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**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**

**SCHOOL OF COMPUTER SCIENCE**

***Department of Cybernetics***

**GRAPHICS AND ANIMATIONS TOOLS**

LAB FILE

SESSION(2020-21)

Course: BTech with specialization in Open Source & Open Standards

Submitted to: Submitted by:

Dr. Durgansh Sharma Mridul Thapa

Associate Professor SAP: 500060077

Department of Cybernetics Roll no: R100217*039*

**Experiment-10**

Design of 3D Building using Blender

**Step 1:** Open Blender, Create a blank file

**Step 3:** Add a plane and scale it to an average area of a building, using Shift+A>S.

**Step 4:** Switch to edit mode using TAB.

**Step 5:** Add some loop cuts using CTRL+R, to create a division of rooms inside the hut. Loop cuts are needed to be added with respect to X and Y axis.

**Step 6:** Now delete any one face on any level to bring the plane in L shape and extrude (E) it with respect to the z-axis such that it is equal to the six floors.

**Step 7:** To make a dome on the roof, extrude from corner from one of the end of the building block. Add a similar plane in between both floors to differentiate between them.

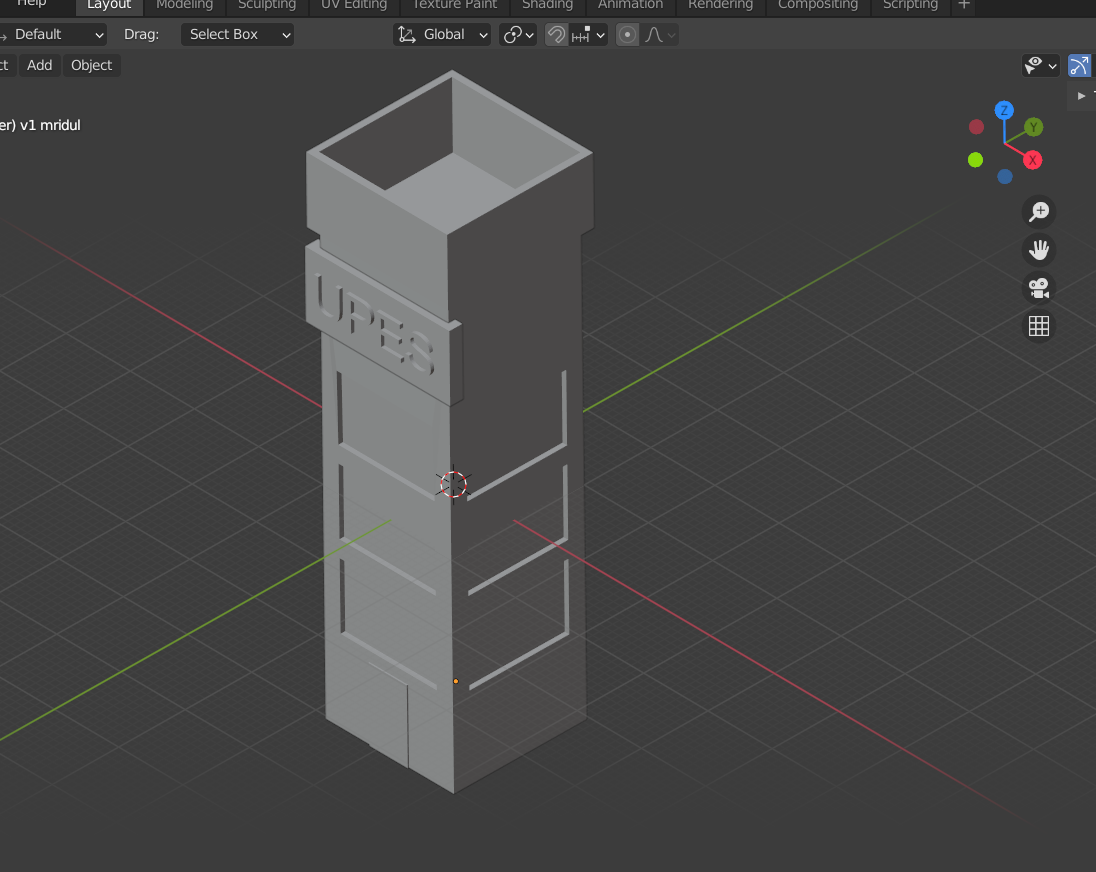
**Step 8:** Now add some pillars to the building by adding a plane first and then by scaling it with respect to z-axis. Now add the same pillar to every corner by just duplicating it. (shift+D)

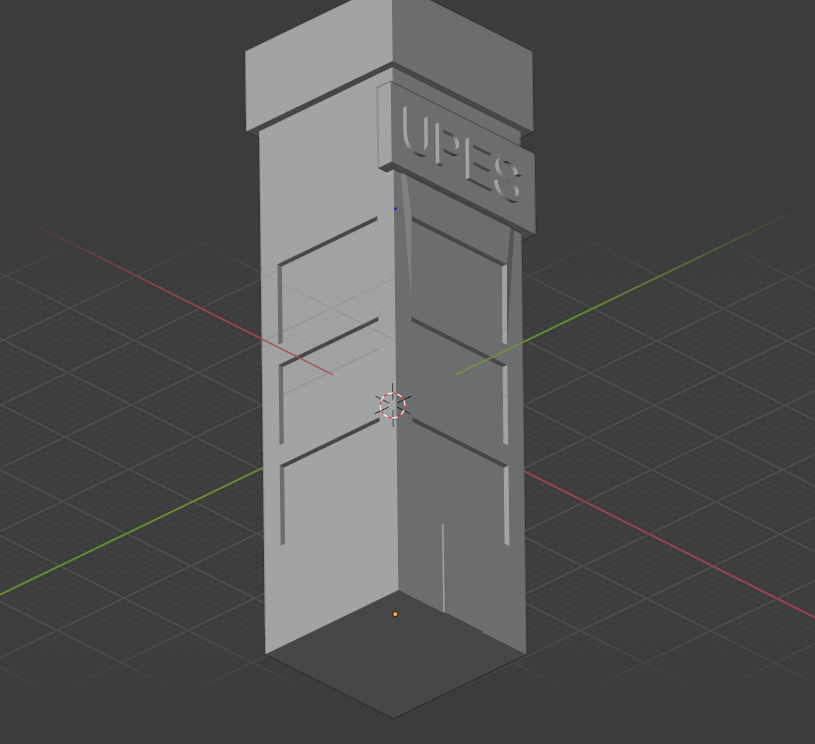
**Step 9:** To create the windows, add a frame apart from the frame for the building. Extrude the window according to how much you depth want. Now duplicate it using (shift+D). Now add an array modifier (x-axis) and increase the number according to the length of the roof. Add a second array modifier (y-axis) and increase the number according to the breadth of roof.

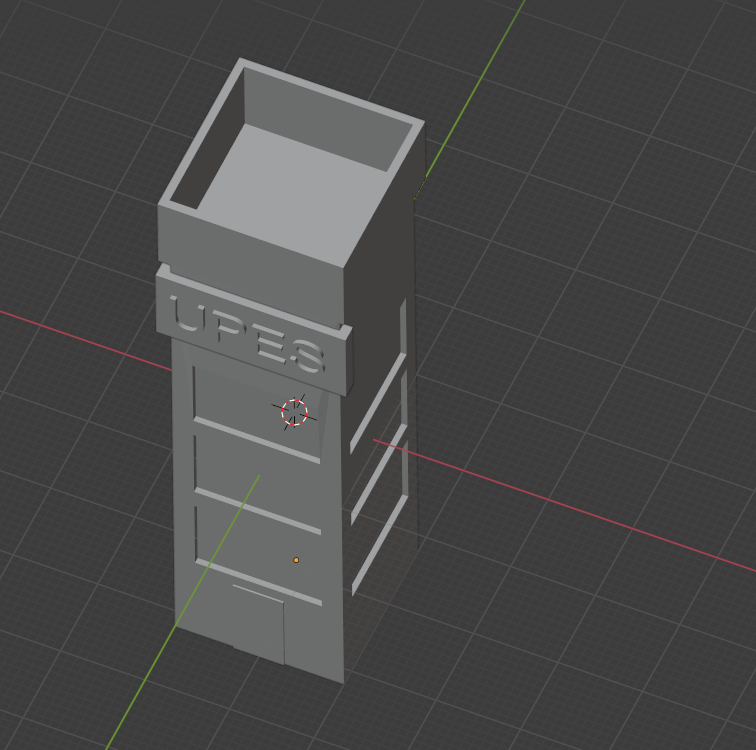
**Step 10:** Add the stairs to building by using add-on and then use any of the textures to provide a brick layout for the building.

**Step 11:** Now add a camera and a light source to it. And arrange the camera to the best fit view.

**OUTPUT SCREEN:**

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[**Link to Experiment**](https://drive.google.com/drive/folders/1flTmZIImByf3y0i2nJoYBXPXMLePEHfe?usp=sharing)