Graphics and Animation Tools

ACADEMIC SESSION 2020-21

B.Tech CSE –Open Source and Open Standards

Sem VII

PRACTICAL WORK FILE

EXPERIMENT 7

[LINK TO OUTPUT FILES]

Submitted To:

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Department of Cybernetics

Submitted By:

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CSE-OSS-B1

Roll Number: 30

EXPERIMENT 7 : 3D Rocket Using Blender.

Objective:

To design a 3D Rocket using Blender

Requirements:

A Ubuntu 18.04 10 running system with 6 GB RAM was used to carry out the experiment.

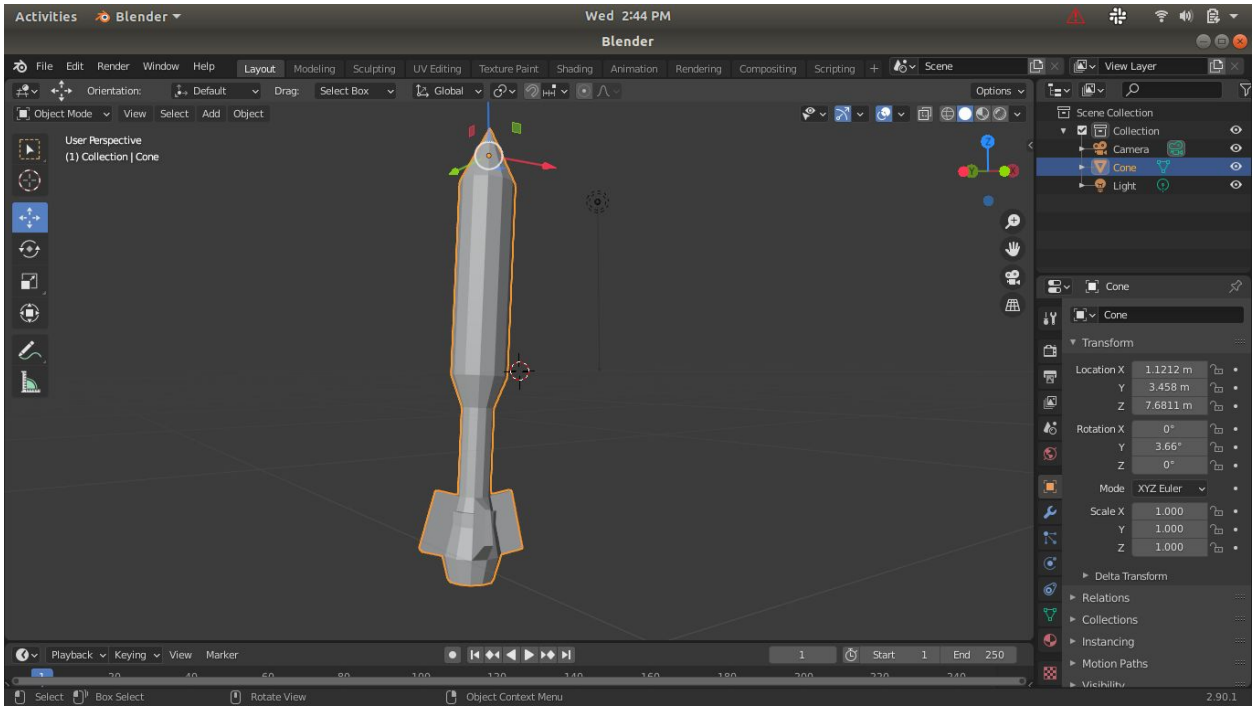
Steps to create a 3D Rocket

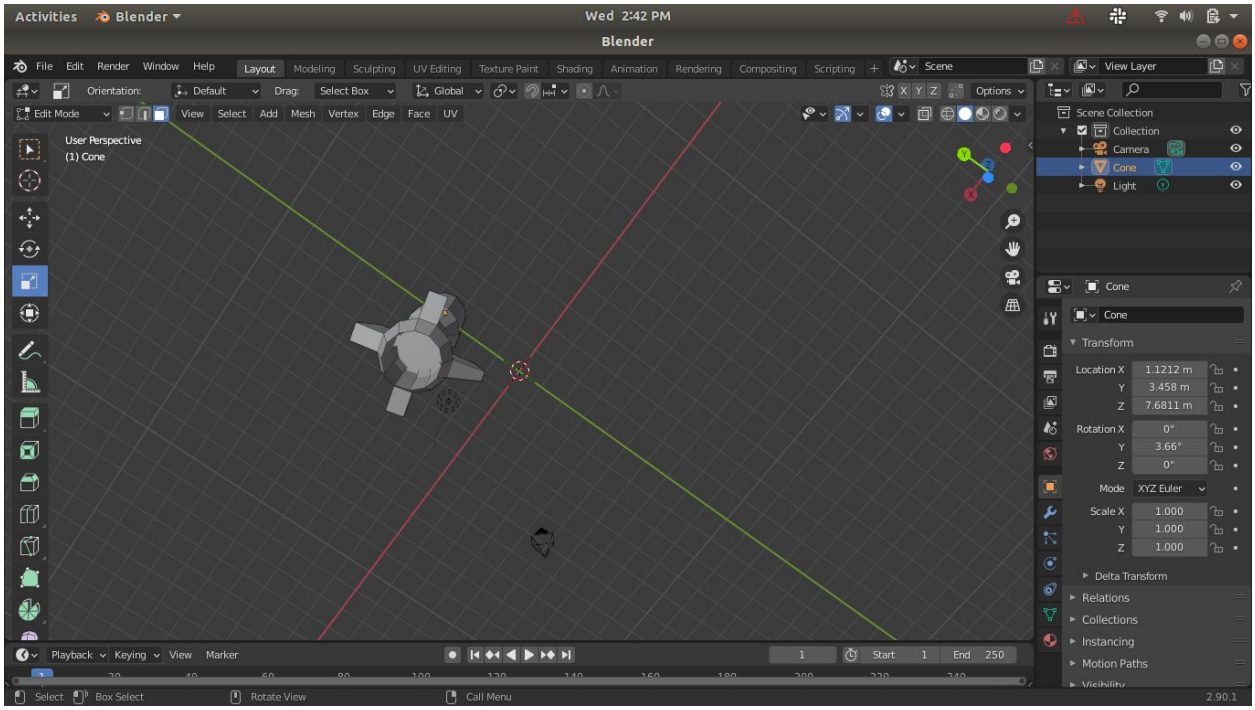
1. Open Blender
2. Delete the pre-inserted object
3. Add a Cone object (Vertices =12)
4. Scale it down a little
5. Shift the object to top mid of the view
6. Press Tab to toggle to editor view
7. Select the bottom face using face selector
8. Press E or Select extrude option from the editor pane and bring down the bottom face, almost double the height of cone to make the body of the rocket
9. Press E again and make the bottom component of the body in a similar way
10. Scale in the bottom component
11. Press E on 4 separate faces of the bottom component to make the feet/wheels of the rocket.
12. Scale up/down the object
13. Scale down to 0.7 every face of the 4 landing feet of the rocket.
14. Extrude up the bottom face to show thrust animation.

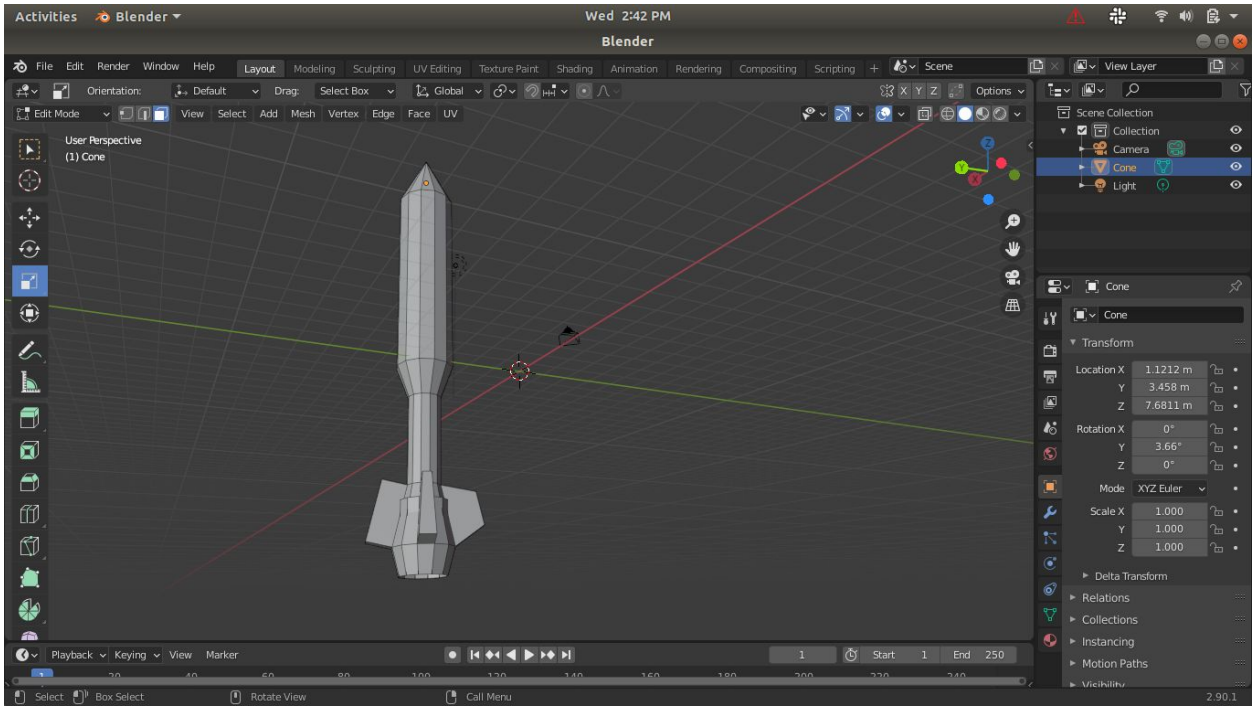
Steps to Render

1. Add a place object and set it child (with keep transform checked to the 3d Text Object)
2. Add light and place it in a suitable position
3. Add camera, Press CTRL+ALT+0 (Num) to position it along the view port
4. Click render on top left
5. Save the output image as PNG.

SNIPPETS


Activities
Blender
Wed 2:44 PM
Blender
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting
Scene
View Layer
Orientation: Default
Drag: Select Box
Global
Options
Object Mode View Select Add Object
User Perspective
(1) Collection | Cone
Scene Collection
Collection
Camera
Cone
Light
Transform
Location X 1.1212 m
Y 3.458 m
Z 7.6811 m
Rotation X 0°
Y 3.66°
Z 0°
Mode XYZ Euler
Scale X 1.000
Y 1.000
Z 1.000
Delta Transform
Relations
Collections
Instancing
Motion Paths
Visibility
Playback Keying View Marker
Start 1
End 250
Select
Box Select
Rotate View
Object Context Menu
2.90.1


Activities
Blender
Wed 2:42 PM
Blender
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting
Scene
View Layer
Orientation: Default
Drag: Select Box
Global
Options
Edit Mode View Select Add Mesh Vertex Edge Face UV
User Perspective
(1) Cone
Scene Collection
Collection
Camera
Cone
Light
Transform
Location X 1.1212 m
Y 3.458 m
Z 7.6811 m
Rotation X 0°
Y 3.66°
Z 0°
Mode XYZ Euler
Scale X 1.000
Y 1.000
Z 1.000
Delta Transform
Relations
Collections
Instancing
Motion Paths
Visibility
Playback Keying View Marker
Start 1
End 250
Select
Box Select
Rotate View
Call Menu
2.90.1


Activities
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Scene
View Layer
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Drag: Select Box
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Edit Mode
View Select Add Mesh Vertex Edge Face UV
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Collection
Camera
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Mode XYZ Euler
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Delta Transform
Relations
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Instancing
Motion Paths
Visibility
Playback Keying View Marker
1
Start 1
End 250
Select
Box Select
Rotate View
Call Menu
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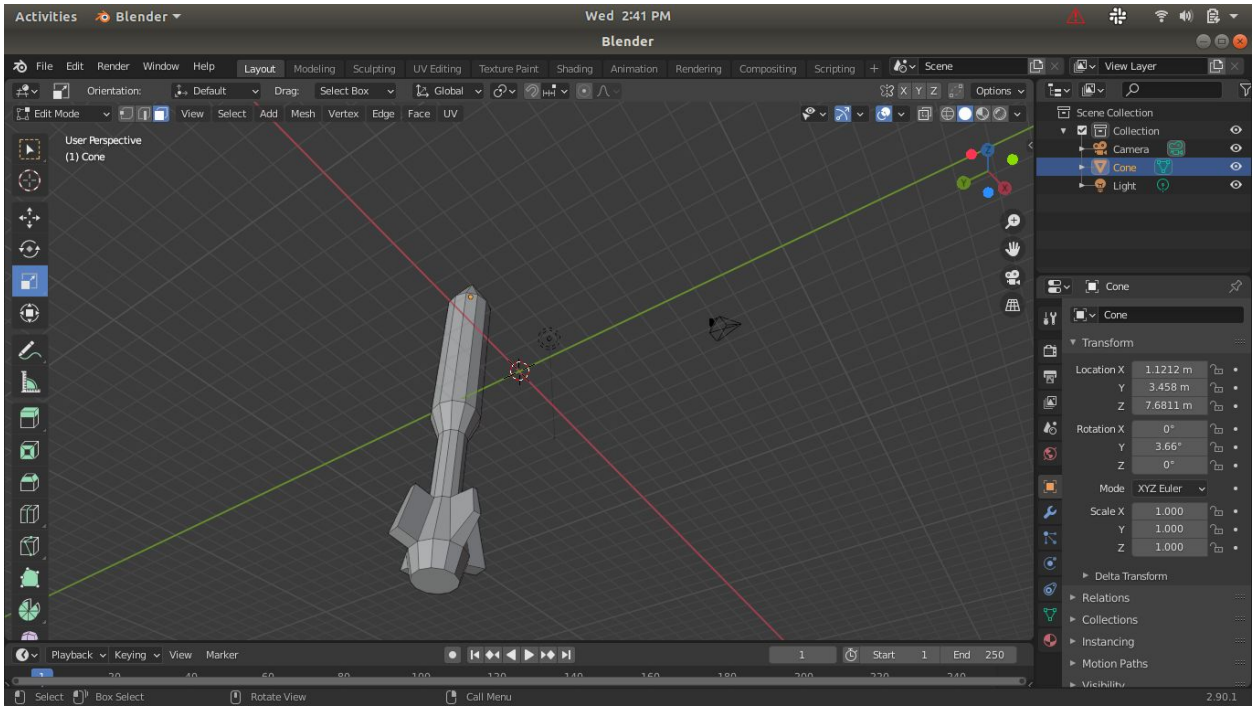
Activities
Blender
Wed 2:41 PM
Blender
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting
Scene
View Layer
Orientation: Default
Drag: Select Box
Global
Options
Edit Mode
View Select Add Mesh Vertex Edge Face UV
User Perspective
(1) Cone
Scene Collection
Collection
Camera
Cone
Light
Transform
Location X 1.1212 m
Y 3.458 m
Z 7.6811 m
Rotation X 0°
Y 3.66°
Z 0°
Mode XYZ Euler
Scale X 1.000
Y 1.000
Z 1.000
Delta Transform
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Motion Paths
Visibility
Playback Keying View Marker
1
Start 1
End 250
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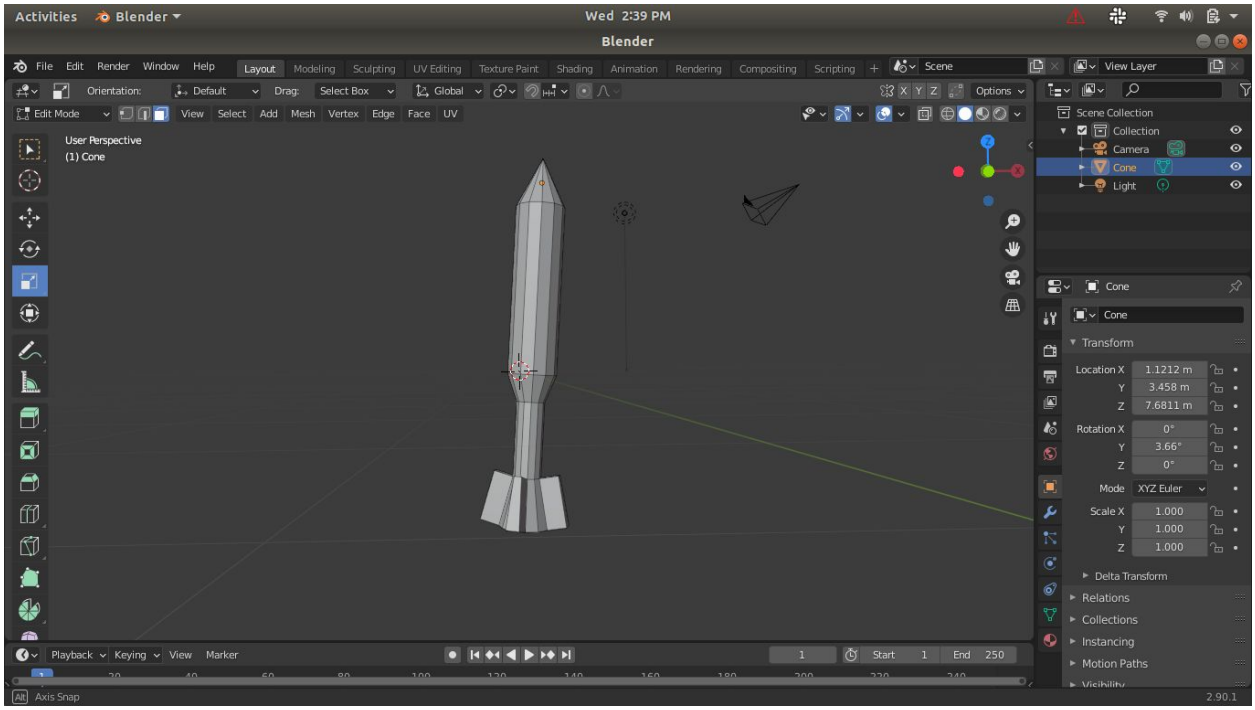
Activities
Blender
Wed 2:39 PM
Blender
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting
Scene
View Layer
Orientation: Default
Drag: Select Box
Global
Options
Edit Mode
View Select Add Mesh Vertex Edge Face UV
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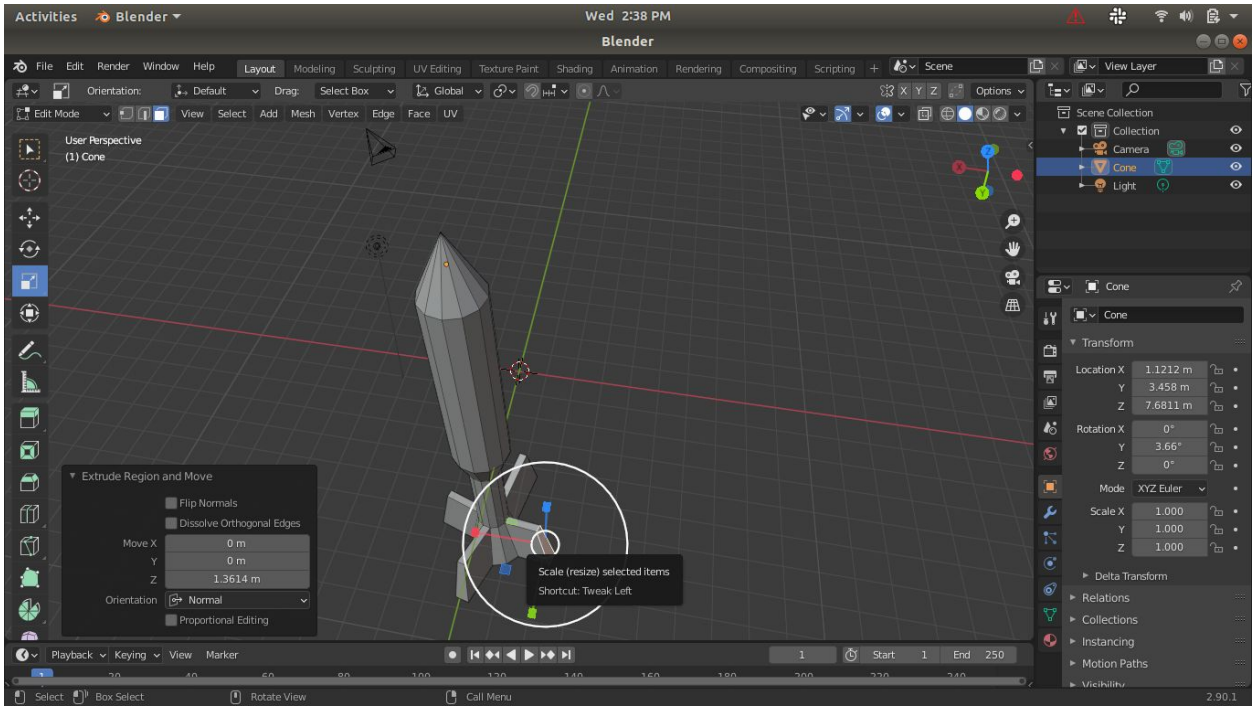
Z 0°
Mode XYZ Euler
Scale X 1.000
Y 1.000
Z 1.000
Delta Transform
Relations
Collections
Instancing
Motion Paths
Playback Keying View Marker
Start 1
End 250
Axis Snap
2.90.1


Activities
Blender
Wed 2:38 PM
Blender
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting
Scene
View Layer
Orientation: Default
Drag: Select Box
Global
Options
Edit Mode
View Select Add Mesh Vertex Edge Face UV
User Perspective
(1) Cone
Extrude Region and Move
Flip Normals
Dissolve Orthogonal Edges
Move X 0 m
Y 0 m
Z 1.3614 m
Orientation Normal
Proportional Editing
Scale (resize) selected items
Shortcut: Tweak Left
Scene Collection
Collection
Camera
Cone
Light
Transform
Location X 1.1212 m
Y 3.458 m
Z 7.6811 m
Rotation X 0°
Y 3.66°
Z 0°
Mode XYZ Euler
Scale X 1.000
Y 1.000
Z 1.000
Delta Transform
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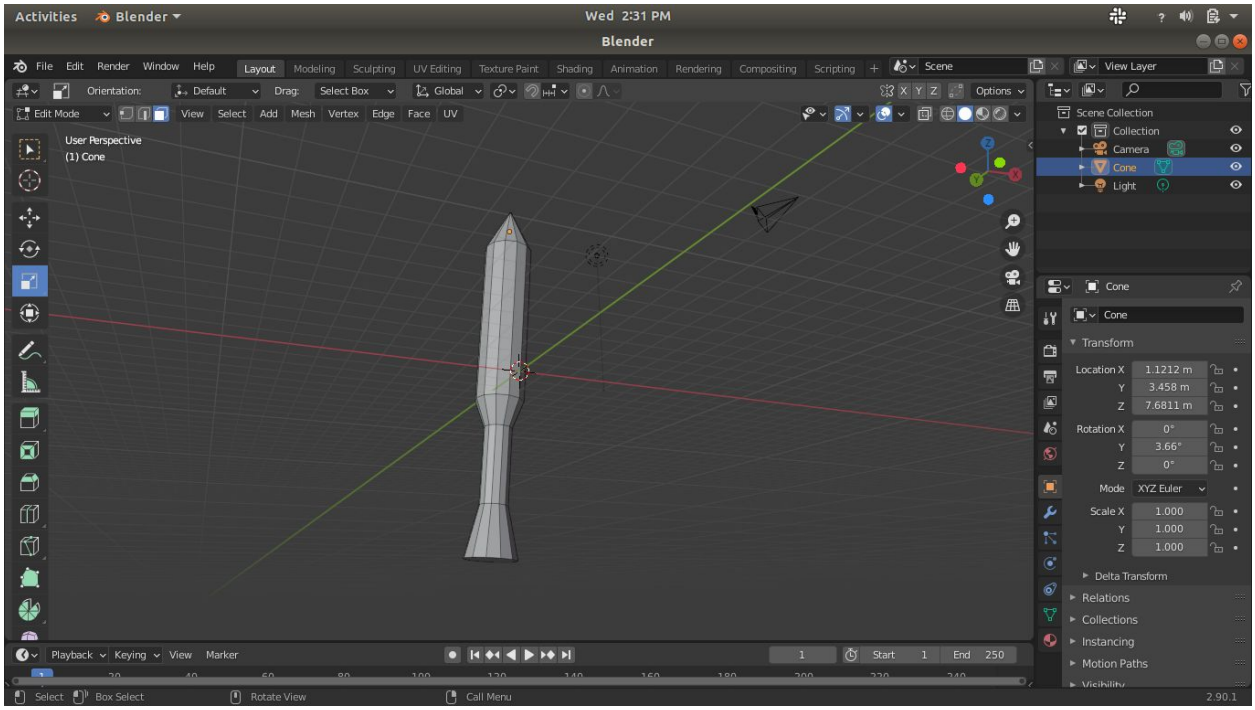
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Scene
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Edit Mode
View Select Add Mesh Vertex Edge Face UV
User Perspective
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Z 0°
Mode XYZ Euler
Scale X 1.000
Y 1.000
Z 1.000
Delta Transform
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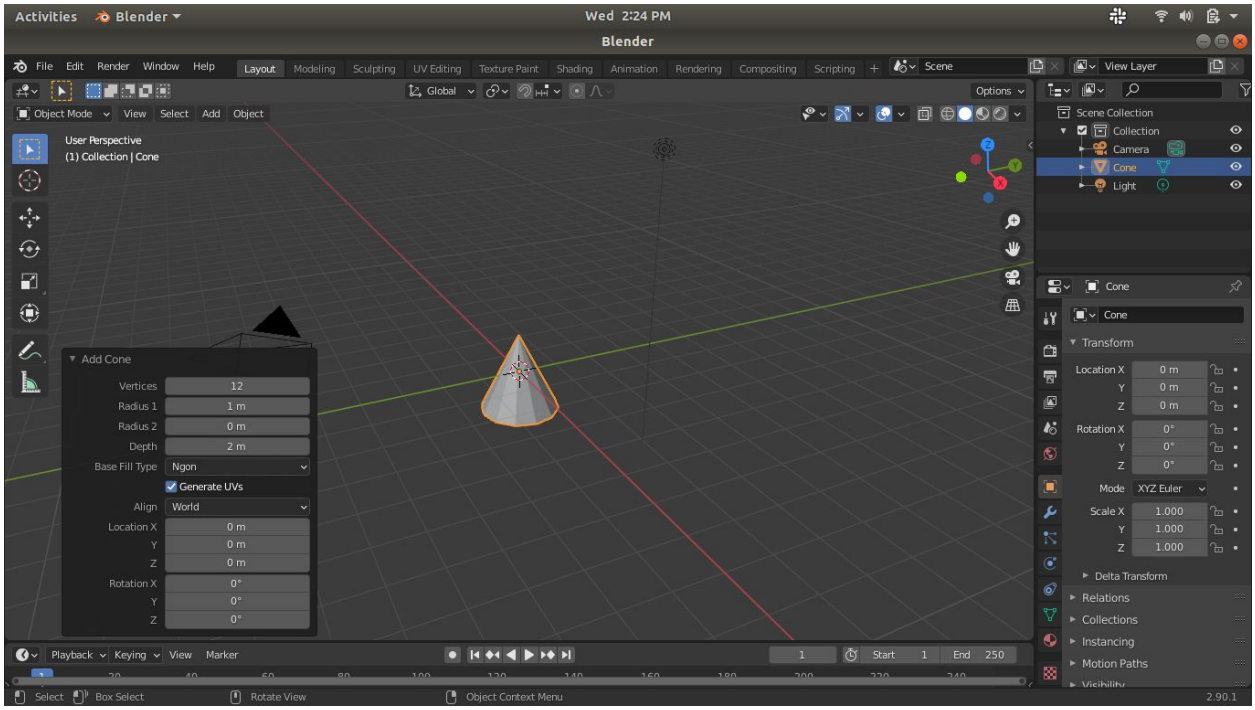
Activities
Blender
Wed 2:24 PM
Blender
File Edit Render Window Help
Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting
Scene
View Layer
Object Mode
View Select Add Object
User Perspective
(1) Collection | Cone
Add Cone
Vertices 12
Radius 1 1 m
Radius 2 0 m
Depth 2 m
Base Fill Type Ngon
Generate UVs
Align World
Location X 0 m
Y 0 m
Z 0 m
Rotation X 0°
Y 0°
Z 0°
Scene Collection
Collection
Camera
Cone
Light
Transform
Location X 0 m
Y 0 m
Z 0 m
Rotation X 0°
Y 0°
Z 0°
Mode XYZ Euler
Scale X 1.000
Y 1.000
Z 1.000
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