GRAPHICS AND ANIMATION TOOLS

FINAL REPORT

ON

HIGHWAY IN NIGHT

UNIVERSITY OF PETROLEUM & ENERGY STUDIES

SCHOOL OF COMPUTER SCIENCE

Open Source and Open Standards

Department of Cybernetics

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Project Title

Highway in night.

Components of the project

1. Road

Step.1. Add a plane and scale it up. Scale it further along x-axis.

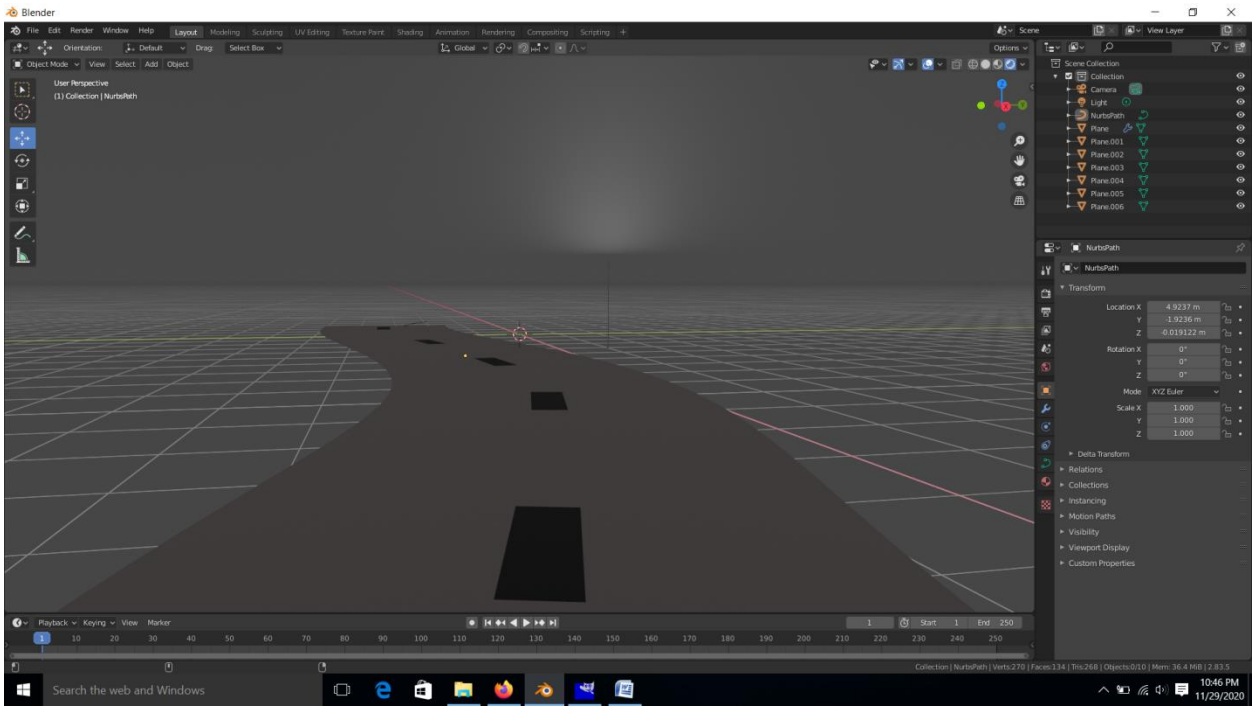
Step.2. Go to top view and in object mode, press Shift+A and select Path under Curve.

Step.3. Go to edit mode, scale up the path and tweak some of its vertices to give it the shape of a road.

Step.4. Select the plane and add an Array modifier. Then add a Curve modifier and then under Object, select the path.

Step.5. Add some loop cuts and color them with black color to make road marks in the middle of the road.

The road has been designed. Now, we need to design the street lights to be placed on both sides of the road.



2. Street light

Step.1. Select the default cube and go to edit mode. Duplicate the cube and move it upwards.

Step.2. Select the edge rings of the base cube and bevel it.

Step.3. Select the bottom face of base cube and scale it up.

Step.4. Select the upper cube scale it down and place it over the lower cube.

Step.5. Select the edge rings of the upper cube bevel it and increase the segments to make the circular edges.

Step.6. Select the top face of upper cube, extrude it upwards and scale it down. This will work as the lamp stand.

Step.7. Duplicate the extruded part, rotate it, move it upwards and scale it down to make a design of a street lamp.

Step.8. Make a loop cut on the rotated part, slide it downwards and bevel it in 2 segments.

Step.9. Select the bottom face of 1 segment and extrude it outwards. Extrude it again and scale it down. Extrude it again and rotate it to touch the lamp stand. This works as the lamp joint.

Step.10. Repeat step-9 with the other segment.

Step.11. Select the top face of the rotated part and scale it down.

Step.12. Rotate it and extrude it a little. Select the end portion and add a cube. This will work as the lamp.

Step.13. Move the cube along x-axis, bevel it and delete the bottom vertices of the cube.

Step.14. Add a loop cut on the lamp stand and bevel it in 2 segments near the lamp joint. Inset it and hold control while setting to create a bulge.

Step.15. Repeat step.14 on bottom of the lamp stand as well.

Step.16. Select the bottom face of the lamp cube, go to render mode and turn on bloom.

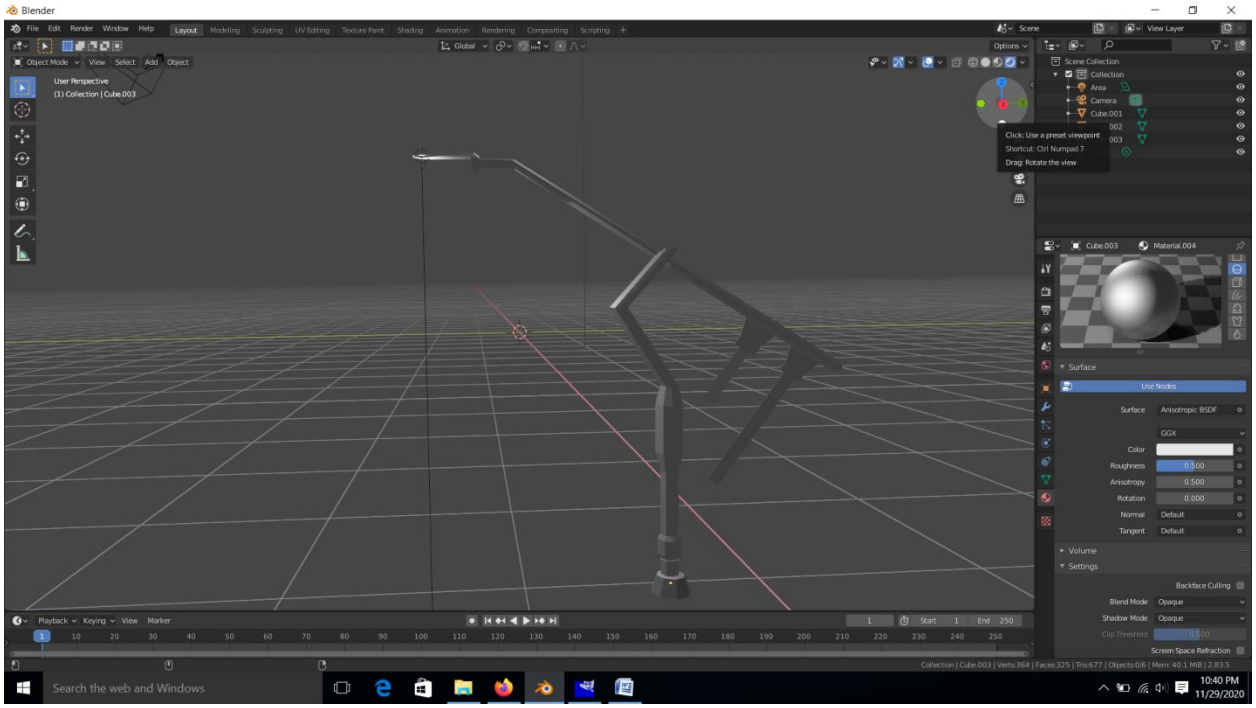
Step.17. Add an area light to this face of the lamp cube.

Step.18. Increase the power of light as per the choice and reduce the distance.

Step.19. Select the street lamp and set object to parent.

Step.20. Add metallic texture to the complete street light and modify other properties as per the choice.

The street light has been designed. Duplicate the street lights and place them on both sides of the road. Now, we need to design a car and place it over the road.



3. Car

Step.1. Select the default cube and scale it twice along x-axis. Now, select the bottom face and move it inwards.

Step.2. Subdivide the cube in three parts using loop cuts and extrude the middle face upwards and scale it down.

Step.3. Add a cylinder with 10 faces and place it normal to the side view of the cube. Duplicate the cylinder and place it at all 4 wheel positions. Delete the intersecting parts to make the space for the wheels.

Step.4. Extrude the front face of the cube, scale and move it down. Now, move it along x-axis to create the bumper of the car.

Step.5. Duplicate the bumper, move it upwards and scale it down to make the number plate.

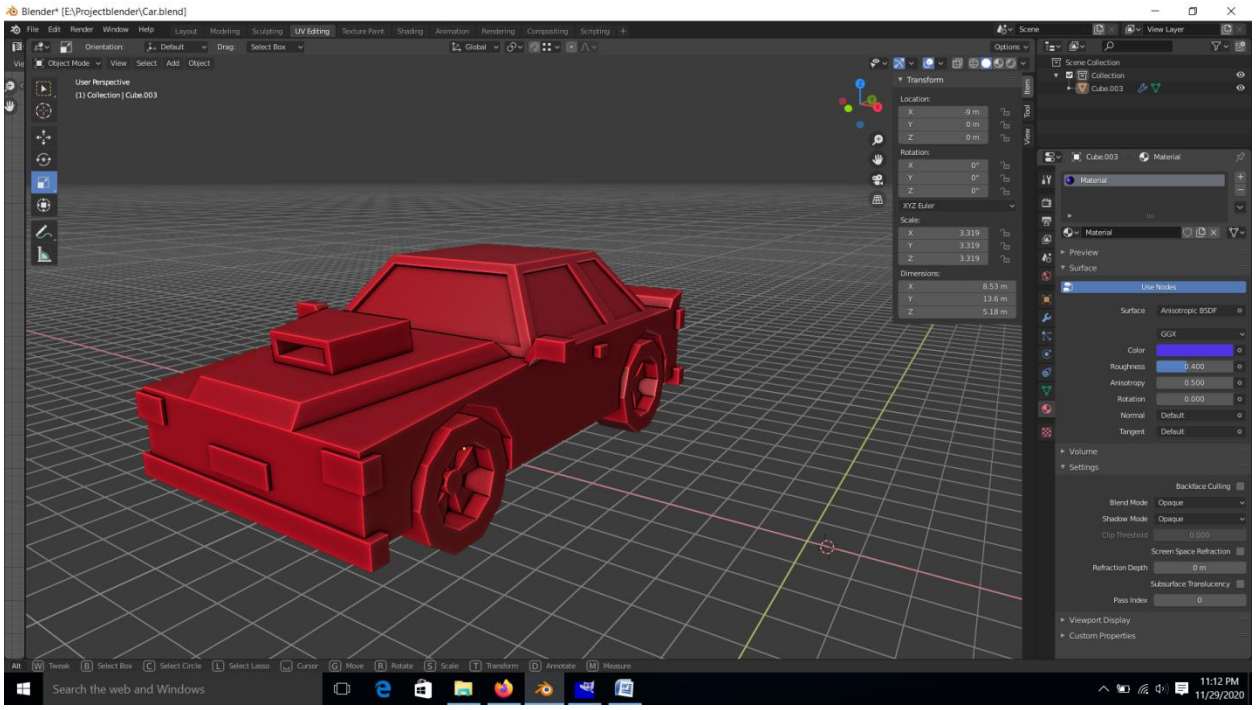
Step.6. Duplicate the number plate twice, move them upwards, scale them down and place it at either side to make headlights.

Step.7. Similarly, create the side mirrors and the car handle.

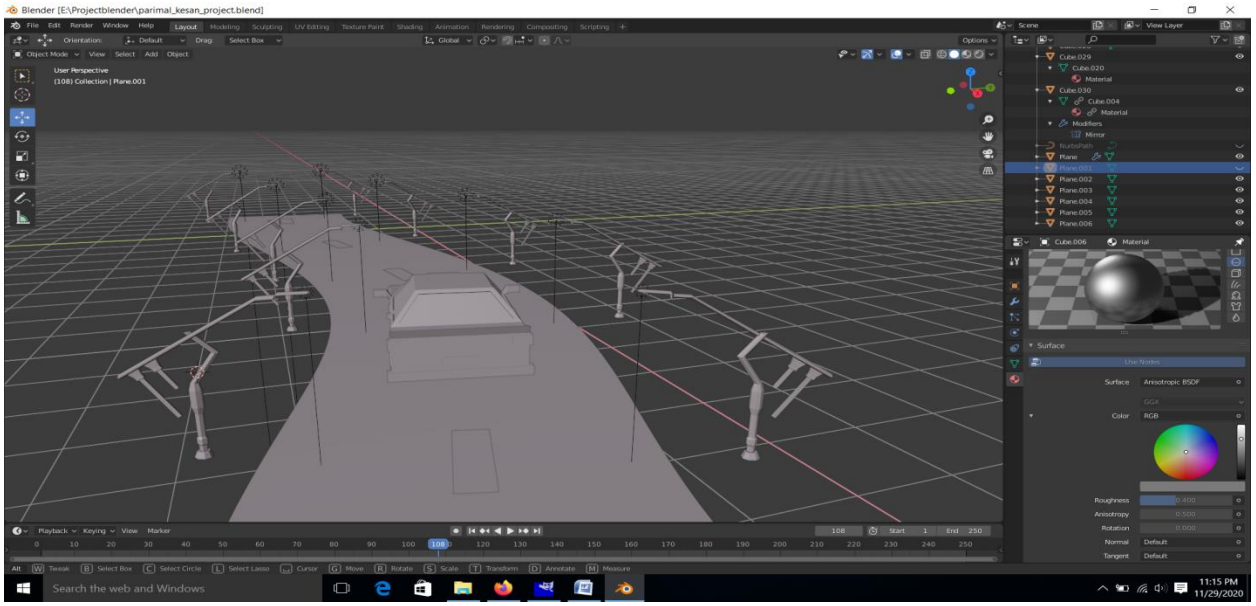
Step.8. Add a cylinder with 10 faces and place it normally to the side view of the cube. Duplicate the cylinder and place it at all 4 wheel positions. This works as the wheels for the car. Change the color of the wheels to black.

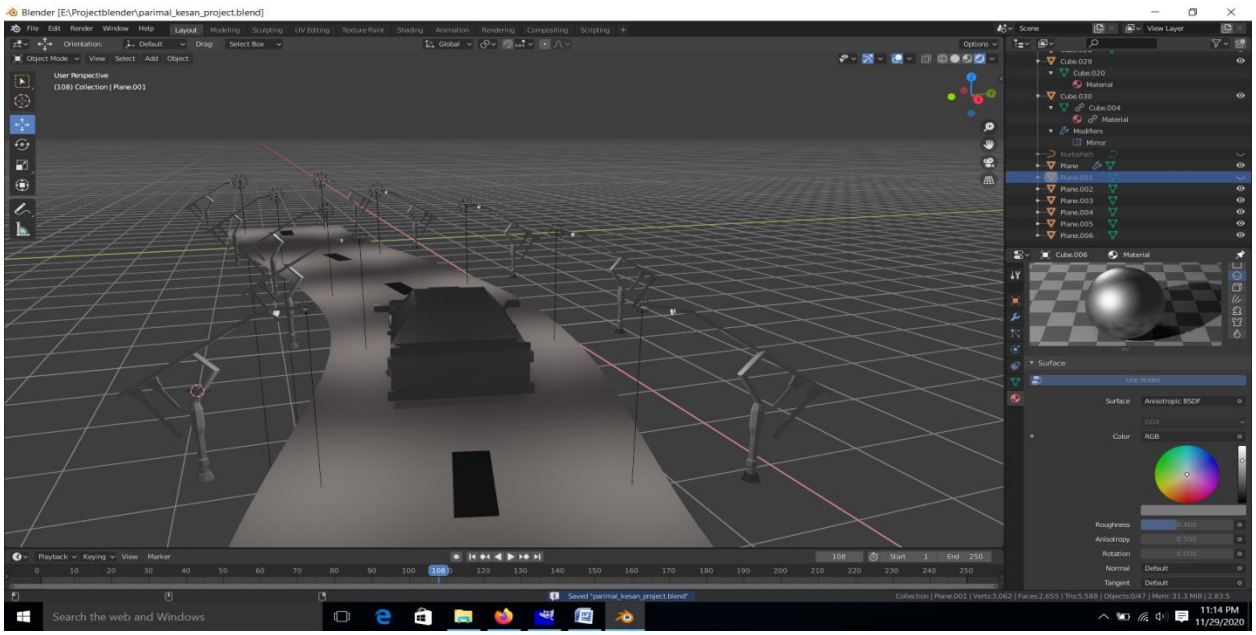
Step.9. Extrude the bonnet faces of the car and scale it down to create a bulging design.

The car has been designed. Place it on the road to complete the design.



Output Screens





Project Files

This is a folder with two blender files. The blend file for car has been appended into final project file.