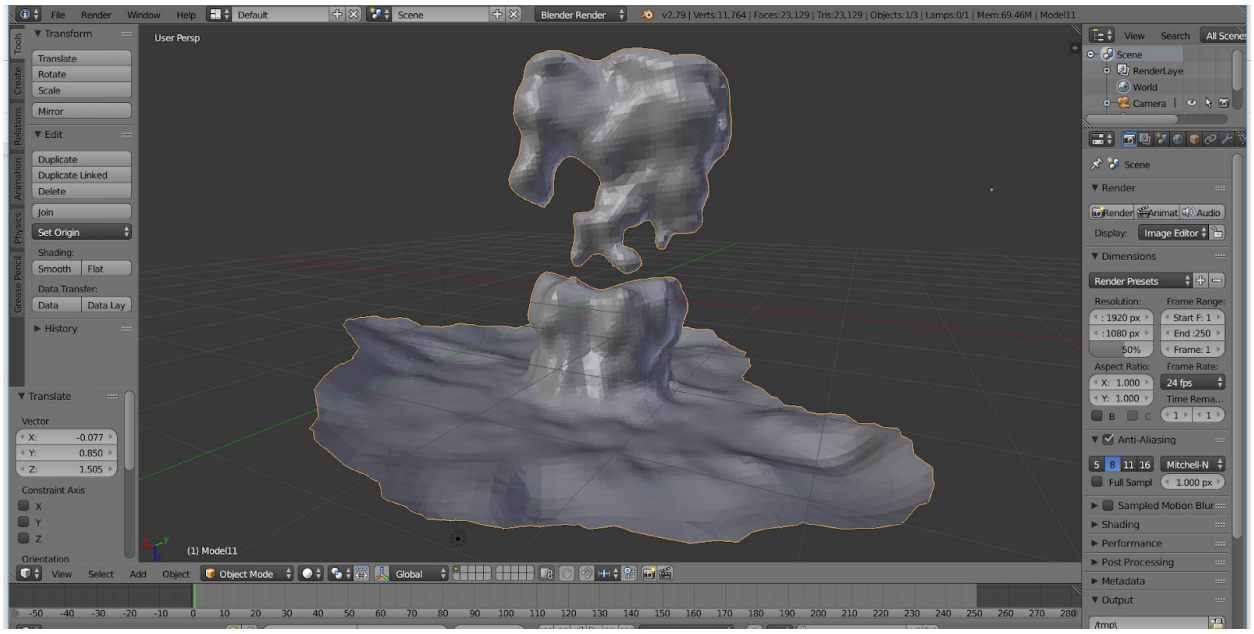
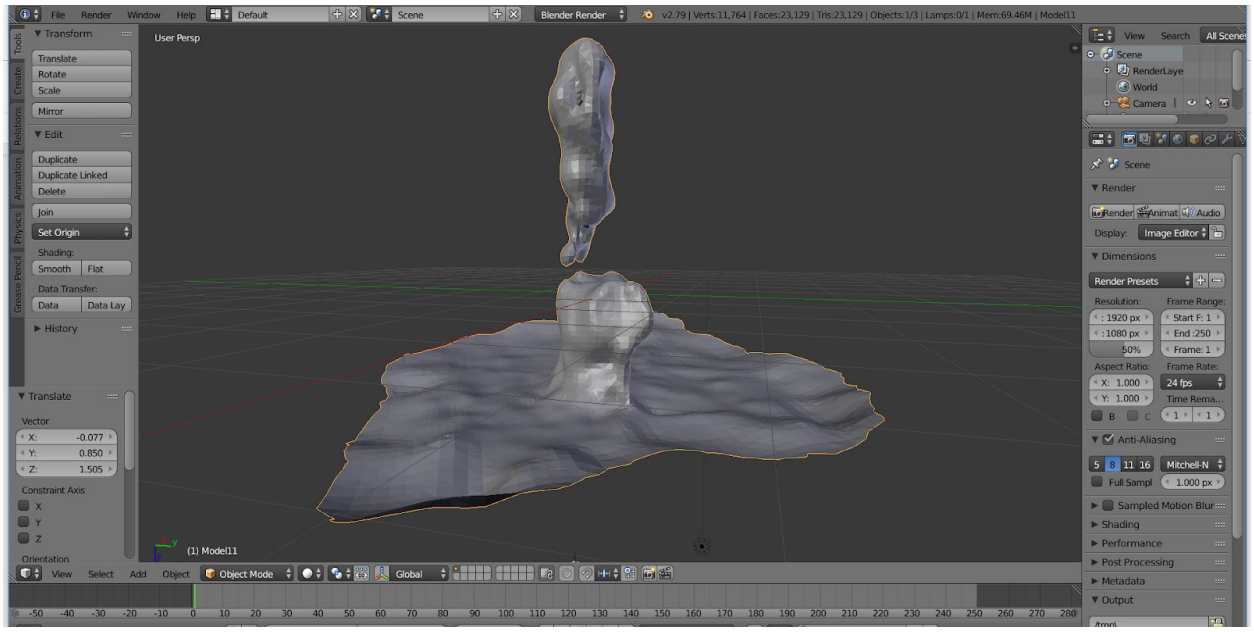
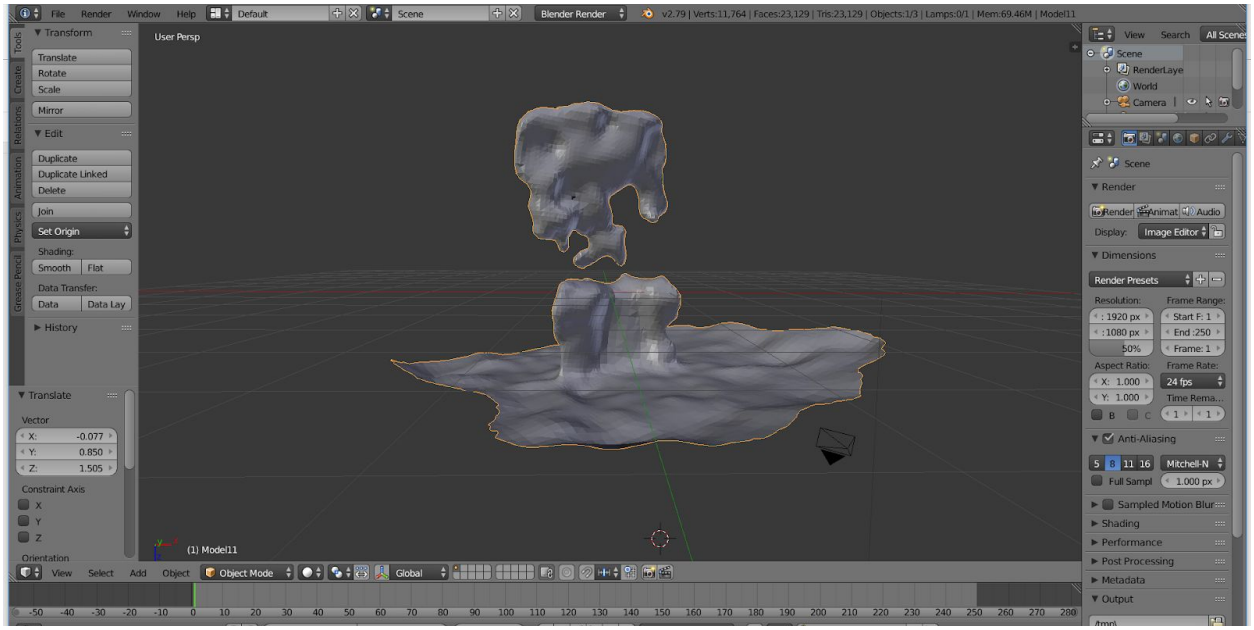
Subject Code: TGD2151
Subject Name: Computer Graphics Fundamental
Student Name: Lim Kuang Tar
Student ID: 1171300077
Contact number: 60164230329
Email address: buddy.tlimk@gmail.com

Softwares Used:

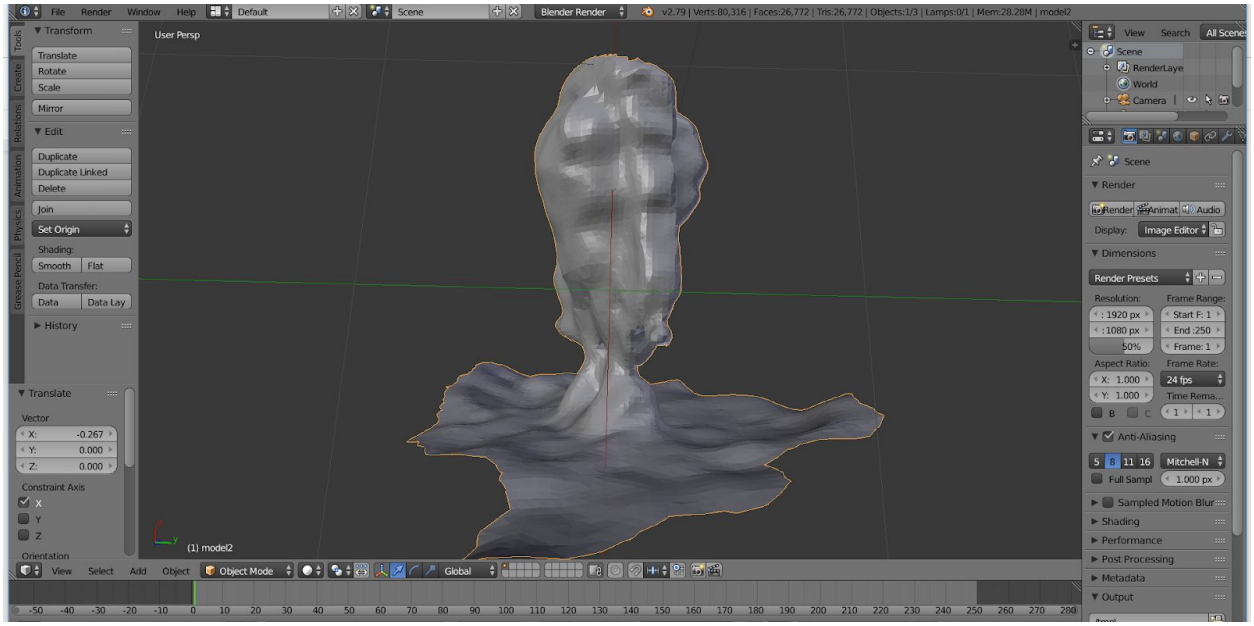
Blender:

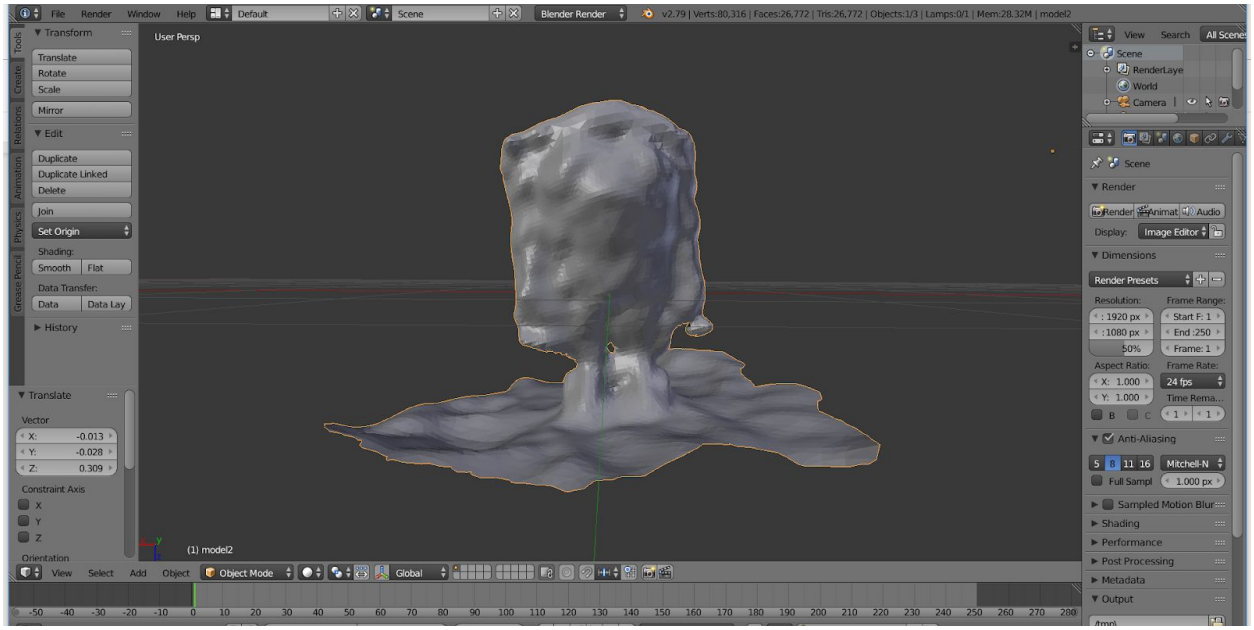


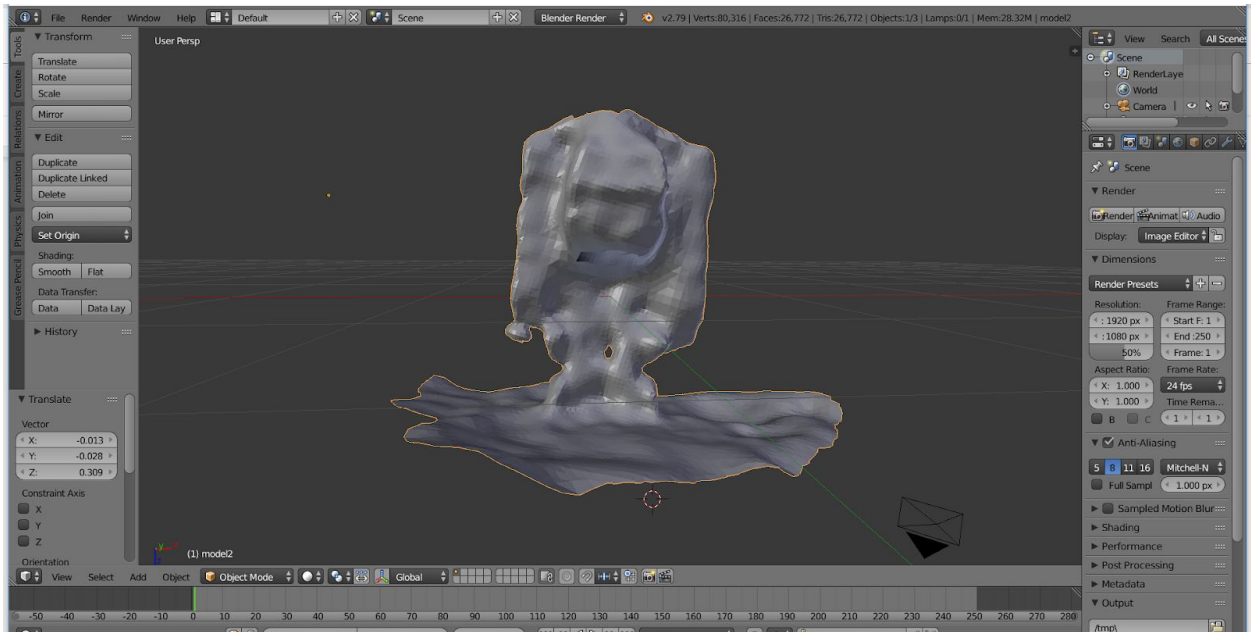



File Render Window Help Default Scene Blender Render v2.79 | Verts:11,764 | Faces:23,129 | Tris:23,129 | Objects:1/3 | Lamps:0/1 | Mem:69.46M | Model11
User Persp
(1) Model11
View Select Add Object Object Mode Global

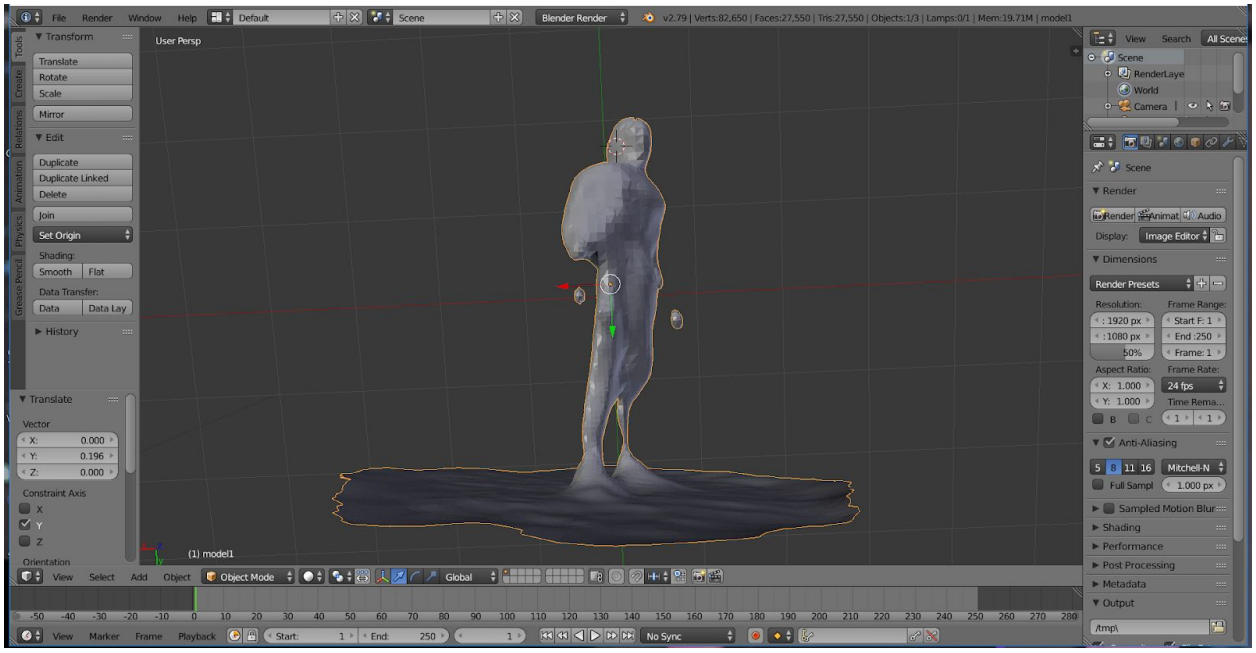
- Model 1

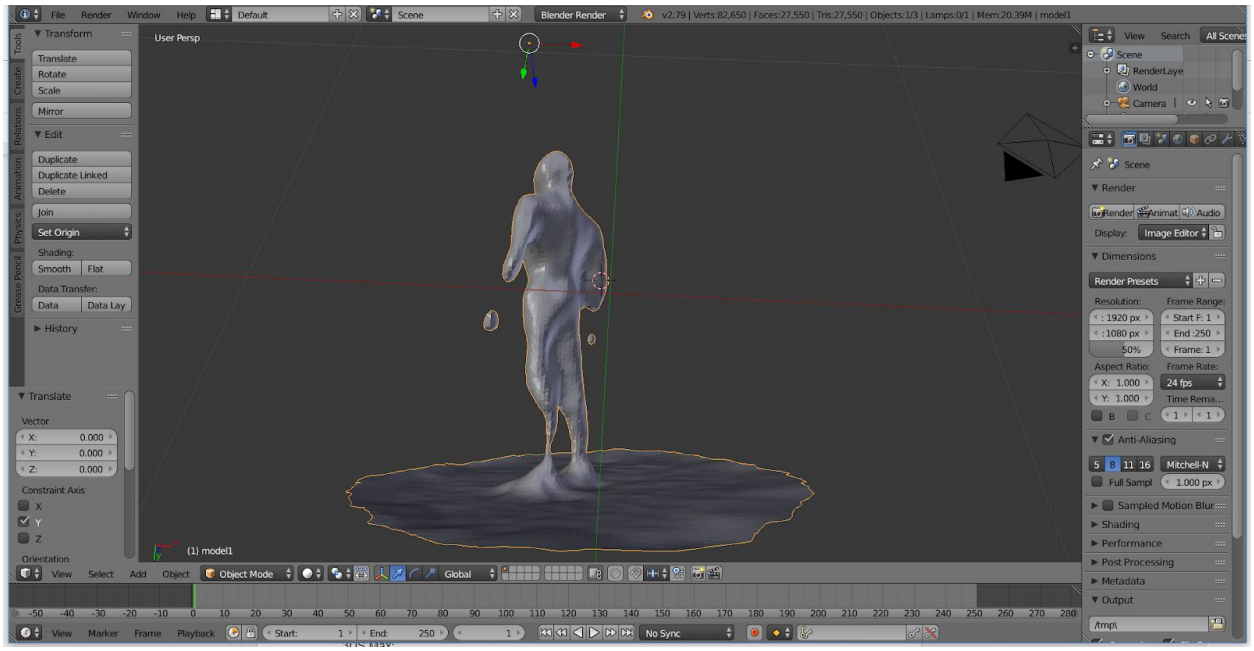

File Render Window Help Default Scene Blender Render v2.79 | Verts:80,316 | Faces:26,772 | Tris:26,772 | Objects:1/3 | Lamps:0/1 | Mem:28.28M | model2
User Persp
(1) model2
View Select Add Object Object Mode Global

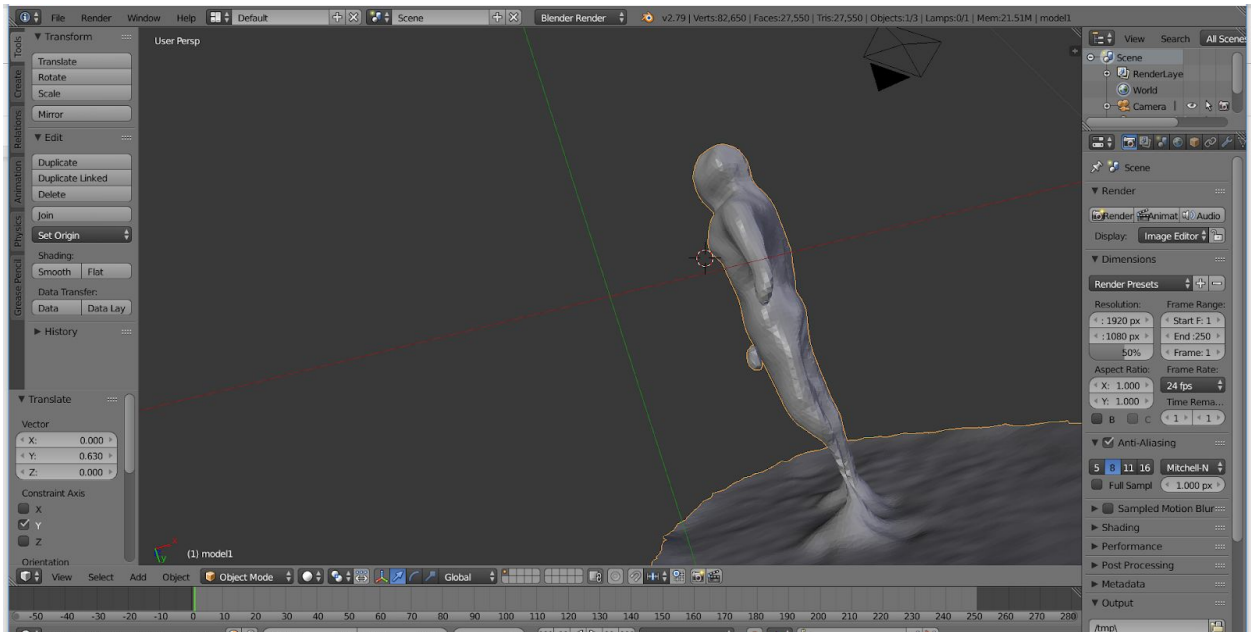

File Render Window Help Default Scene Blender Render v2.79 | Verts:80,316 | Faces:26,772 | Tris:26,772 | Objects:1/3 | Lamps:0/1 | Mem:28.32M | model2
User Persp
Transform
Translate
Rotate
Scale
Mirror
Edit
Duplicate
Duplicate Linked
Delete
Join
Set Origin
Shading:
Smooth Flat
Data Transfer:
Data Data Lay
History
Translate
Vector
X: -0.013
Y: -0.028
Z: 0.309
Constraint Axis
X
Y
Z
Orientation
(1) model2
View Select Add Object Object Mode Global
View Search All Scenes
Scene
RenderLaye
World
Camera
Render
Render Animat Audio
Display: Image Editor
Dimensions
Render Presets
Resolution: 1920 px 1080 px 50%
Frame Range: Start F: 1 End :250 Frame: 1
Aspect Ratio: X: 1.000 Y: 1.000
Frame Rate: 24 fps
Time Rema...
Anti-Aliasing
5 8 11 16 Mitchell-N
Full Sampl 1.000 px
Sampled Motion Blur
Shading
Performance
Post Processing
Metadata
Output
/tmp\


File Render Window Help Default Scene Blender Render v2.79 | Verts:80,316 | Faces:26,772 | Tris:26,772 | Objects:1/3 | Lamps:0/1 | Mem:28.32M | model2
User Persp
Transform
Translate
Rotate
Scale
Mirror
Edit
Duplicate
Duplicate Linked
Delete
Join
Set Origin
Shading:
Smooth Flat
Data Transfer:
Data Data Lay
History
Translate
Vector
X: -0.013
Y: -0.028
Z: 0.309
Constraint Axis
X
Y
Z
Orientation
(1) model2
View Select Add Object Object Mode Global
View Search All Scenes
Scene
RenderLaye
World
Camera
Render
Render Animat Audio
Display: Image Editor
Dimensions
Render Presets
Resolution: 1920 px 1080 px 50%
Frame Range: Start F: 1 End :250 Frame: 1
Aspect Ratio: X: 1.000 Y: 1.000
Frame Rate: 24 fps
Time Rema...
Anti-Aliasing
5 8 11 16 Mitchell-N
Full Sampl 1.000 px
Sampled Motion Blur
Shading
Performance
Post Processing
Metadata
Output
/tmp\

- Model 2

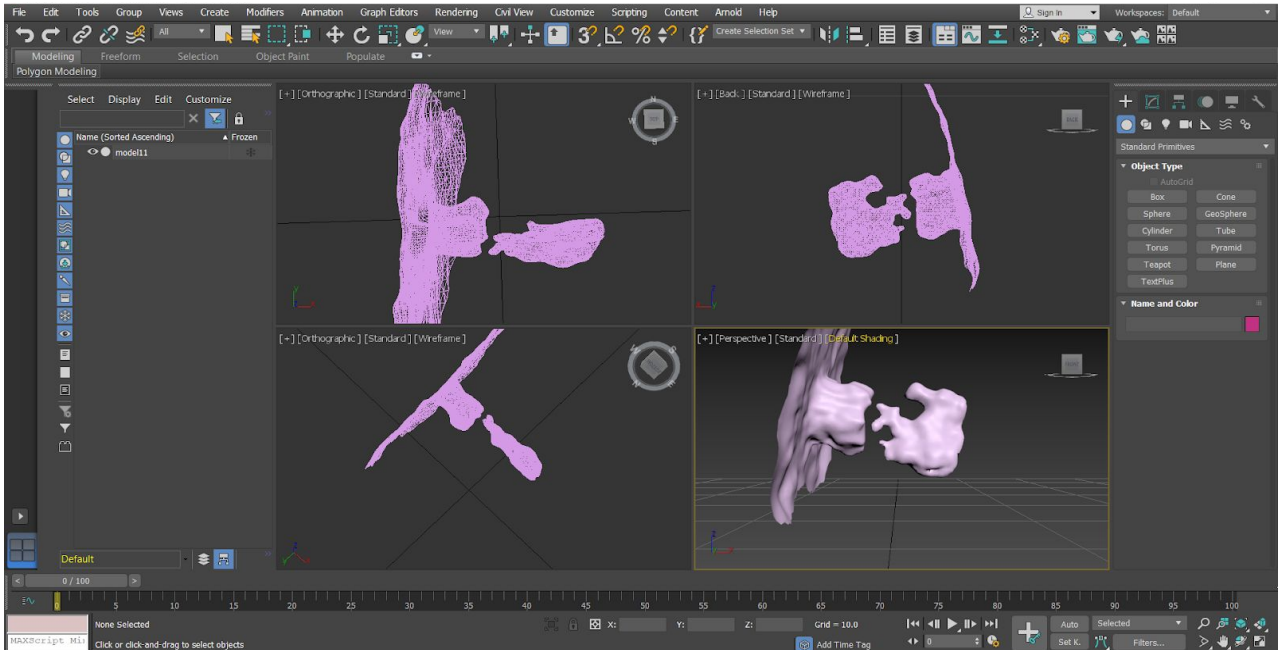

File Render Window Help Default Scene Blender Render v2.79 | Verts:82,650 | Faces:27,550 | Tris:27,550 | Objects:1/3 | Lamps:0/1 | Mem:19.71M | model1
User Persp
Transform
Translate
Rotate
Scale
Mirror
Edit
Duplicate
Duplicate Linked
Delete
Join
Set Origin
Shading:
Smooth Flat
Data Transfer:
Data Data Lay
History
Translate
Vector
X: 0.000
Y: 0.196
Z: 0.000
Constraint Axis
X
Y
Z
Orientation
(1) model1
View Select Add Object Object Mode Global
View Marker Frame Playback Start: 1 End: 250 1 No Sync
View Search All Scenes
Scene
RenderLaye
World
Camera
Render
Render Animat Audio
Display: Image Editor
Dimensions
Render Presets
Resolution: 1920 px 1080 px 50%
Frame Range: Start F: 1 End :250 Frame: 1
Aspect Ratio: X: 1.000 Y: 1.000
Frame Rate: 24 fps
Anti-Aliasing
5 8 11 16 Mitchell-N
Full Sampl 1.000 px
Sampled Motion Blur
Shading
Performance
Post Processing
Metadata
Output
/tmp\


File Render Window Help Default Scene Blender Render v2.79 | Verts:82,650 | Faces:27,550 | Tris:27,550 | Objects:1/3 | Lamps:0/1 | Mem:20.39M | model1
User Persp
Transform
Translate
Rotate
Scale
Mirror
Edit
Duplicate
Duplicate Linked
Delete
Join
Set Origin
Shading:
Smooth Flat
Data Transfer:
Data Data Lay
History
Translate
Vector
X: 0.000
Y: 0.000
Z: 0.000
Constraint Axis
X
Y
Z
Orientation
(1) model1
View Select Add Object Object Mode Global
View Marker Frame Playback Start: 1 End: 250 1 No Sync
View Search All Scenes
Scene
RenderLaye
World
Camera
Render
Render Animat Audio
Display: Image Editor
Dimensions
Render Presets
Resolution: 1920 px 1080 px 50%
Frame Range: Start F: 1 End :250 Frame: 1
Aspect Ratio: X: 1.000 Y: 1.000
Frame Rate: 24 fps
Anti-Aliasing
5 8 11 16 Mitchell-N
Full Sampl 1.000 px
Sampled Motion Blur
Shading
Performance
Post Processing
Metadata
Output
/tmp\

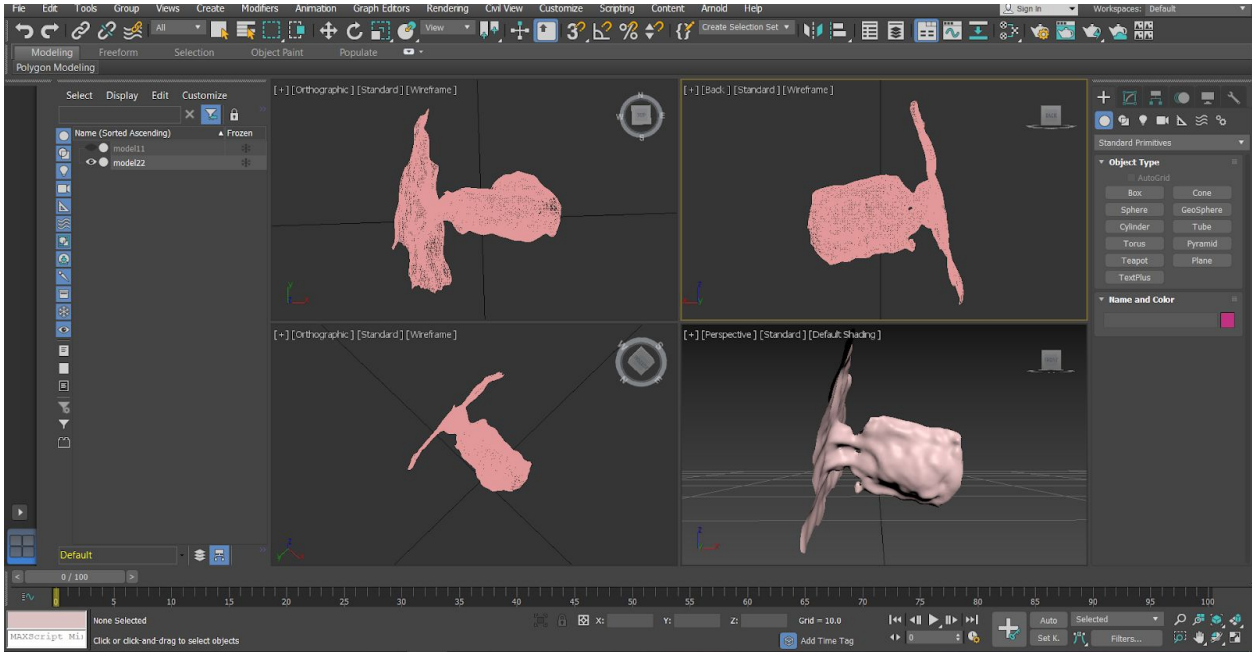

File Render Window Help Default Scene Blender Render v2.79 | Verts:82,650 | Faces:27,550 | Tris:27,550 | Objects:1/3 | Lamps:0/1 | Mem:21.51M | model1
User Persp
(1) model1
View Select Add Object Object Mode Global
View Search All Scenes
Scene
RenderLaye
World
Camera
Render
Render Animat Audio
Display: Image Editor
Dimensions
Render Presets
Resolution:
: 1920 px
:1080 px
50%
Frame Range:
Start F: 1
End :250
Frame: 1
Aspect Ratio:
X: 1.000
Y: 1.000
Frame Rate:
24 fps
Time Rema...
Anti-Aliasing
Mitchell-N
Full Sampl
1.000 px
Sampled Motion Blur
Shading
Performance
Post Processing
Metadata
Output
/tmp\
Transform
Translate
Rotate
Scale
Mirror
Edit
Duplicate
Duplicate Linked
Delete
Join
Set Origin
Shading:
Smooth Flat
Data Transfer:
Data Data Lay
History
Translate
Vector
X: 0.000
Y: 0.630
Z: 0.000
Constraint Axis
X
Y
Z
Orientation

- Model 3

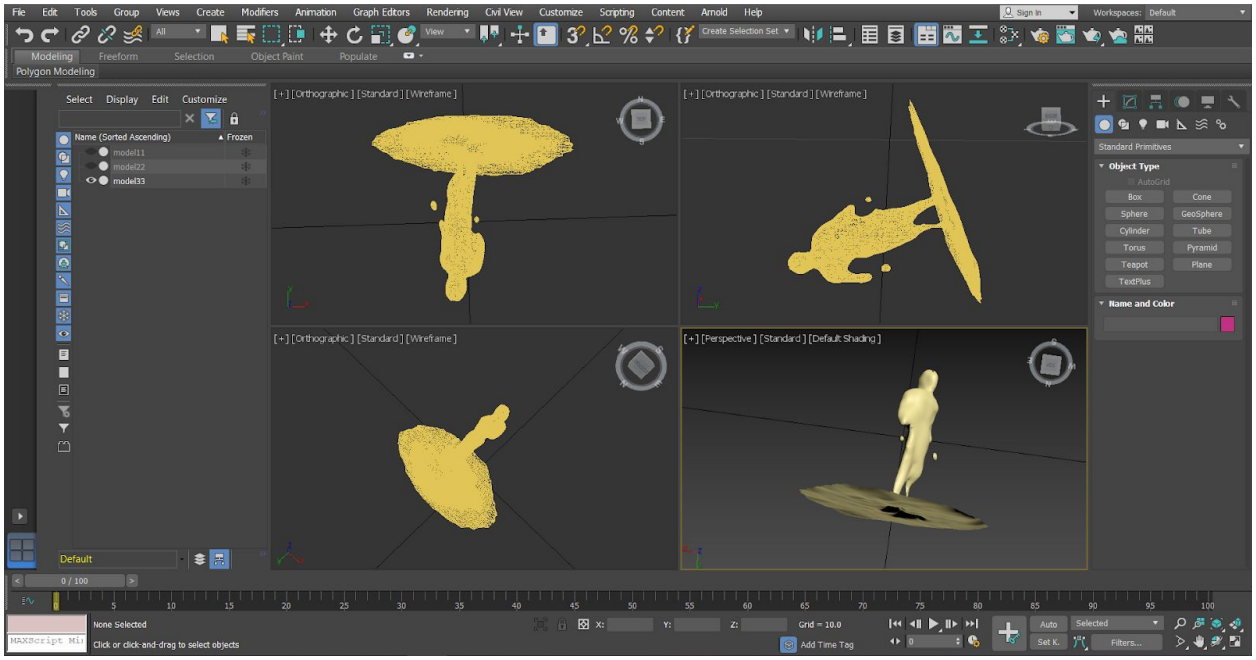
3DS Max:



- Model 1



- Model 2



- Model 3

Model 1

ply
format binary_little_endian 1.0
comment VTK generated PLY File
obj_info vtkPolyData points and polygons: vtk4.0
element vertex 69387
property float x
property float y
property float z
property float nx
property float ny
property float nz
element face 23129
property list uchar int vertex_indices
end_header

Model 2

```
ply
format binary_little_endian 1.0
comment VTK generated PLY File
obj_info vtkPolyData points and polygons: vtk4.0
element vertex 80316
property float x
property float y
property float z
property float nx
property float ny
property float nz
element face 26772
property list uchar int vertex_indices
end_header
```

Model 3

```
ply
format binary_little_endian 1.0
comment VTK generated PLY File
obj_info vtkPolyData points and polygons: vtk4.0
element vertex 82650
property float x
property float y
property float z
property float nx
property float ny
property float nz
element face 27550
property list uchar int vertex_indices
end_header
```

The method I used to create toy models into computer models is by using SCANN3D from Google Play Store and then using my phone's camera to take pictures of the toys (approx. 30 pictures each) and exported the model file into each respective softwares.

The problem I have encountered during the process of making the model is that the models are not very accurate. Certain limbs would disappear or models will look out of shape as opposed to the physical model. It is to be believed that this is due to the algorithm that SCANN3D uses to interpolate the model may not be accurate, however it is to be noted also that I was using the free trial version of SCANN3D as the software operated on a subscription basis and as such, may have affected the end result of the model as the high quality model required subscription. Another factor would be the lighting conditions where I took pictures of the model, presumably due to the fact that there were many sources on light that were shining on the model and also light being reflected from the window which my phone's camera had trouble focusing and adjusting its exposure values to compensate. Another problem that I encountered is that the data exported from SCANN3D's file couldn't be extrapolated in the way the report required and therefore the report only had half the data.