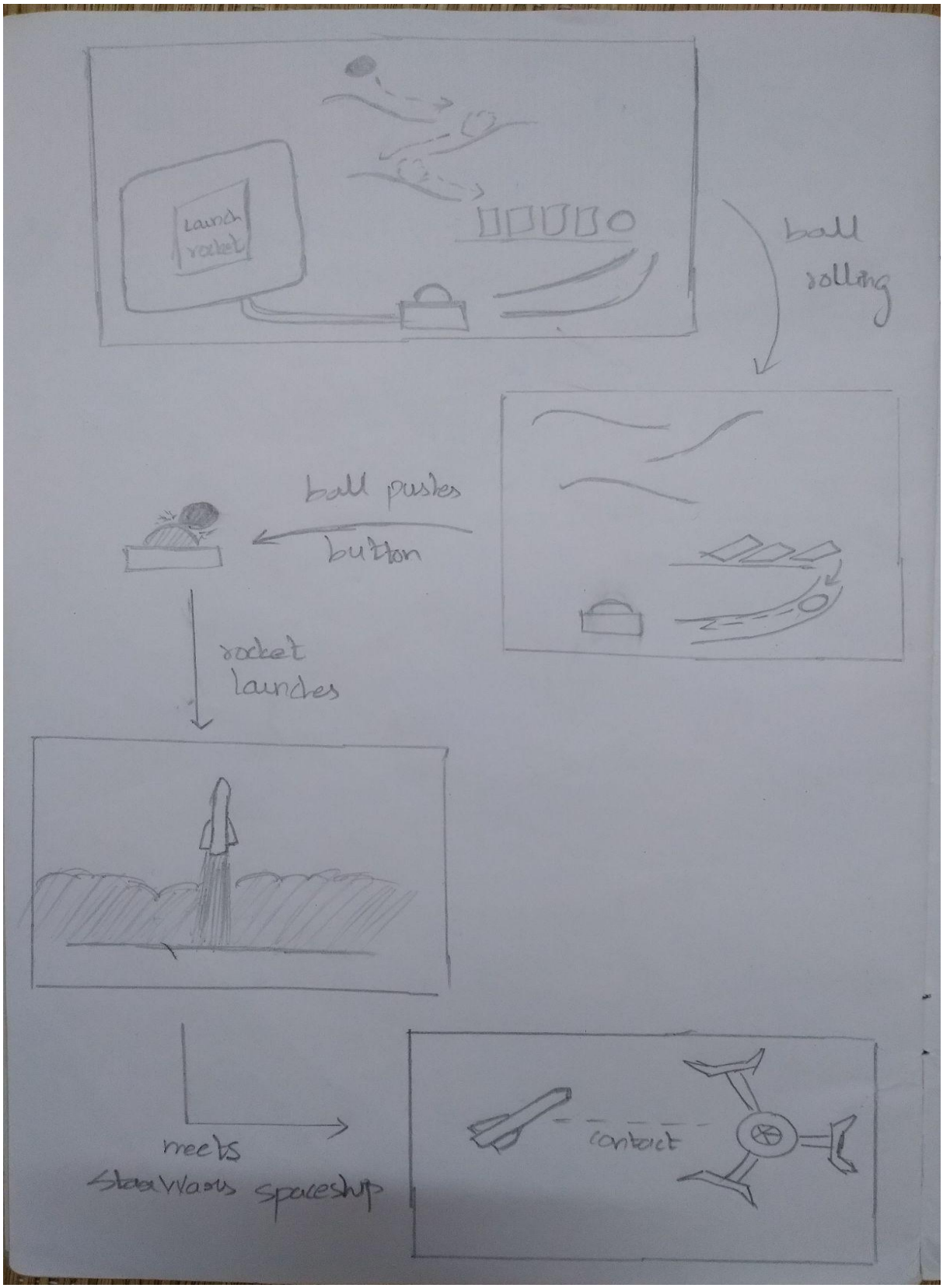
9. Community and Support: Blender has a vibrant and active community. Users can find tutorials, documentation, and support through forums, websites, and social media.

Blender's open-source nature encourages collaboration and continual improvement. It has gained popularity not only for its robust feature set but also because it's free and open to everyone. Whether you're a beginner or an experienced 3D artist, Blender provides a powerful platform for bringing your creative visions to life.

Description:

It's about a Mom(Alice) and her son going to a rocket launch as Alice is the chief engineer responsible for the launch . Alice’s bored son starts building something found in his backpack and her mom’s desk. When Alice’s son was showing how his new creation worked it accidentally triggers the launch button which leads to an early launch.
The launch goes smoothly fortunately , the shuttle detaches its extra parts to venture into deep space.
Three hours pass , the astronaut spots something outside his shuttle and to his surprise it’s an alien spaceship , the astronaut looks in shock , The end.

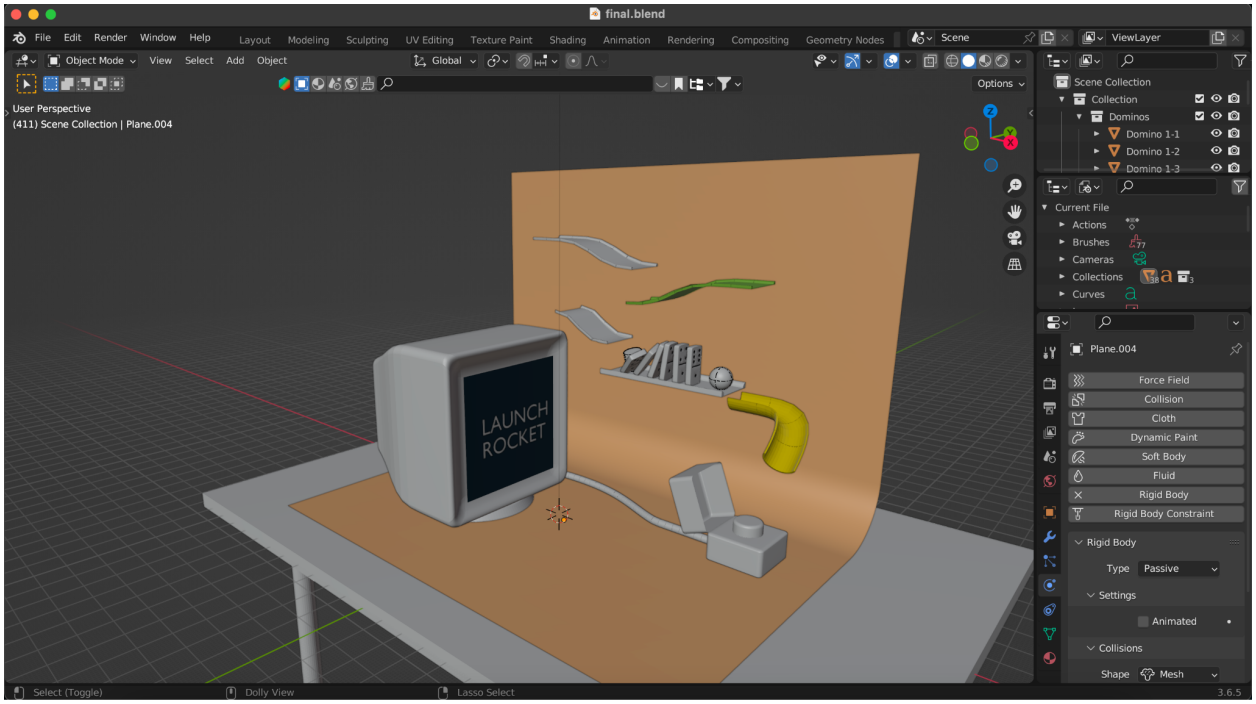
Storyboard Layout :

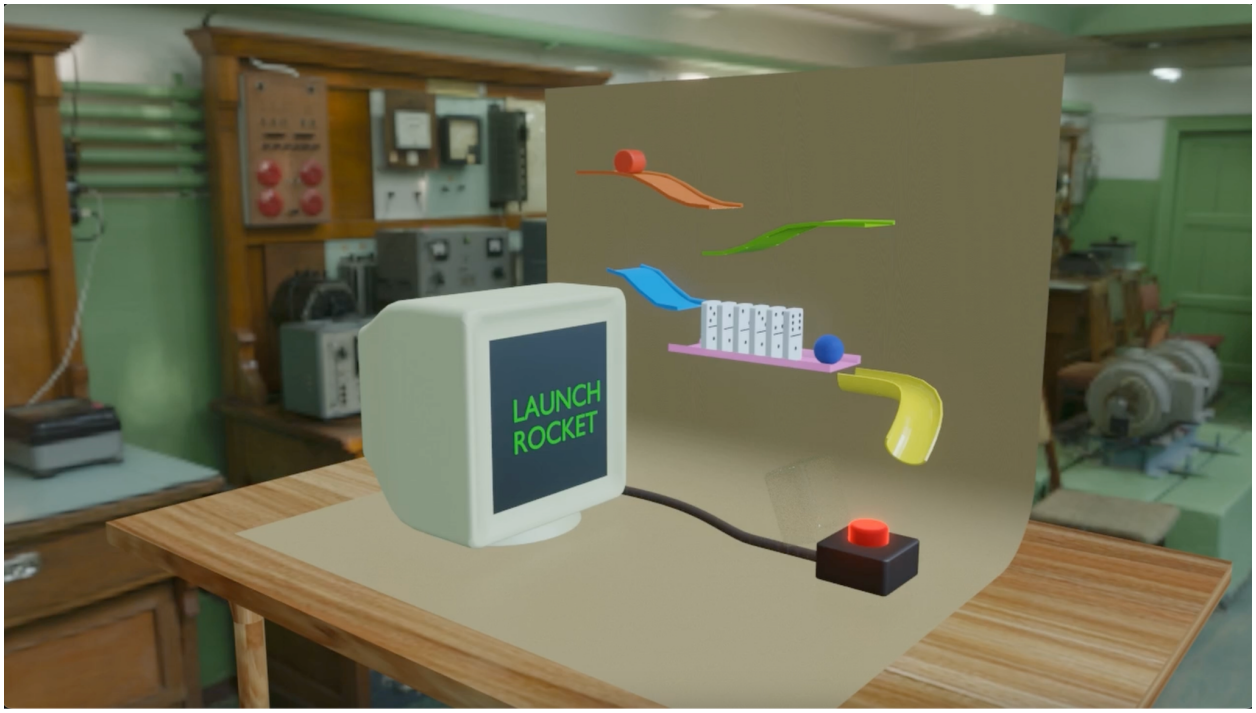


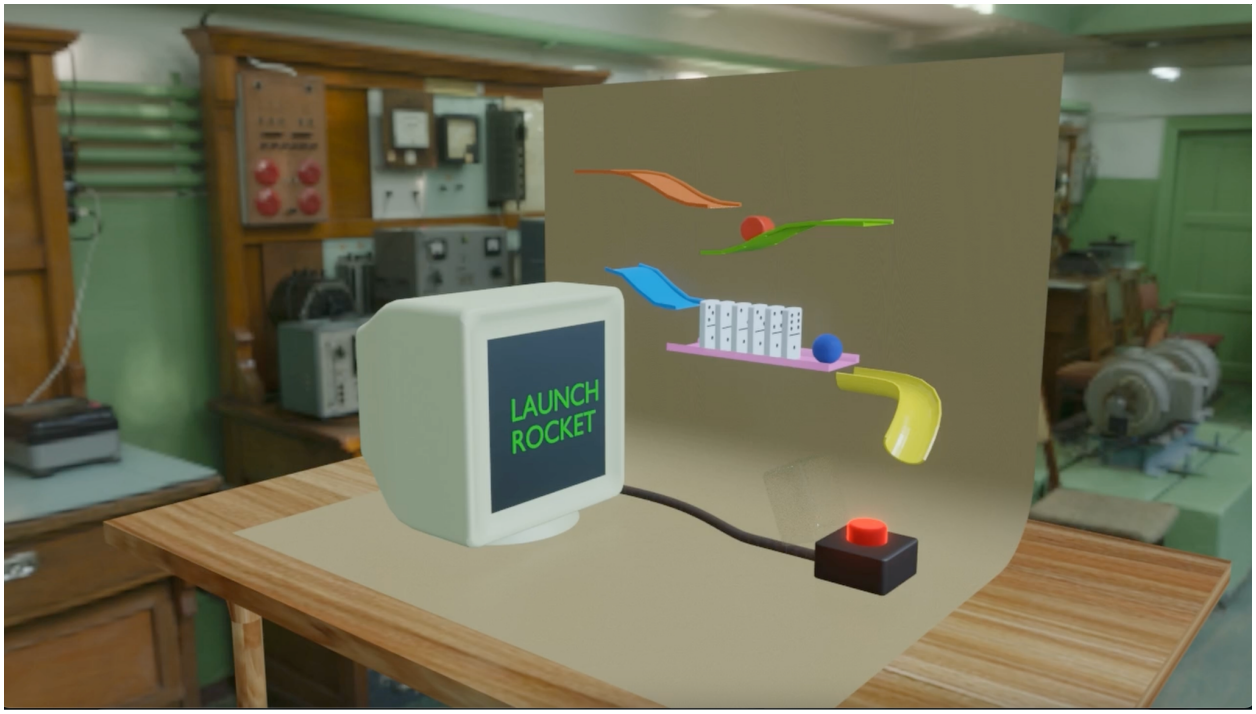
Object Description:

1.Cylinder - a red cylinder
2.Ramps - ramps where the cylinder and the ball rolls
3.Dominos - Cuboid shaped Dominos
4.Ball - Spherical shaped ball
5.Computer - A reformed cube shape in the shape of a old computer
6.Button - A combination of a red cylinder and a cuboid
7.Rocket - A combination of cylinders , cones with textures
8.Spaceship - A combination of spheres,planes and circles

Screenshots :


final.blend
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Geometry Nodes
Scene
ViewLayer
Object Mode View Select Add Object
Global
Options
User Perspective
(411) Scene Collection | Plane.004
LAUNCH ROCKET
Scene Collection
Collection
Dominos
Domino 1-1
Domino 1-2
Domino 1-3
Current File
Actions
Brushes
Cameras
Collections
Curves
Plane.004
Force Field
Collision
Cloth
Dynamic Paint
Soft Body
Fluid
Rigid Body
Rigid Body Constraint
Rigid Body
Type Passive
Settings
Animated
Collisions
Shape Mesh
Select (Toggle)
Dolly View
Lasso Select
3.6.5


LAUNCH ROCKET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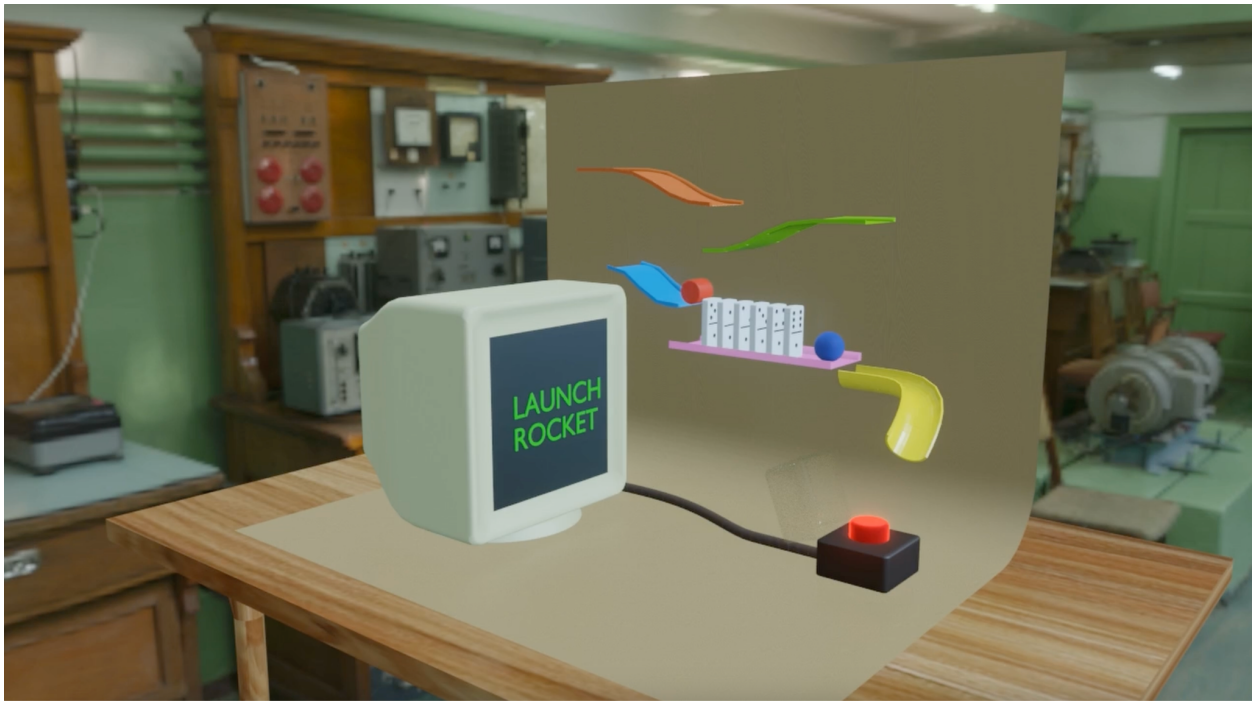
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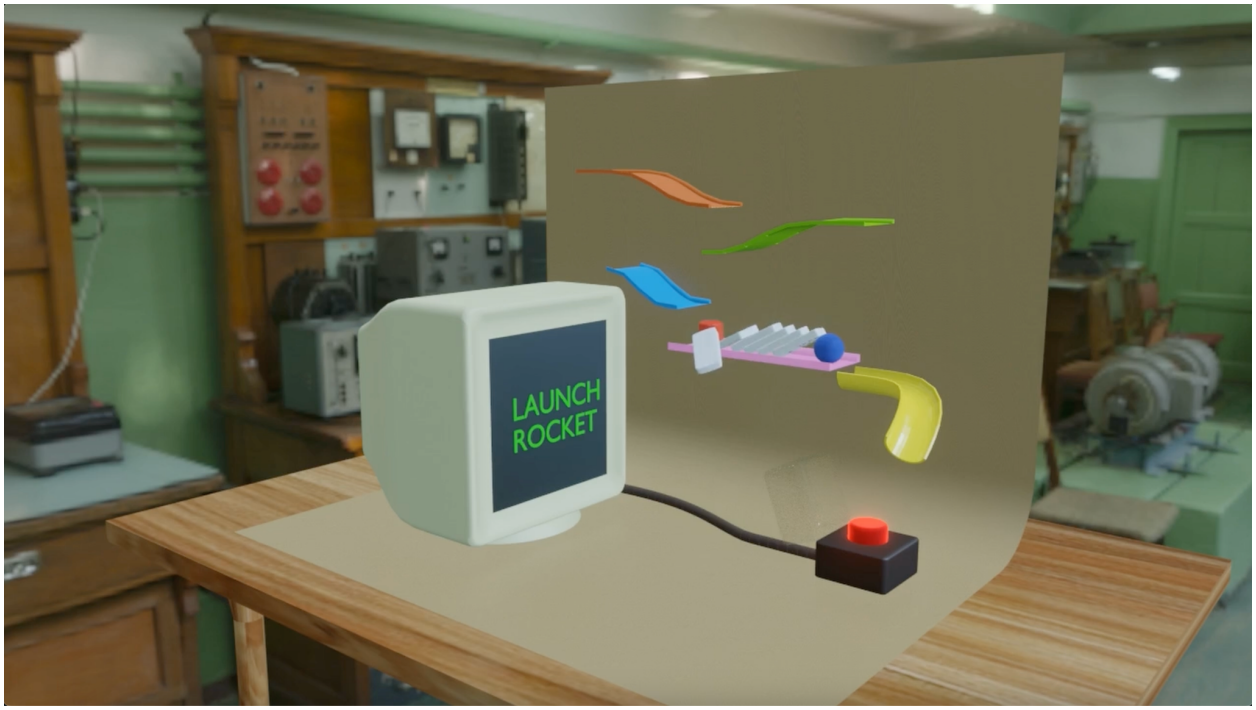
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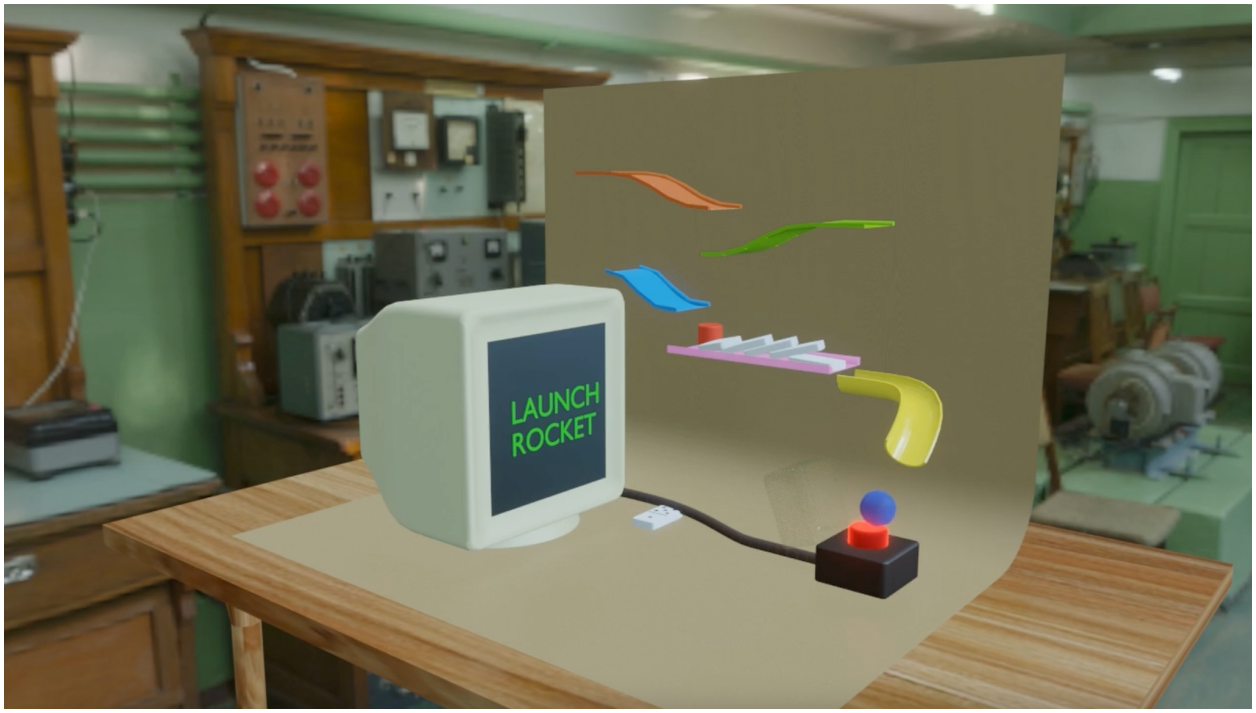
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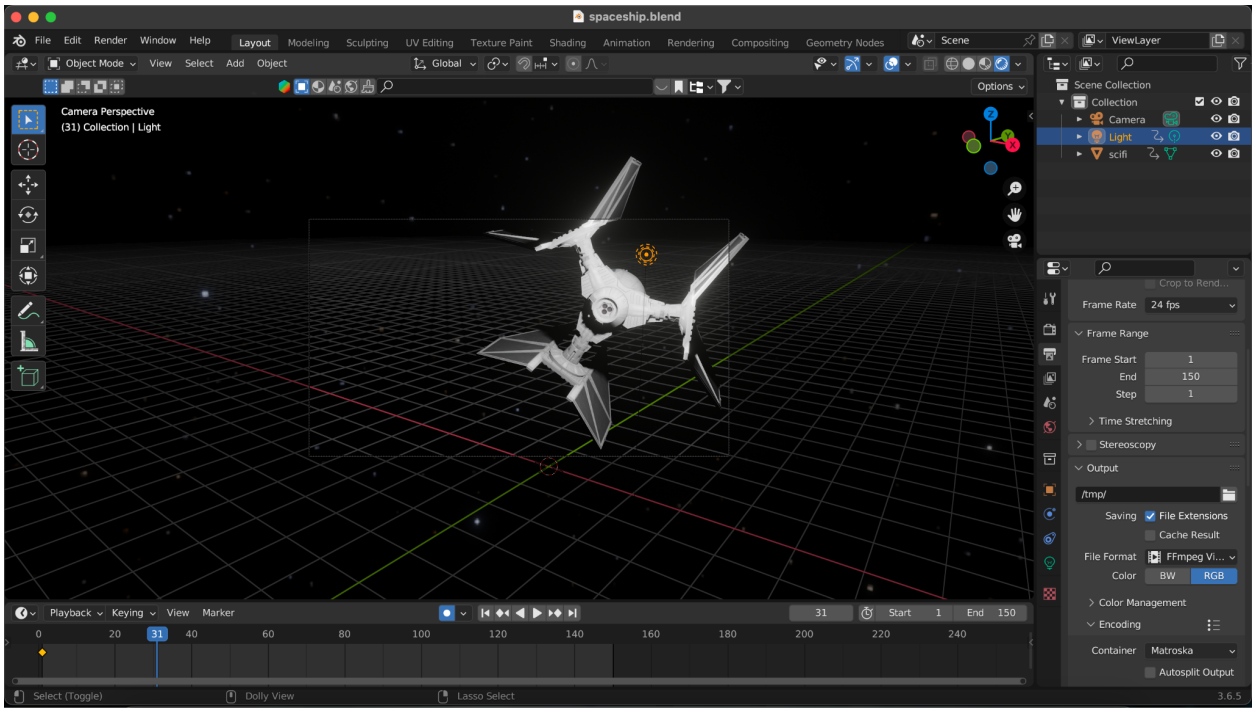
spaceship.blend
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Geometry Nodes
Scene
ViewLayer
Object Mode View Select Add Object
Global
Options
Camera Perspective
(31) Collection | Light
Scene Collection
Collection
Camera
Light
scifi
Frame Rate 24 fps
Frame Range
Frame Start 1
End 150
Step 1
Time Stretching
Stereoscopy
Output
/tmp/
Saving File Extensions
Cache Result
File Format FFmpeg Vi...
Color BW RGB
Color Management
Encoding
Container Matroska
Autosplit Output
Playback Keying View Marker
31 Start 1 End 150
0 20 31 40 60 80 100 120 140 160 180 200 220 240
Select (Toggle)
Dolly View
Lasso Select
3.6.5

Type of Interpolation:

Linear , Bezier Curve are the interpolation methods used in this project

Learning Outcomes:

1. Learned to Create a Story with a Storyboard.
2. Learned to use Blender and video editing tools like Davinci resolve 18.
3. Learned to render 3D animations with textures , lighting and physics.