EL – 225 Engineering Drawing

Semester Project

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Roll Number: 19B-008-EE Section: A

Maximum Marks	Designing of 3D model = 10	Project Presentation = 10	Project Report Evaluation= 10	Total = 30
Marks Obtained				
Remarks (if any)				

Experiment evaluated by

Instructor Name: Engr. Shaheer Ahmed

Signature:

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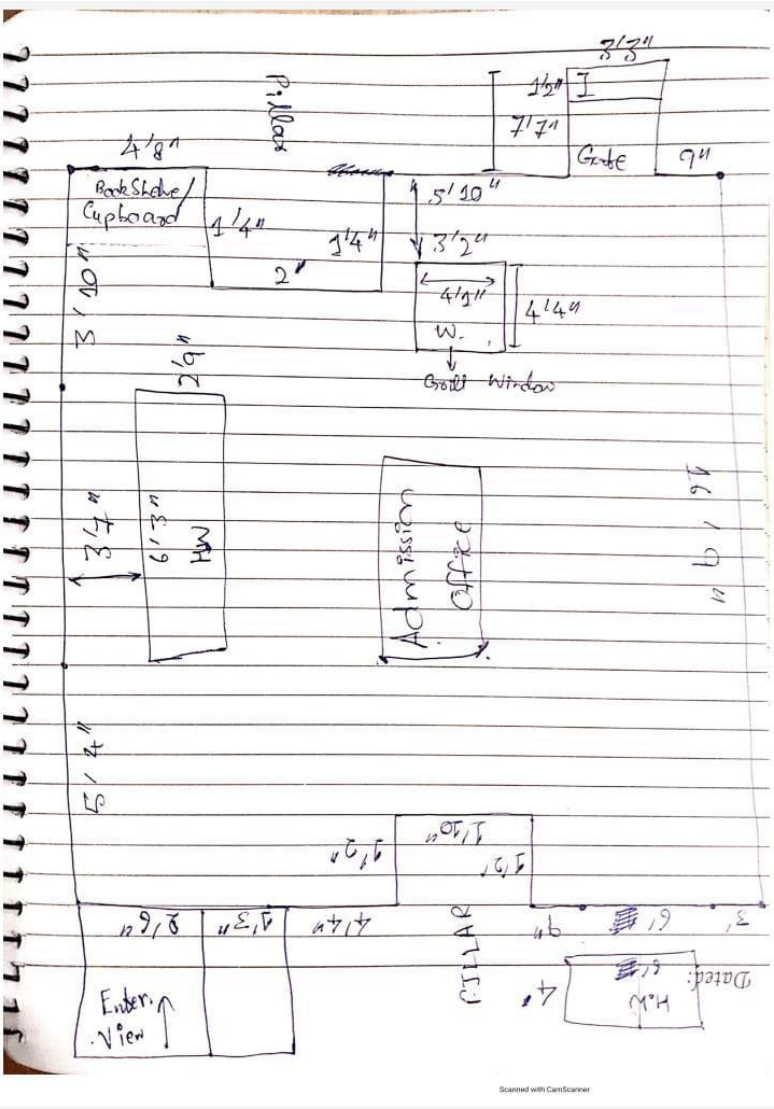
I. Project Description:

The project is the interior of the admission office of the Adamjee model school (previously known as J.M.A school). The interior is designed in 2D and then converted into 3D using various commands of AutoCAD. The objective is to convert the hand drawn 2D sketch of the admission office into a 3D interior of the admission office. In this project various commands are explored while creating a 2D version and then converting it into 3D.

II. Realistic Image:



III. AutoCAD commands

Following table 1, represents the all commands which were used to create 3D model

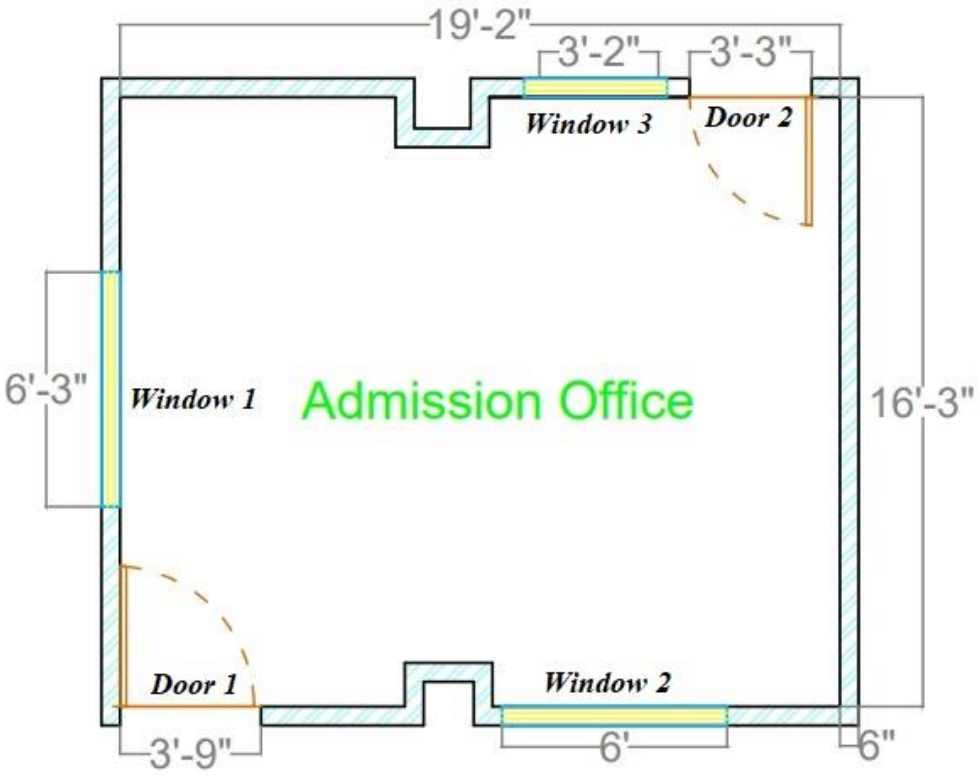
S.no	Commands	Purpose
1	Presspull	Presses or pulls bounded areas
2	Extrude	Creates a 3D solid by extruding a 2D or 3D curve.
3	Move	Moves objects a specified distance in a specified direction.
4	Subtract	Combines selected 3D solids or 2D regions by subtraction.
5	Offset	Creates concentric circles, parallel lines and parallel curves.
6	Rotate	Rotates object around a base point.
7	Trim	Trims object of meet the edges of other objects.
8	Dimension	Creates multiple types of dimensions within a single command.
9	Union	Combines selected 3D or 2D regions by addition
10	Fillet	Rounds and fillets the edges of the objects.
11	Line	Creates a straight line segment.
12	Box	Creates a 3D solid box
13	UCS	Reorientation of the Grid.

Following table 2, represents the commands which were used and explored to create 3D model.

S.no	Commands
1	Camera
2	Stretch
3	3D Rotate

IV. Dimensions

2D Dimension:



	Width	Height	Length
Room Dimension	16'3"	11'6"	19'2"

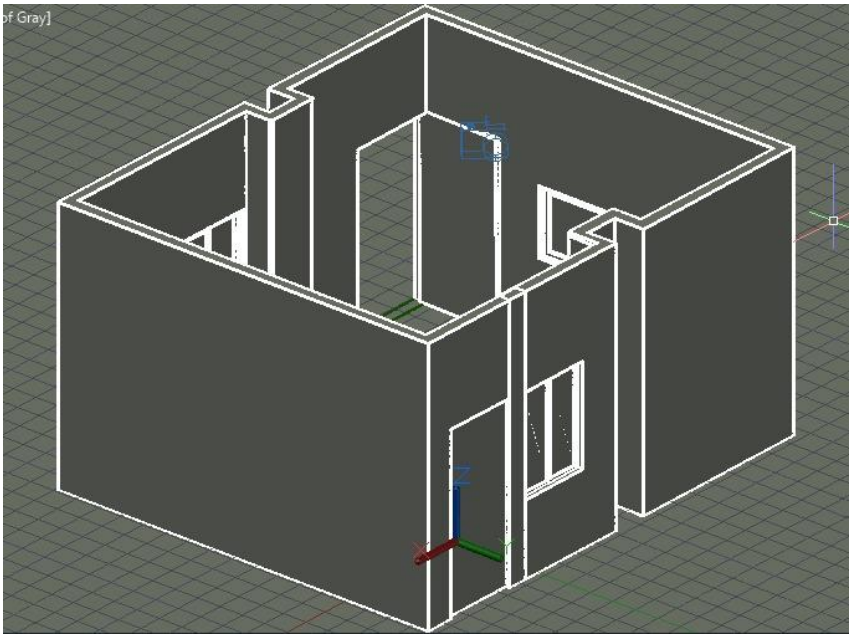
Wall Thickness	6"

	Width	Height
Door 1	3'9"	7'7"
Door 2	3'3"	7'7"
Window 1	6'3"	2'9"
Window 2	6'	4'
Window 3	3'2"	4'4"

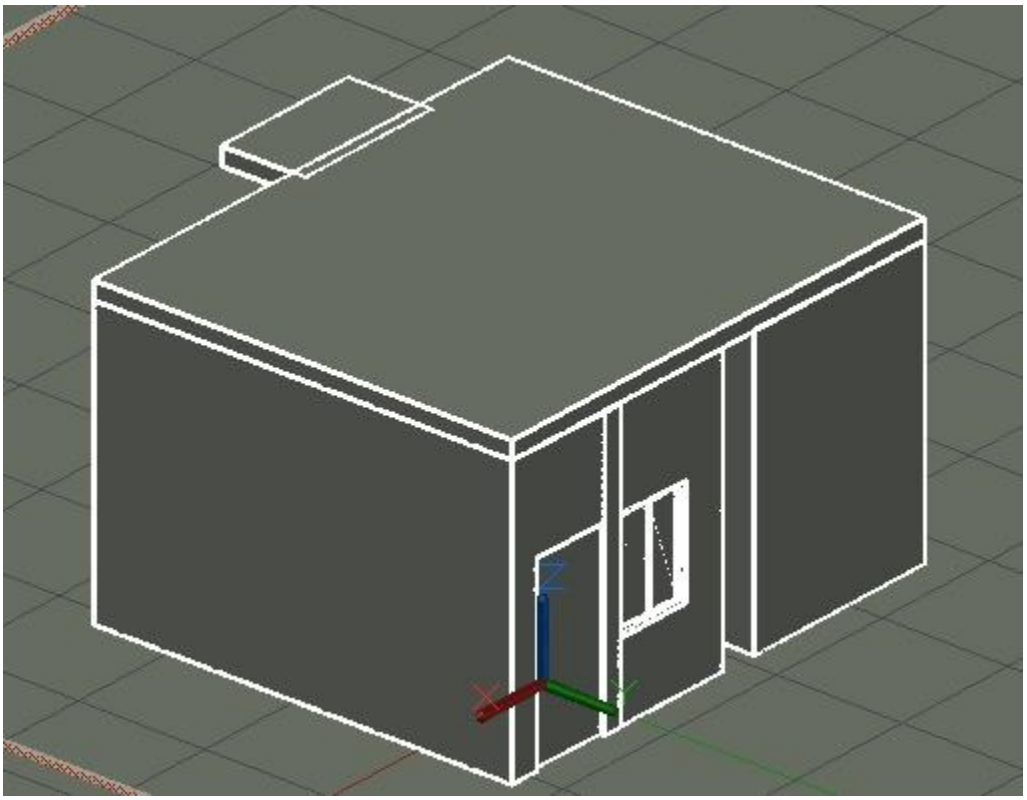
V. Steps:

Step 1: Creating 2D using commands: line, trim, dimension, hatch and offset.

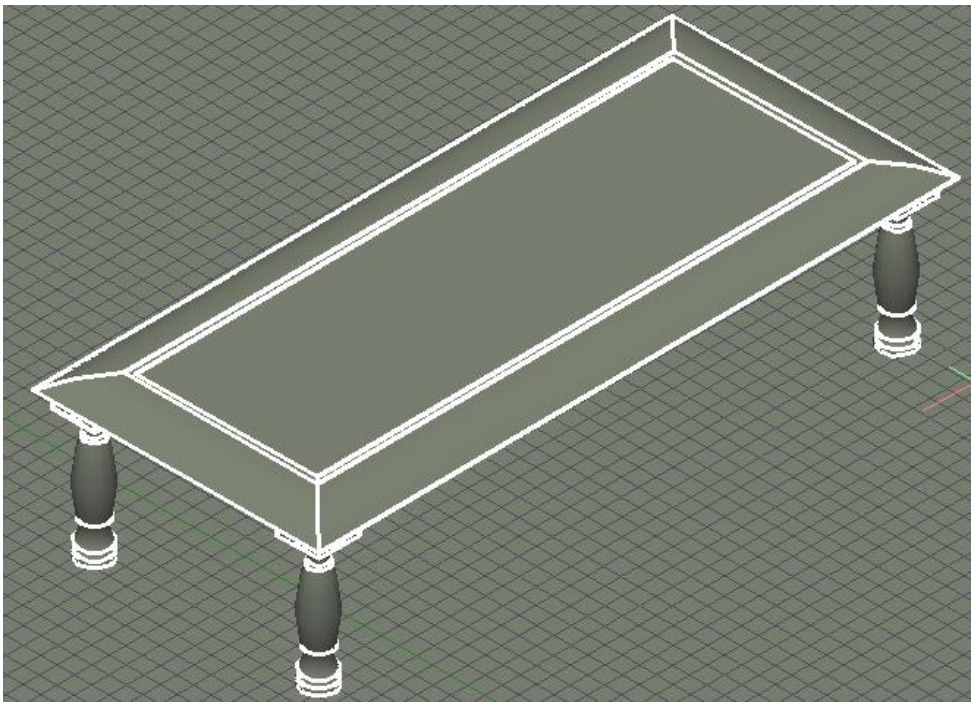
Step 2: Creating 3D (Building Walls, Pillars, Doors and Windows) using commands: pullup and move.



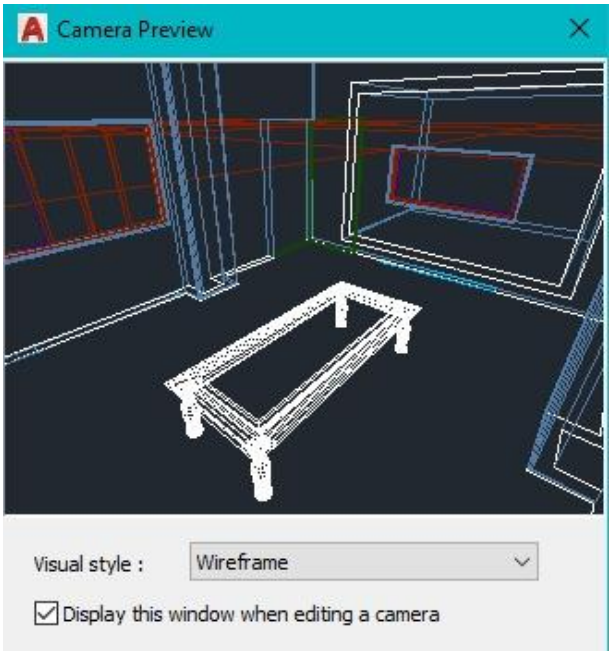
Step 3: Creating 3D (Building Roof) using commands: box and move.

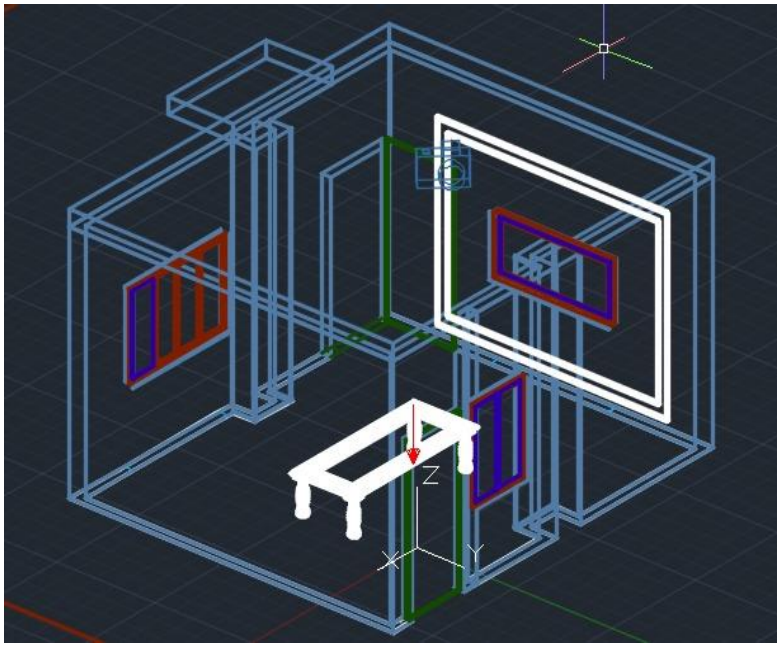


Step 4: Creating 3D (Building Center Table) using commands: revolve, presspull, filletedge and union.

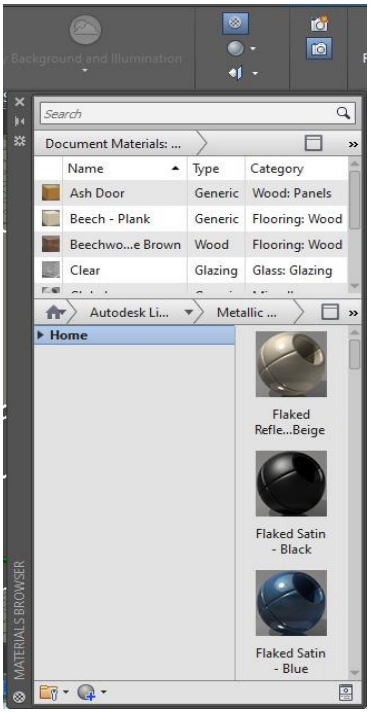


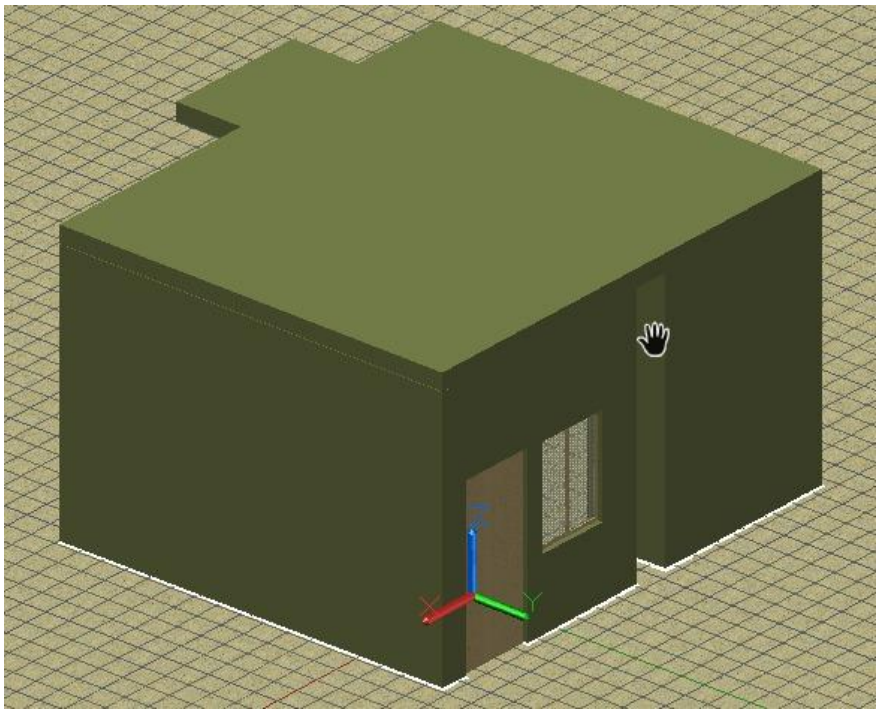
Step 5: Creating 3D (Fitting Camera) using commands: camera.





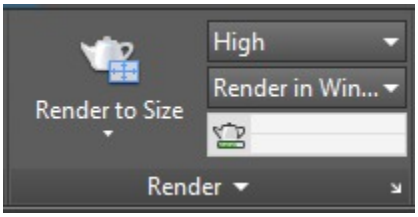
Step 6: Creating 3D (Adding material in the structure) using commands: rmat.

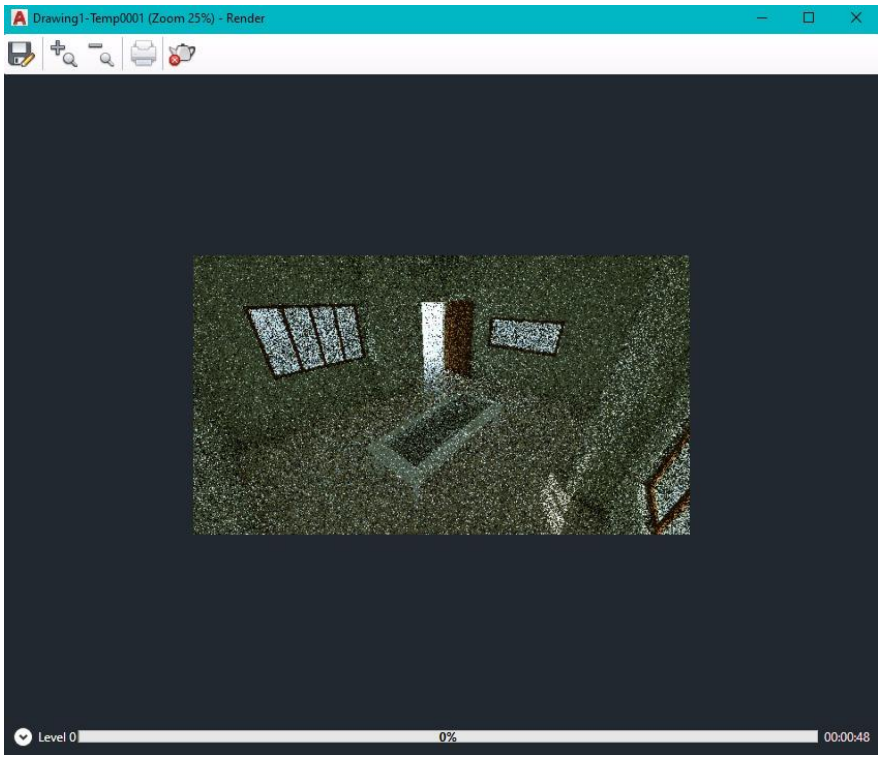




Interior Material

Step 7: Creating 3D (Rendering Process) using GUI to select render option.

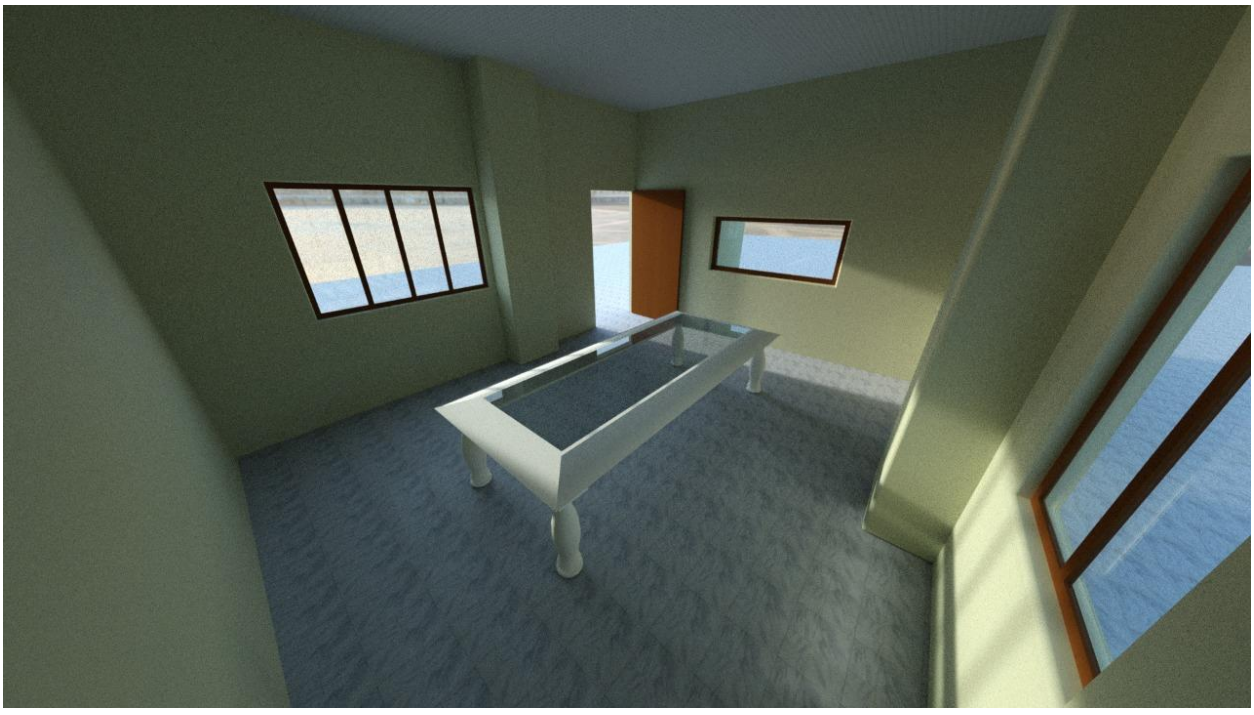




VI. Final image

Without Render AutoCAD:

With Render AutoCAD:



VII. Four different view of 3D model

Camera 1 Camera 2

Camera 3 Camera 4