

Session 03

Youth Create: Creating 3D Worlds (03)

Lailei Huang, Technology Programs Officer

Lailei.Huang@canadabay.nsw.gov.au

The Learning Space



Agenda

Review - House Project & Blender Skills

- Adjust the Wall Shape
- Add Roof Panels
- Use Archimesh addon

Project - New Topics

- 3D Model an Ikea Table
- Add a Material, add Lights inside the room

An Example Output



Part 1

3D Modelling with Blender

Hard surface modelling - 3D Object / Mesh Editing

3D Model an Ikea Table



LACK

\$25

Side table, black-brown, [55x55 cm](#)

★★★★★ (221)

Choose colour

Black-brown



How to get it

 [Check delivery availability](#)

 [Check Click & Collect options](#)

 [Check in-store stock](#)

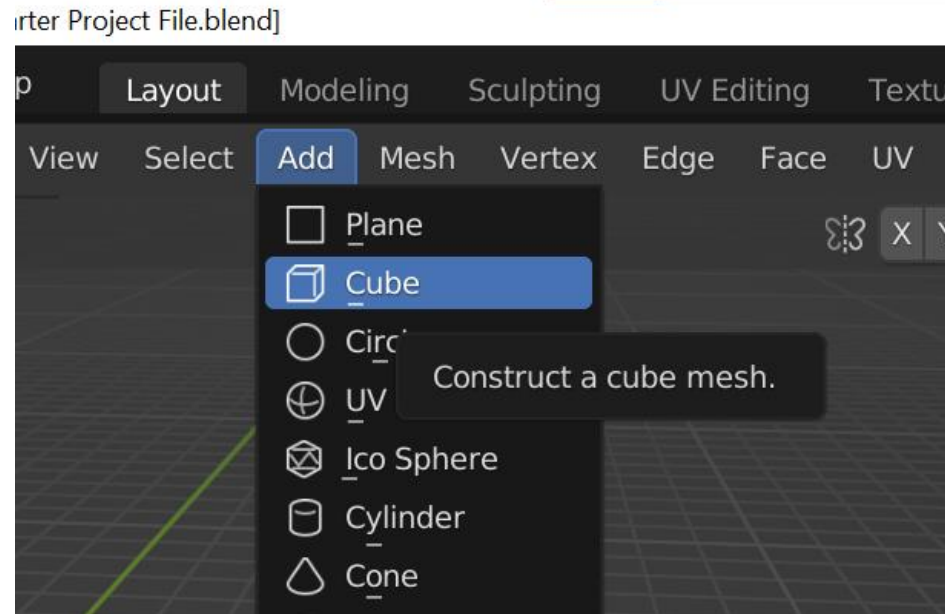
Something like
this



Top View



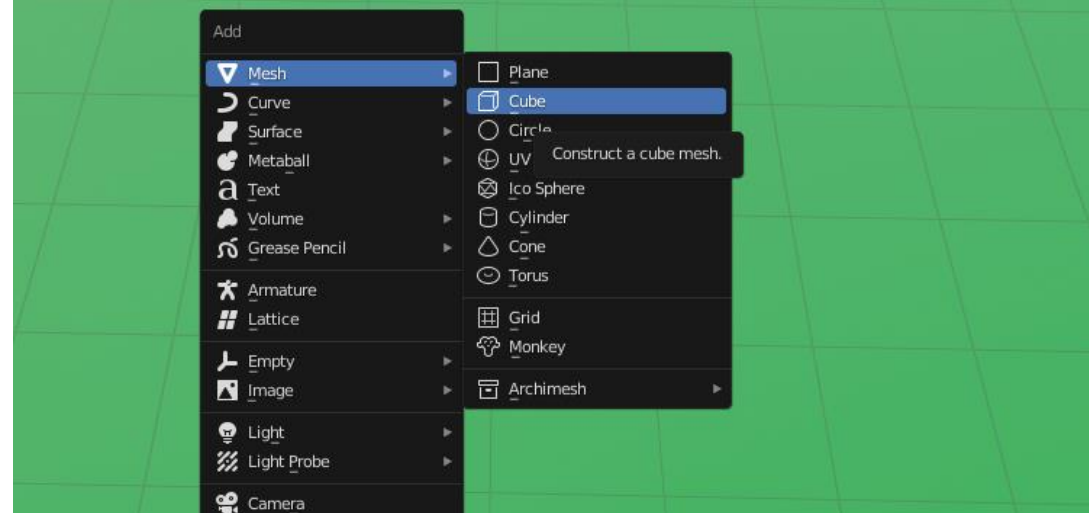
Let's start with
adding a cube



Option 01:
Menu

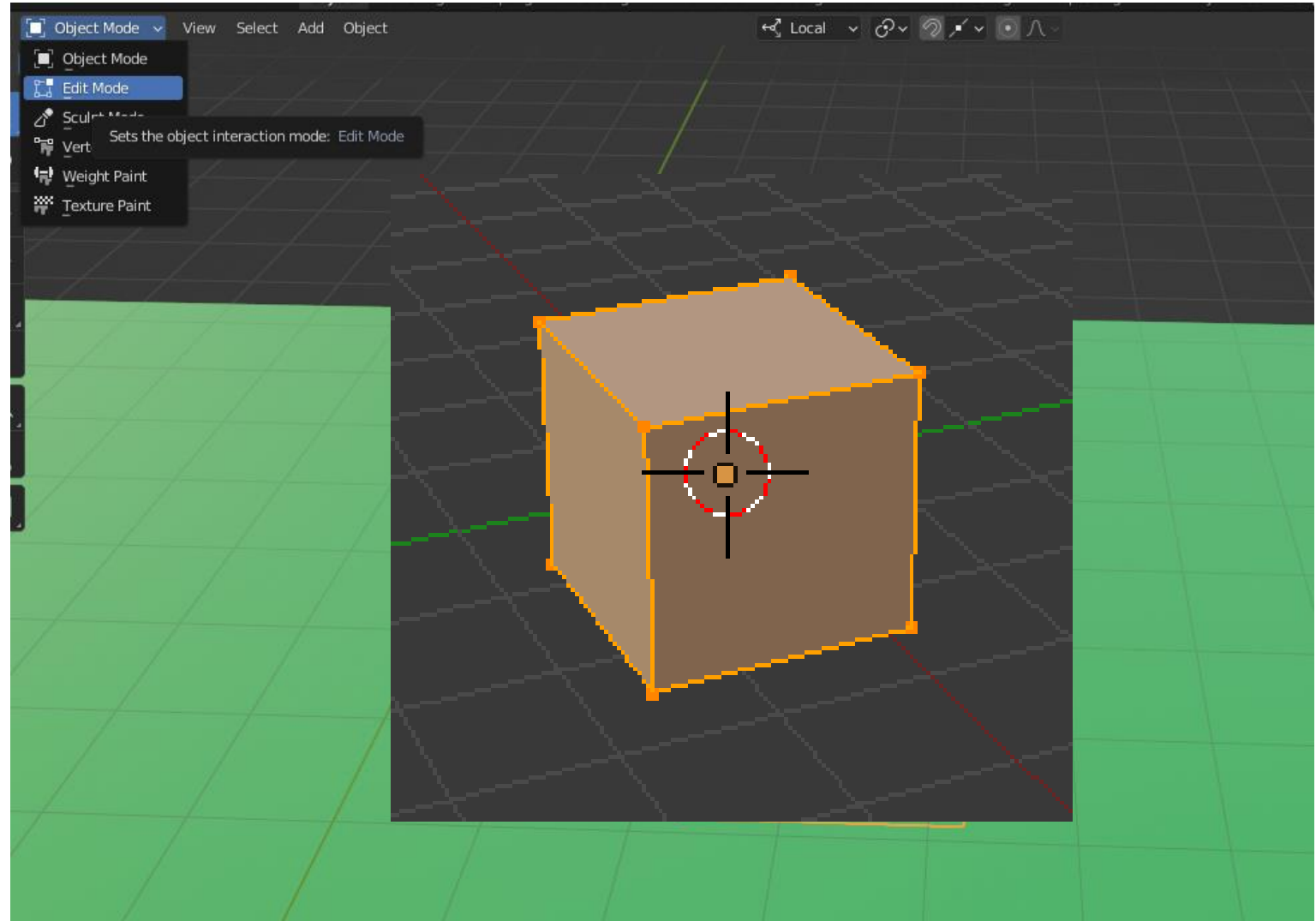
Option 02:
Shortcut

Shift + 'A'



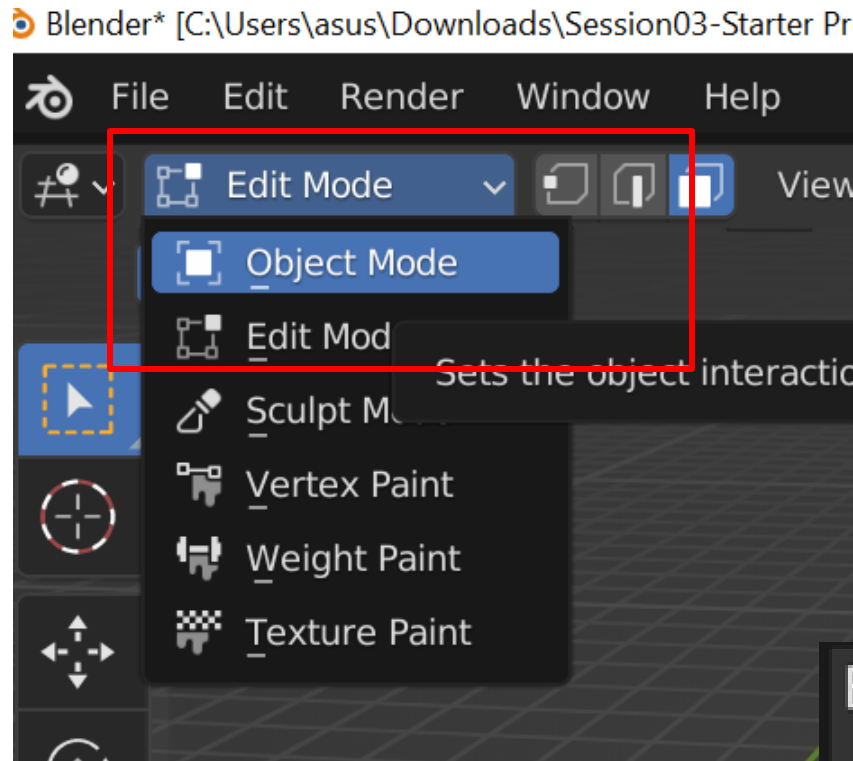
Object Mode && Edit Mode

- to edit:
 - > vertices,
 - > edges and
 - > faces of a 3D object



Switch to **Edit Mode**

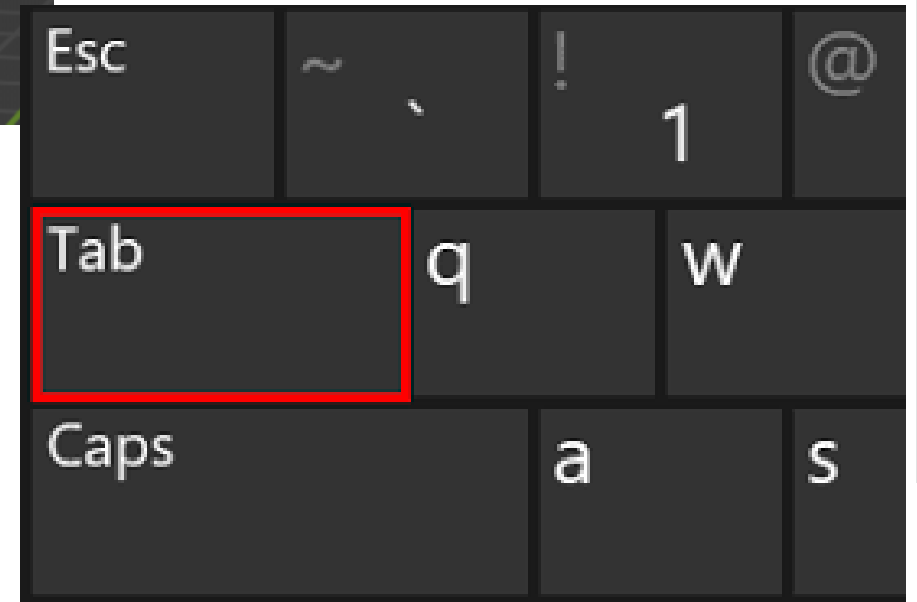
- to edit:
 - >vertices,
 - >edges and
 - > faces of a 3D object



Option 01:
Menu

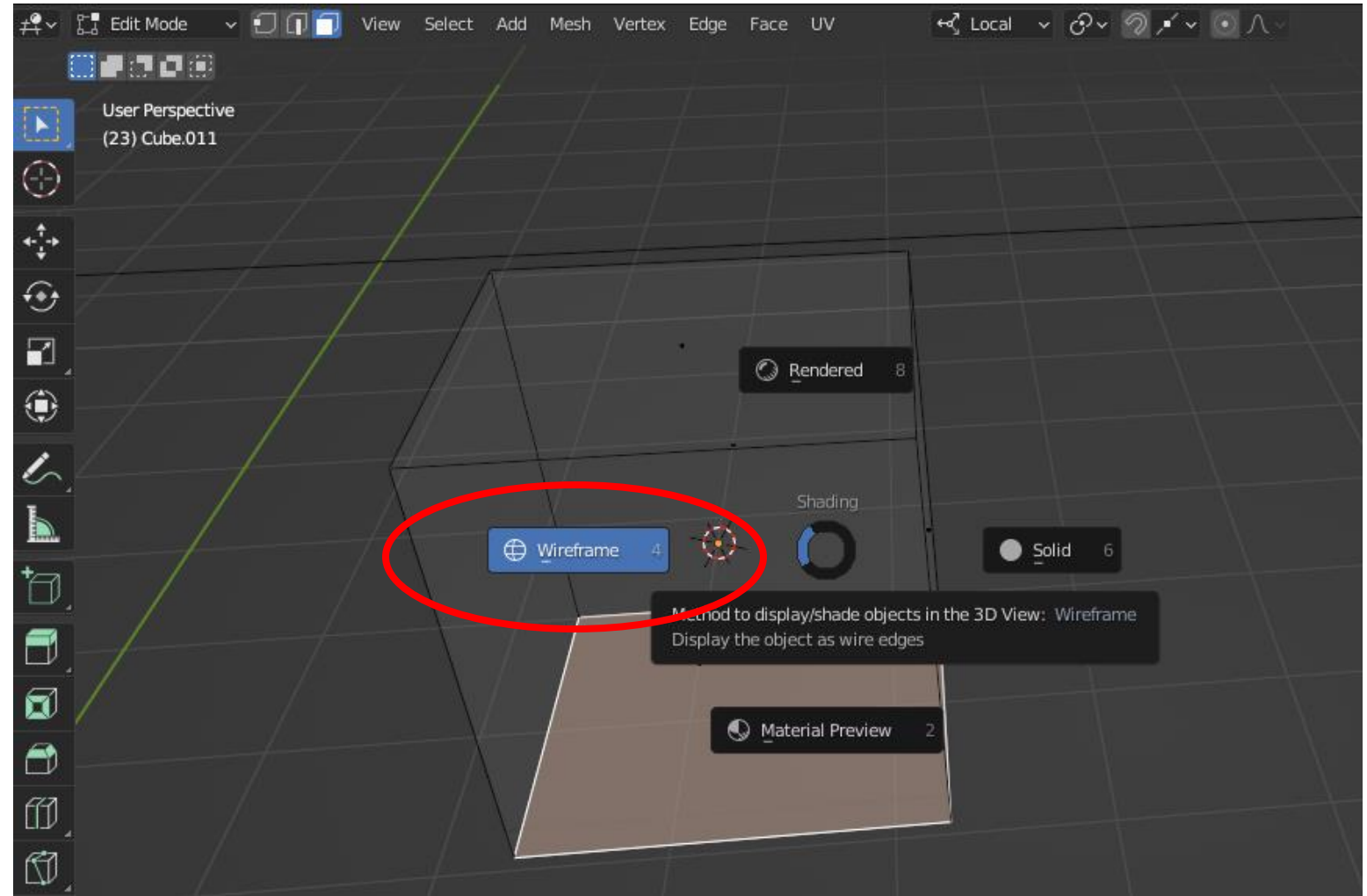
Option 02:
Shortcut

'Tab' Key

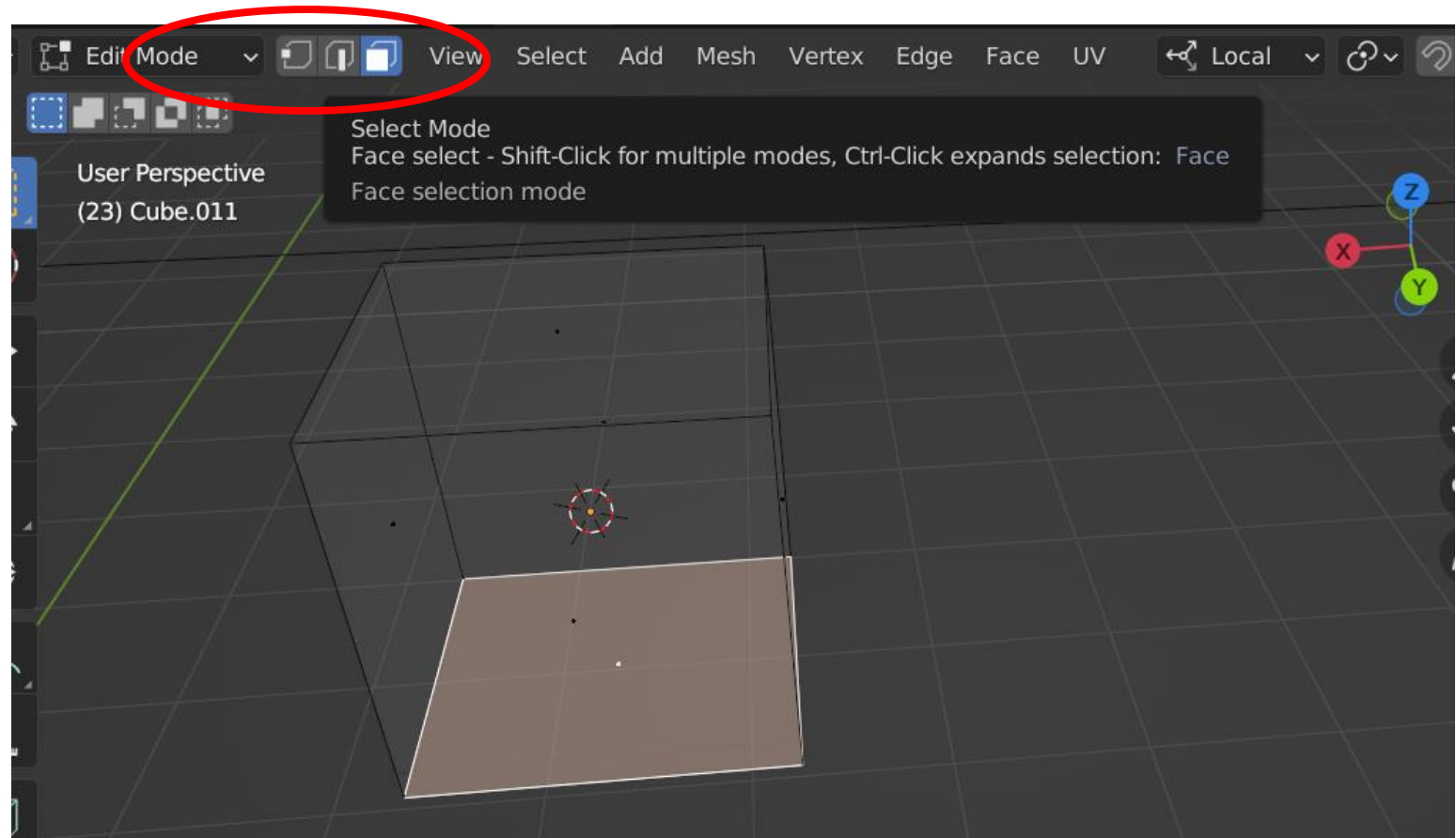


Switch to
Wireframe
Render Mode
to see all the
faces

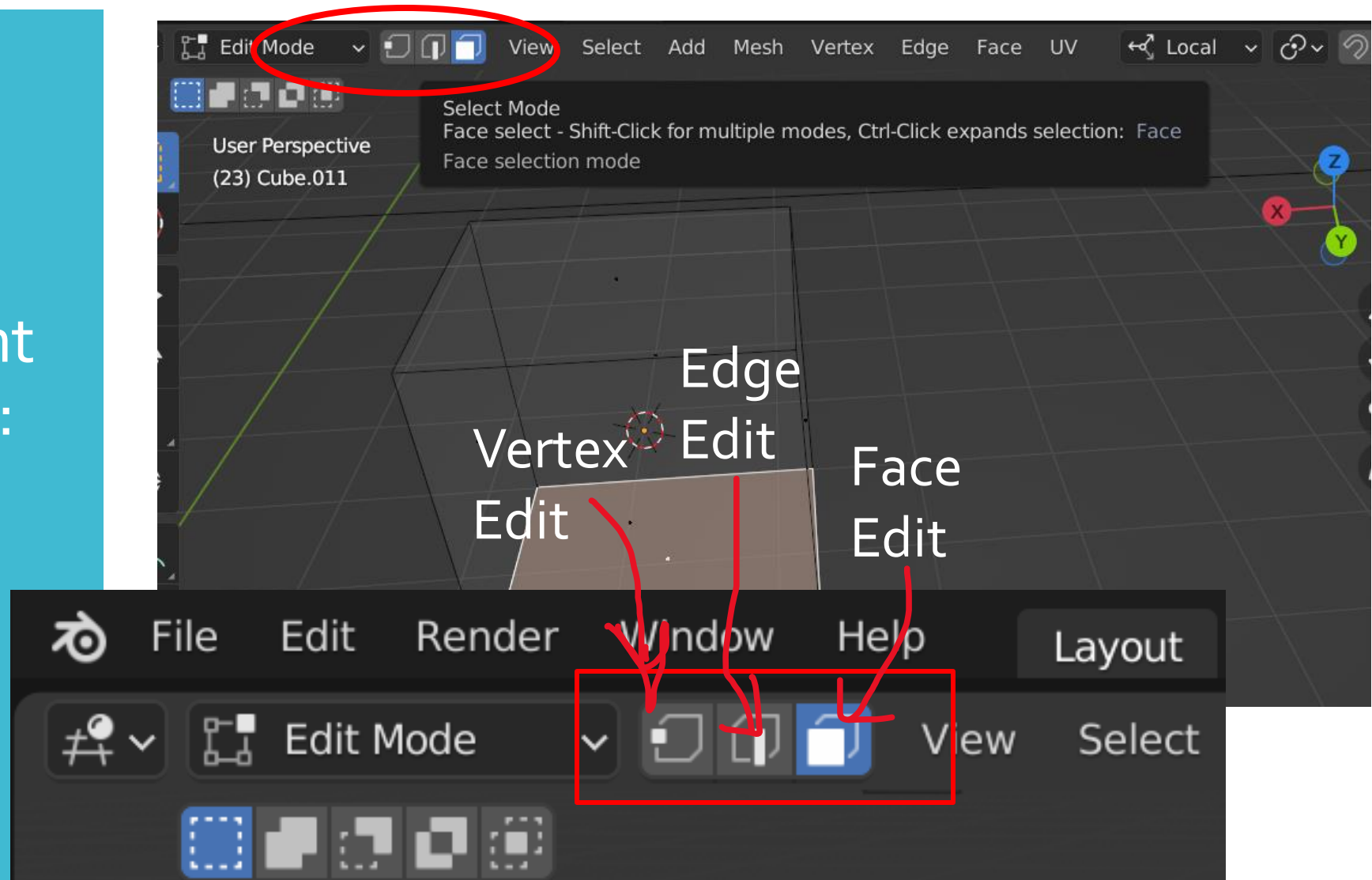
Shortcut:
'Z' key



Choose different
selection mode:
Vertex | Edge |
Face

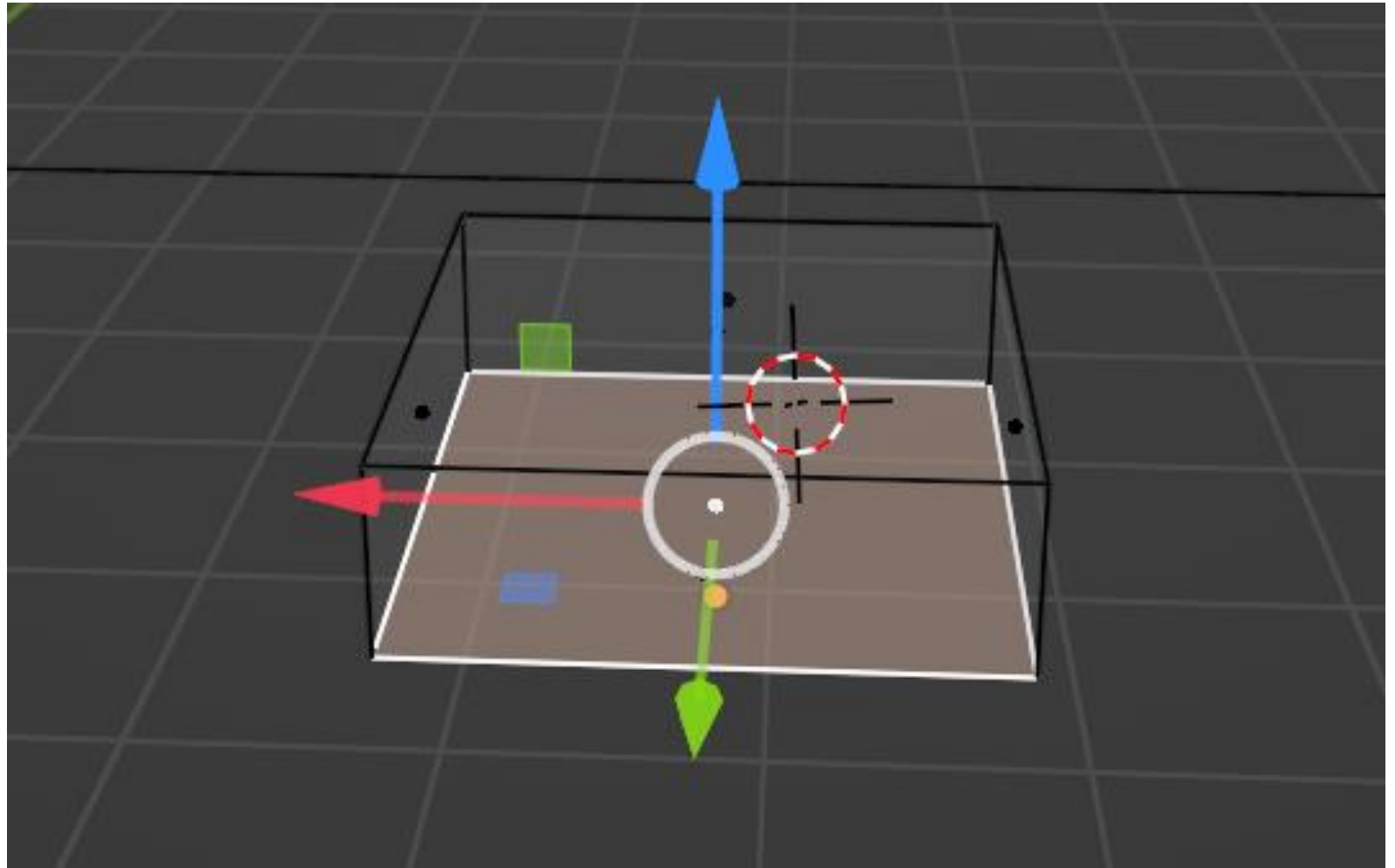


Choose different
selection mode:
Vertex | Edge |
Face



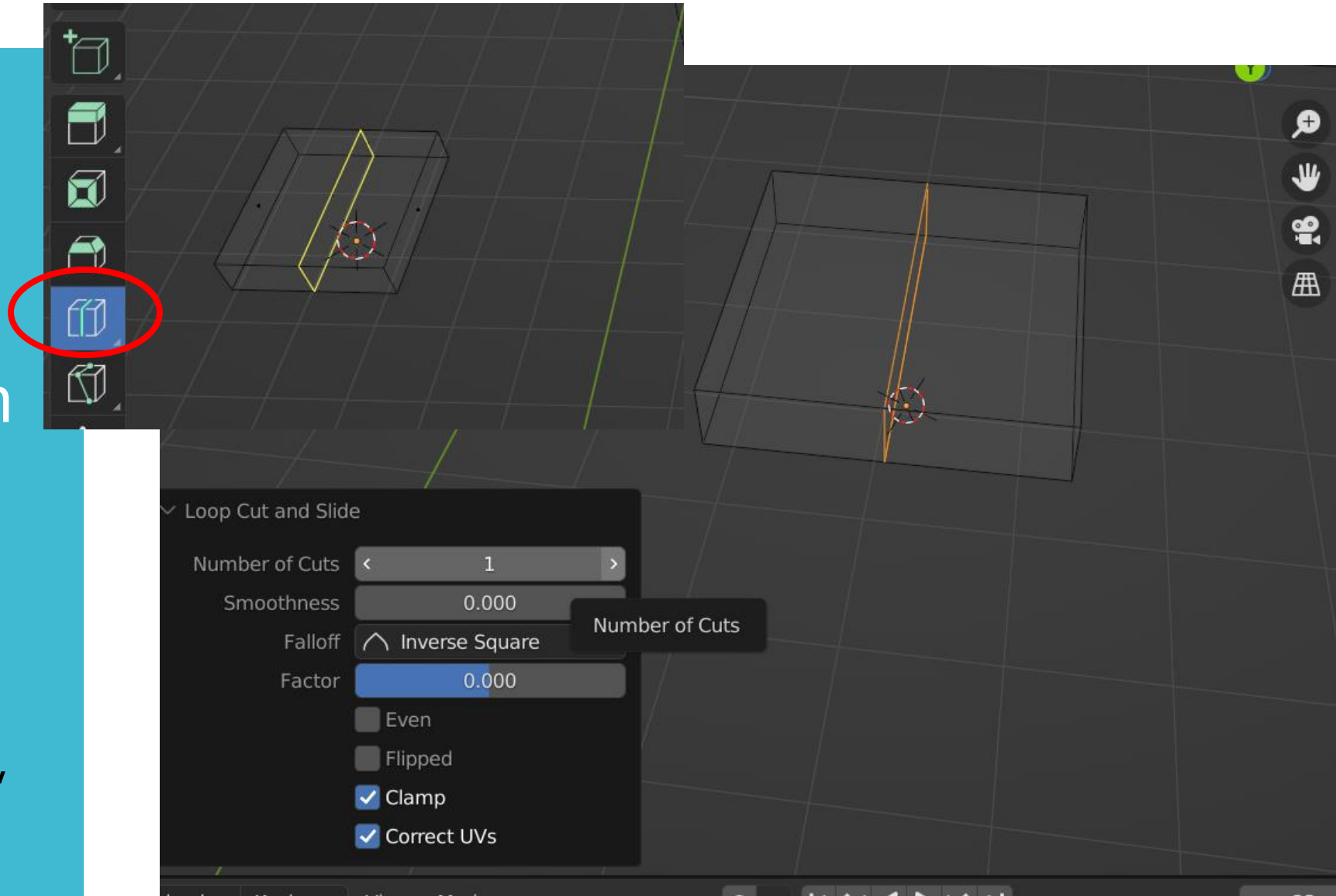
Move the face
up (change the
size)

Shortcut:
'G' + 'Z' key

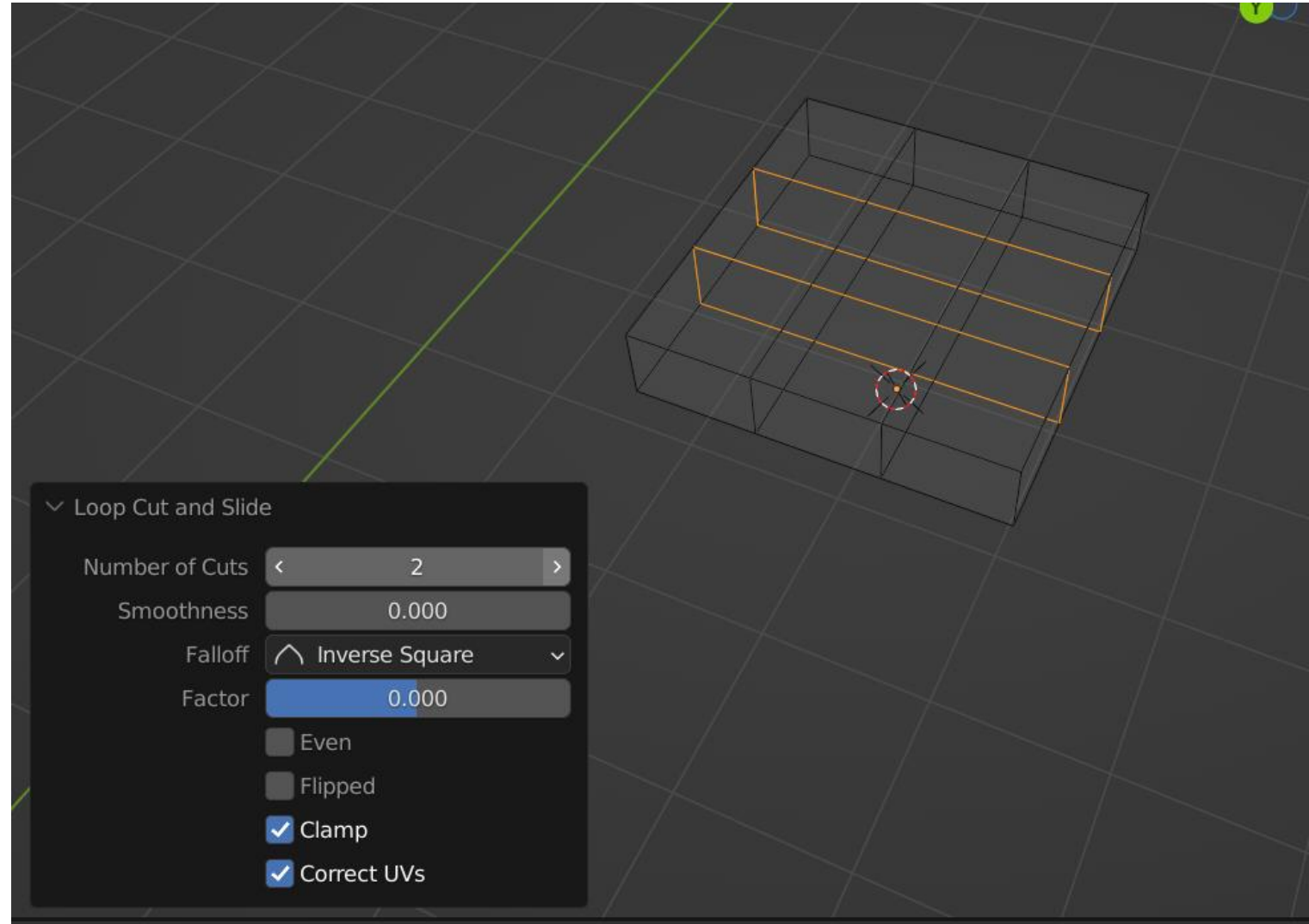


Add faces with **Loop Cut** Operation

- Change Number of Cuts to 2
- Shortcut 'Ctrl + R'

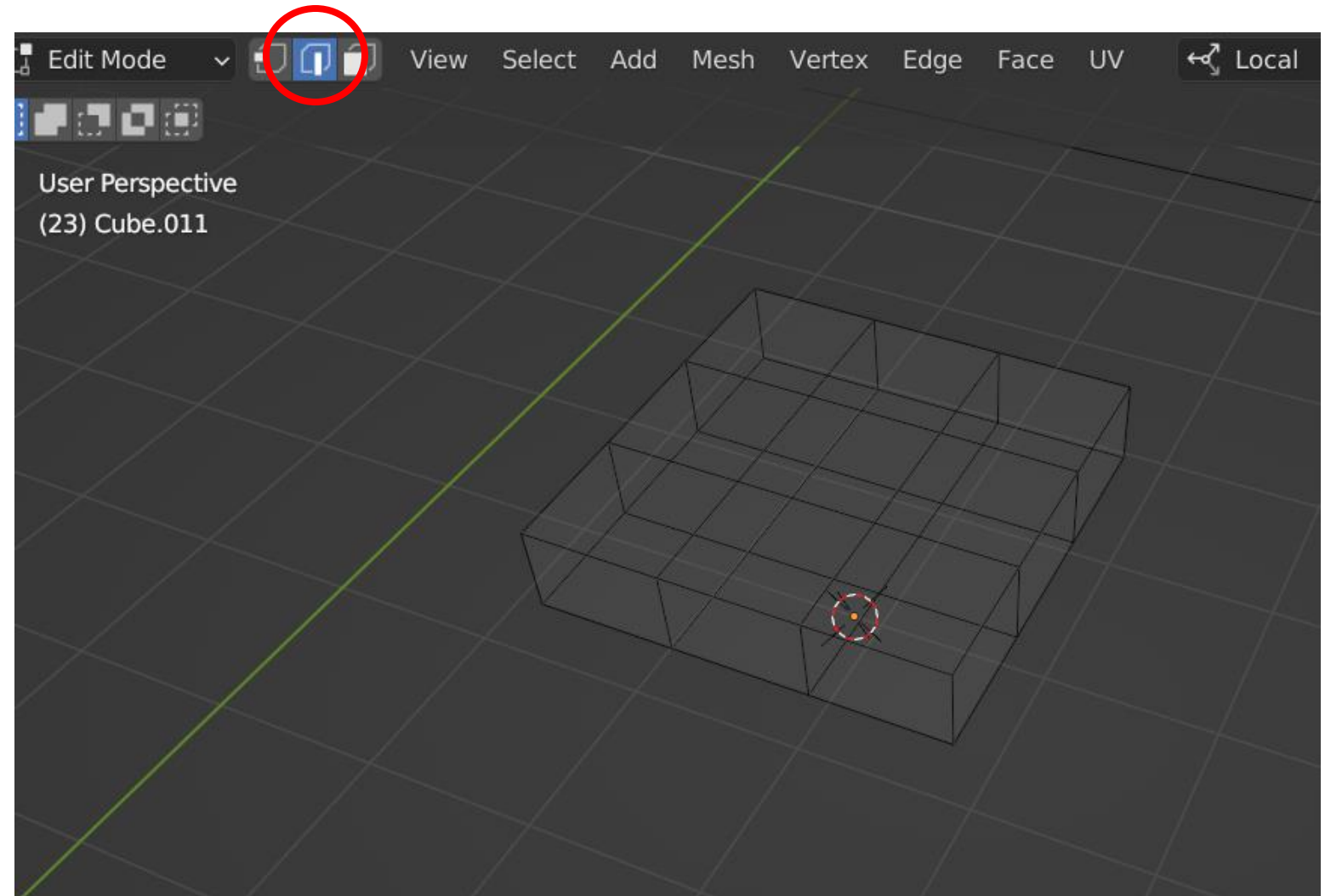


Add 2 cut on
the other side



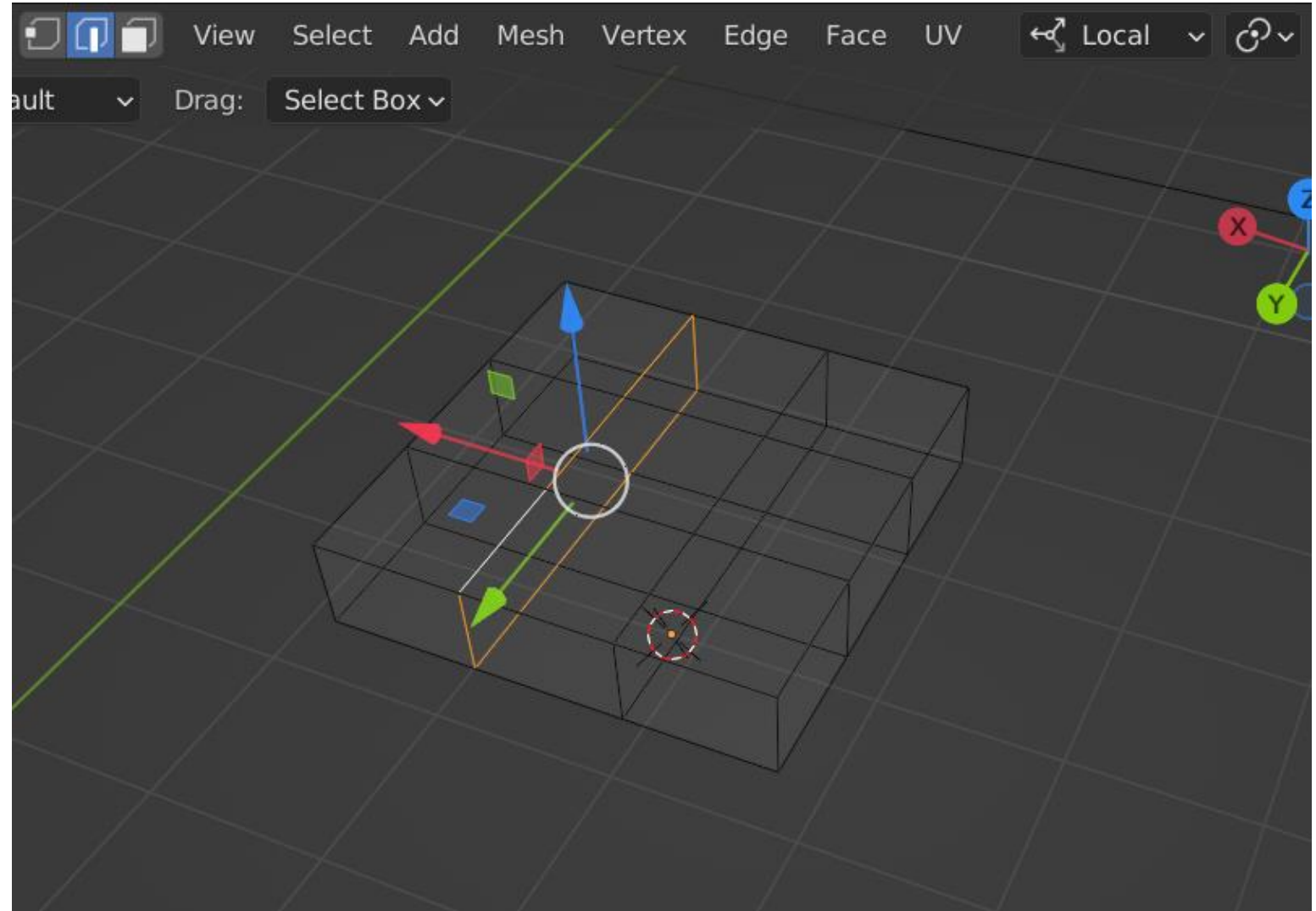
Now change the
**Edge Edit to
move** Positions

- Use Edge Mode



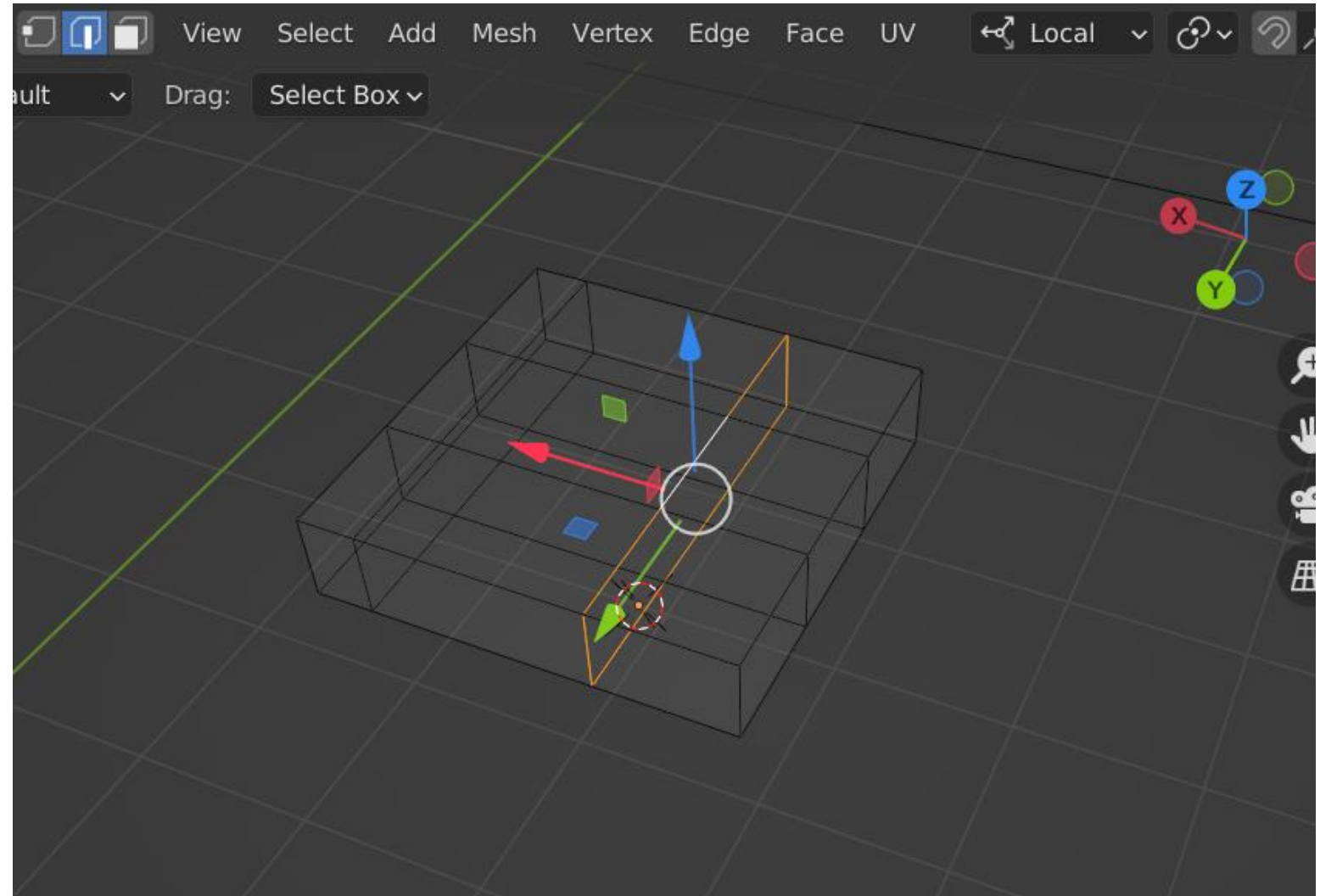
Now Select and Move One Edge Loop to the Left

**Alt + click the edge to
select the loop**

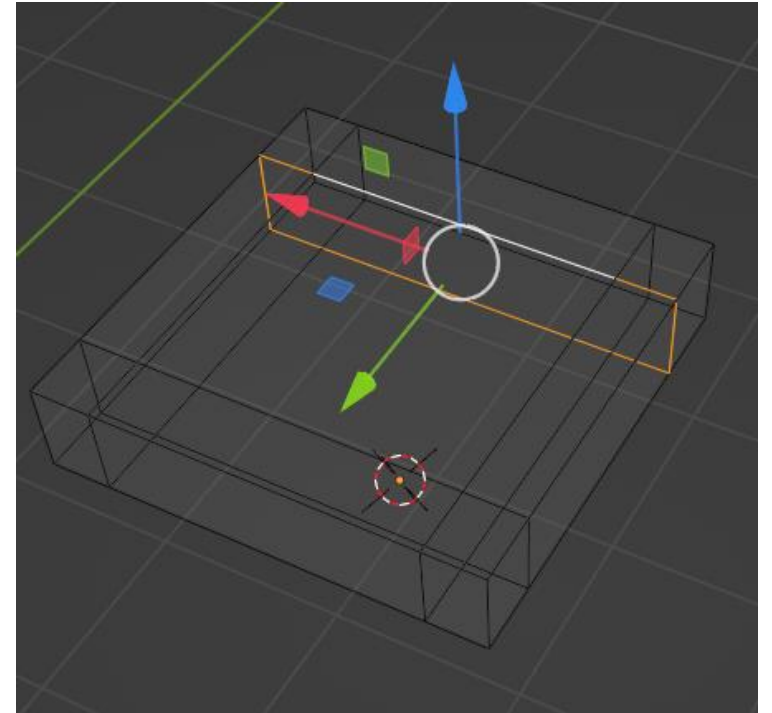
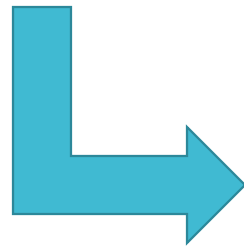
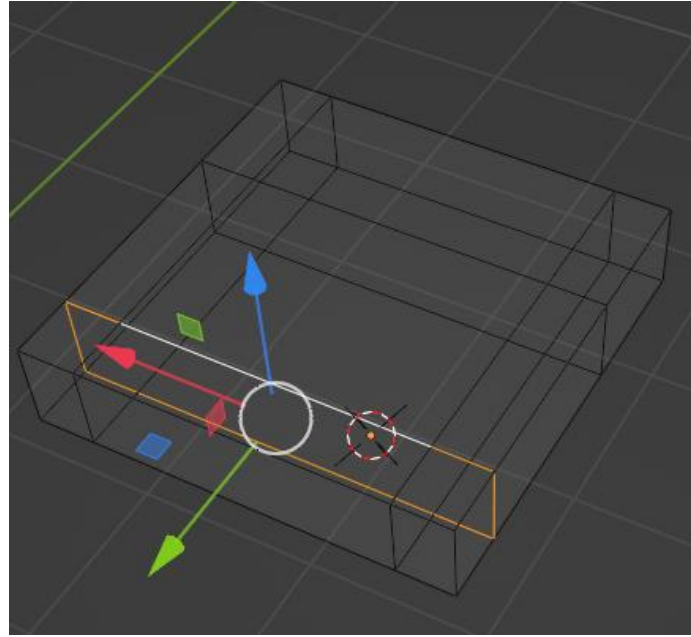


Repeat to Move another Edge Loop to the Right

Alt + click the edge to
select the loop

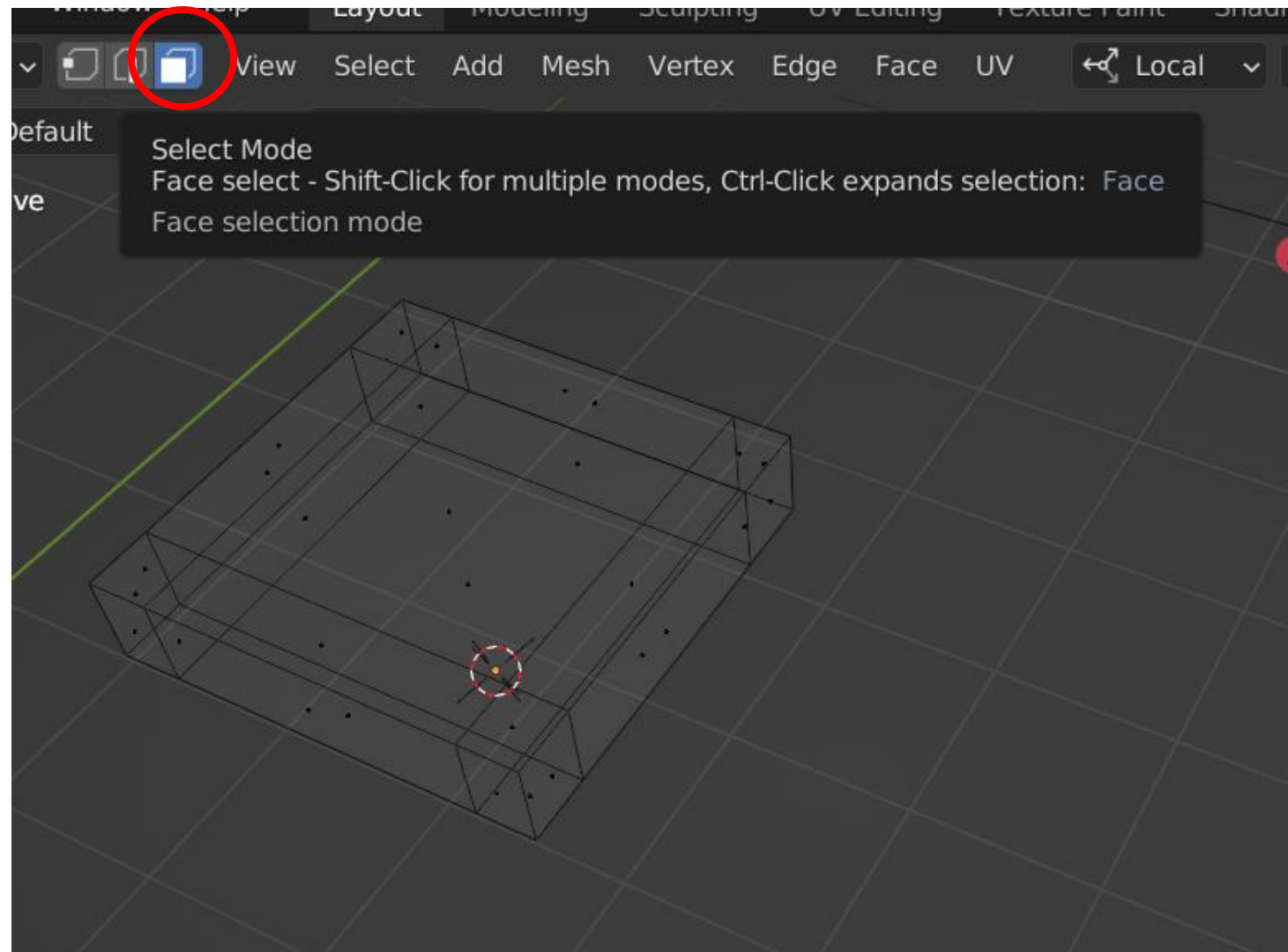


Move the Rest Two Edge Loops

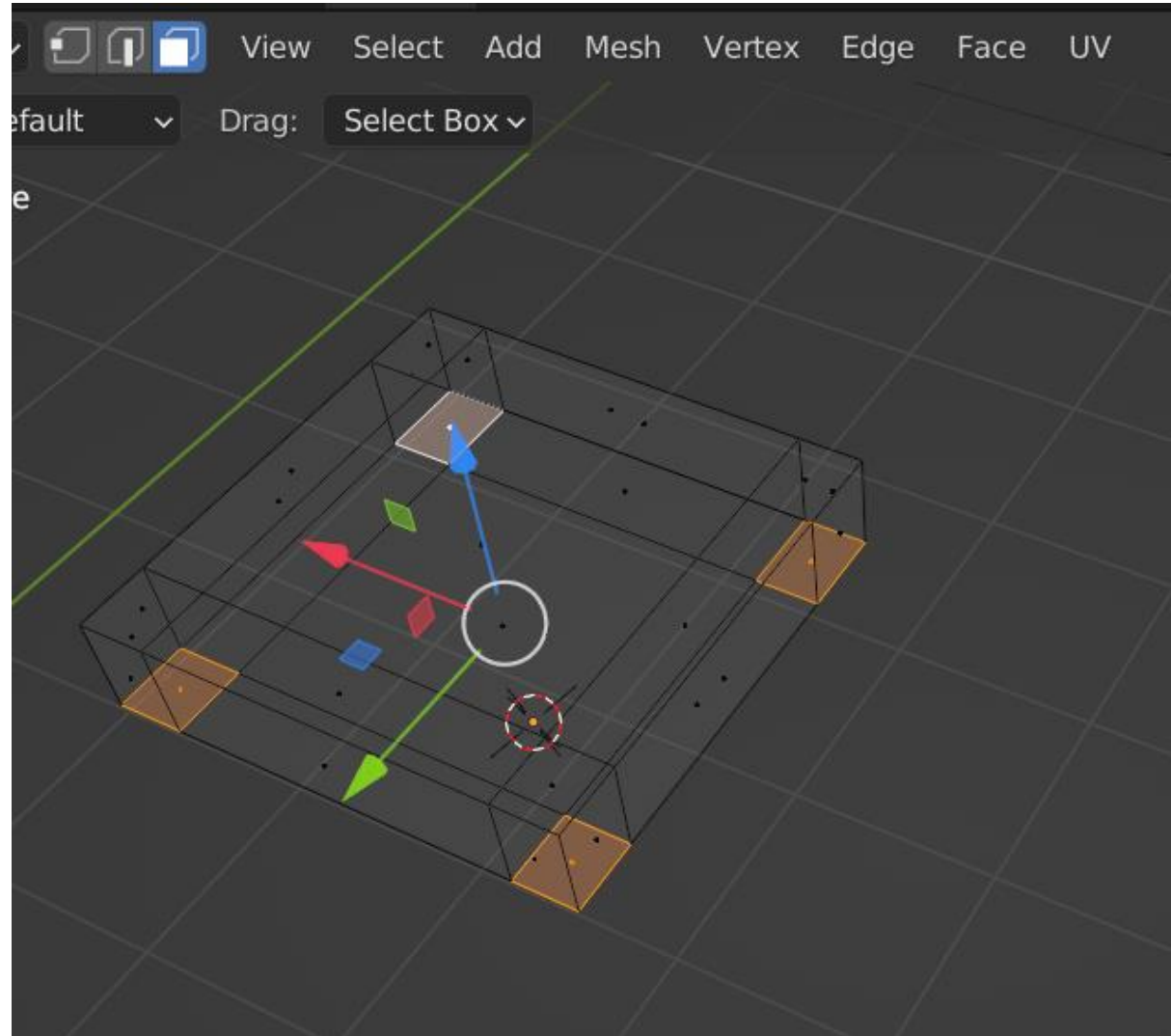


Now Switch to Face Mode

- Move Faces

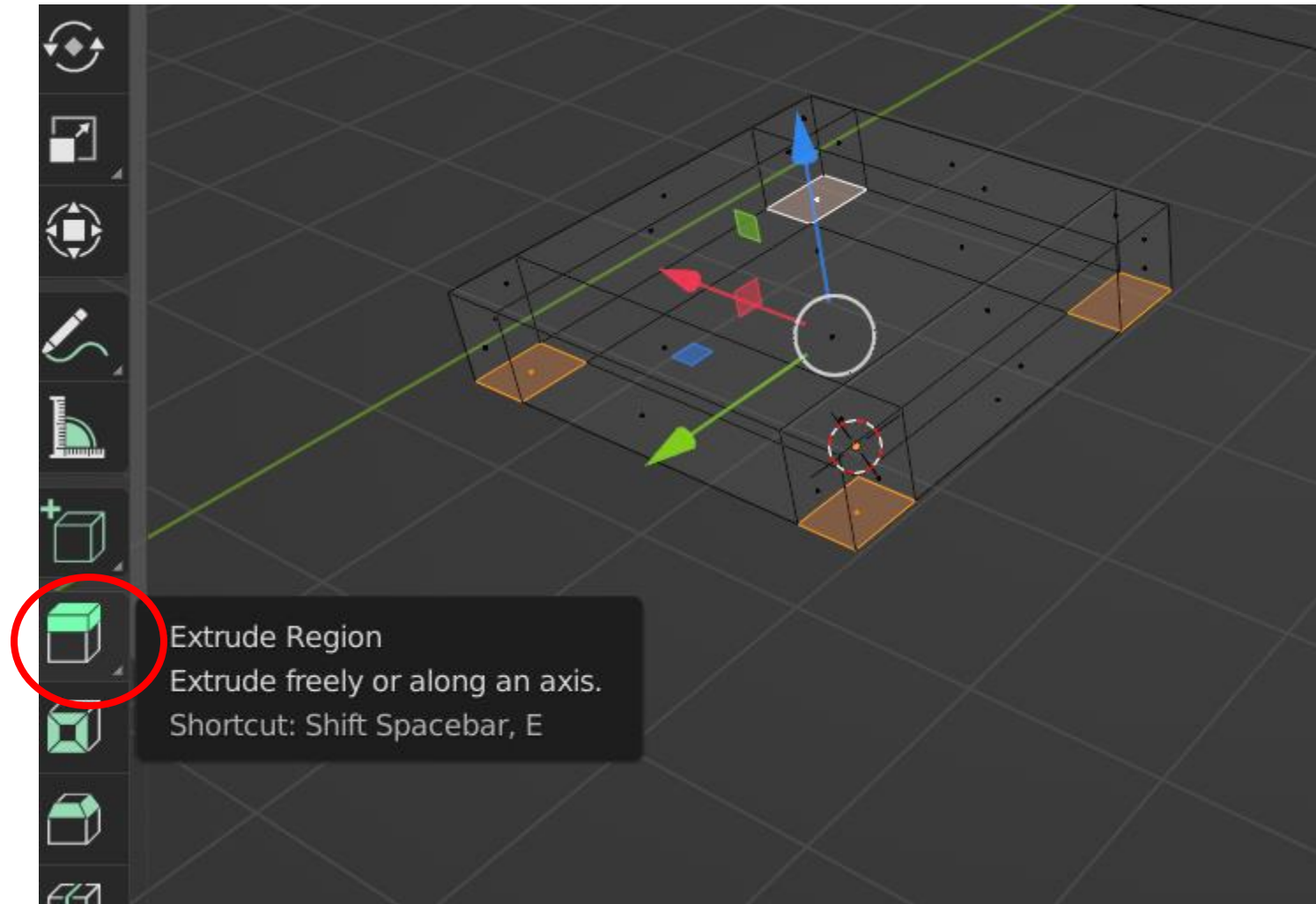


Shift select all
four bottom
corner faces

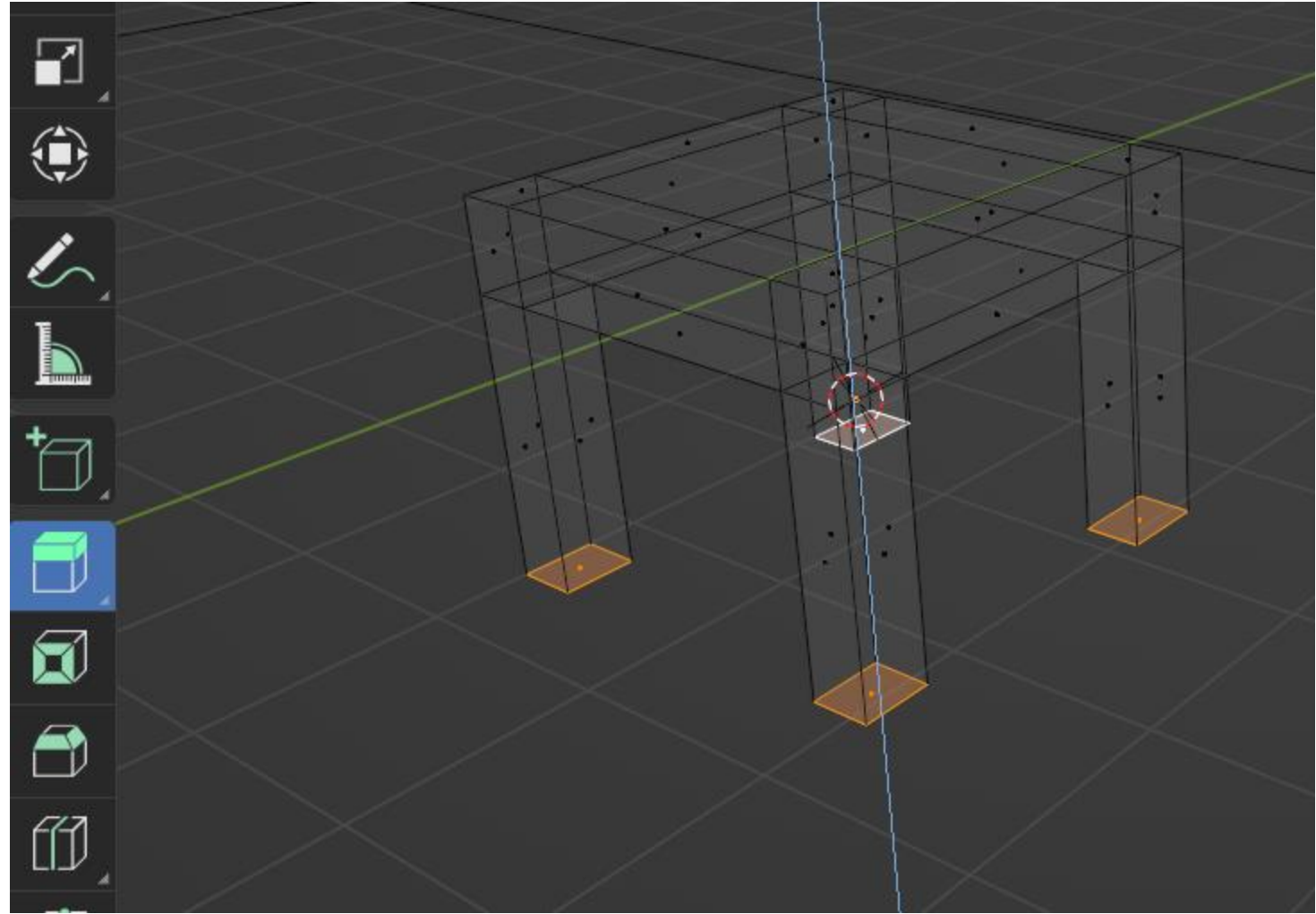


Use Extrude
Button

or Shortcut:
'e' key



Use 'G' to
Move, press 'Z'
to move along
Z axis

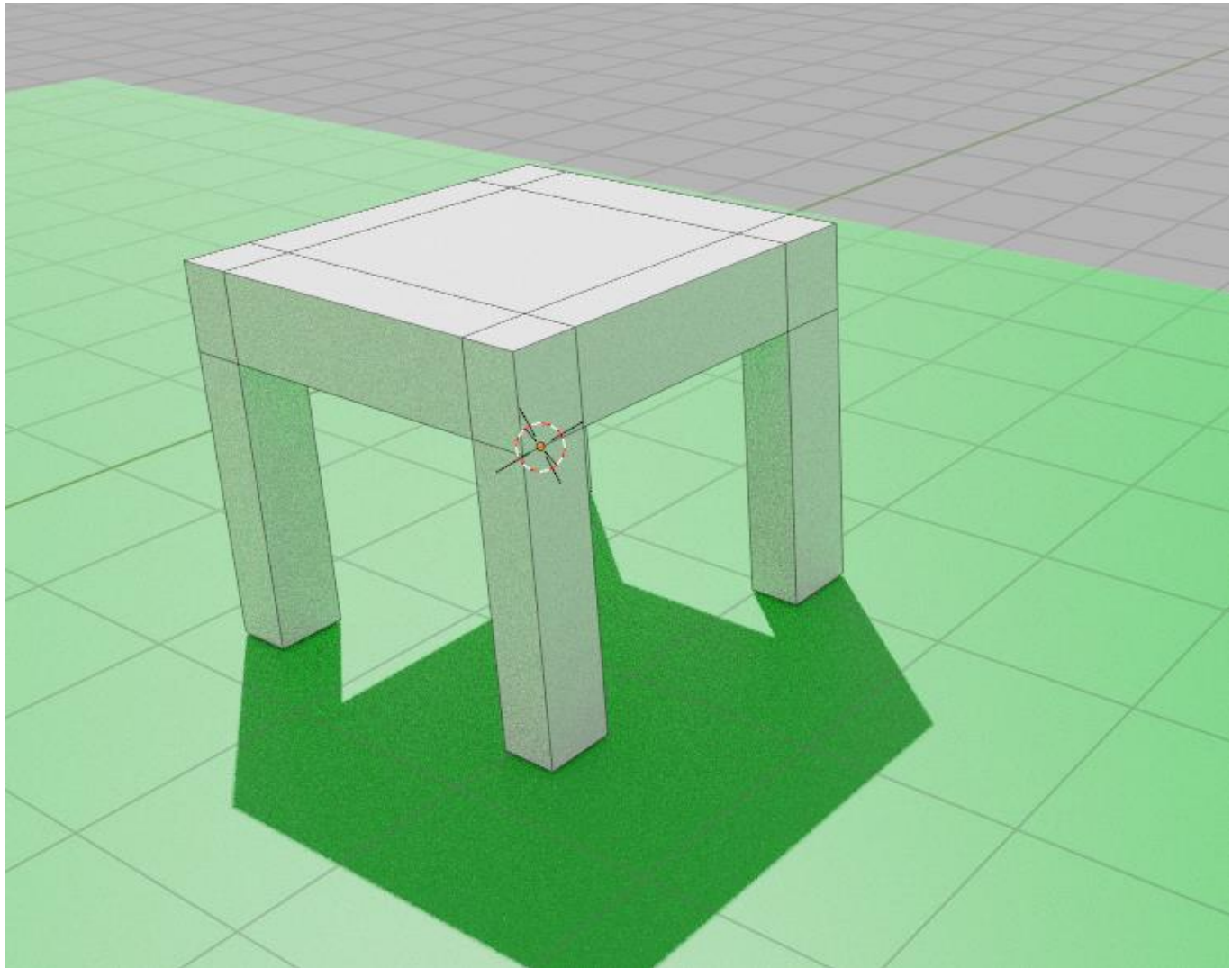


Add a Simple Material

Next: Add a
Material

Switch to
Render /
Material view

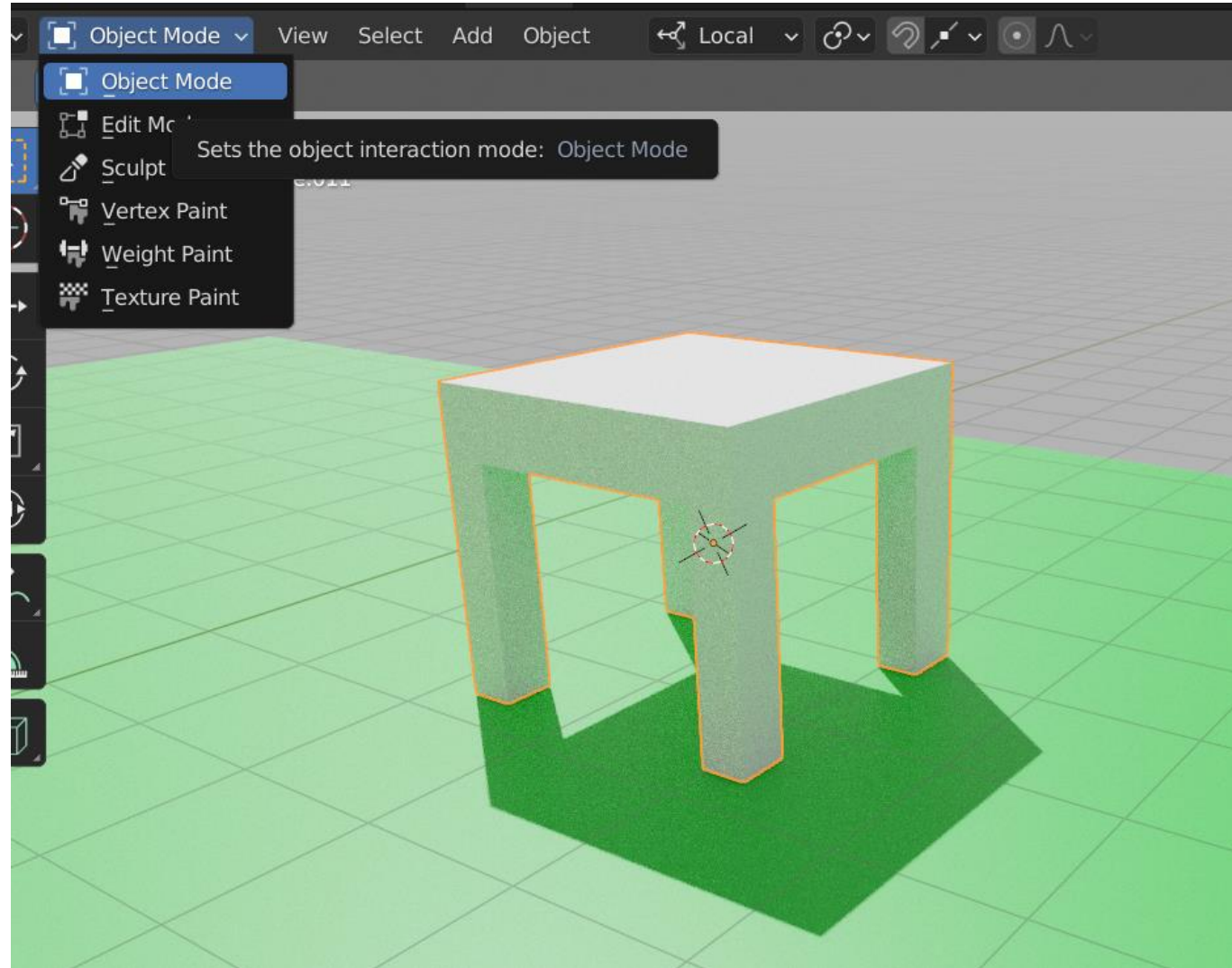
or Shortcut:
'Z' key



Add a Material to
the whole object

Switch Back to
Object Mode

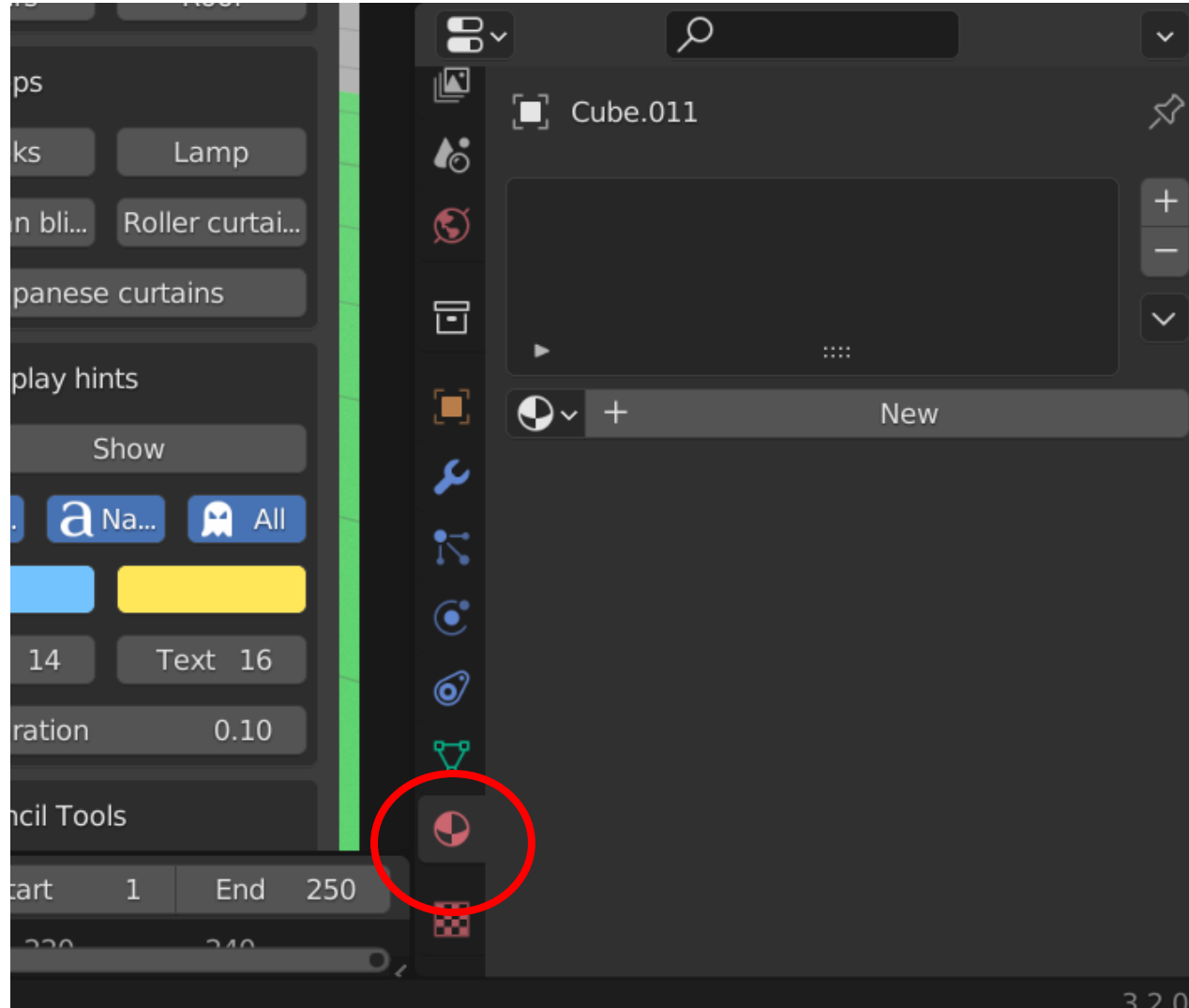
or Shortcut:
'Tab' key



Add a Material

Open the
Material Side
Panel

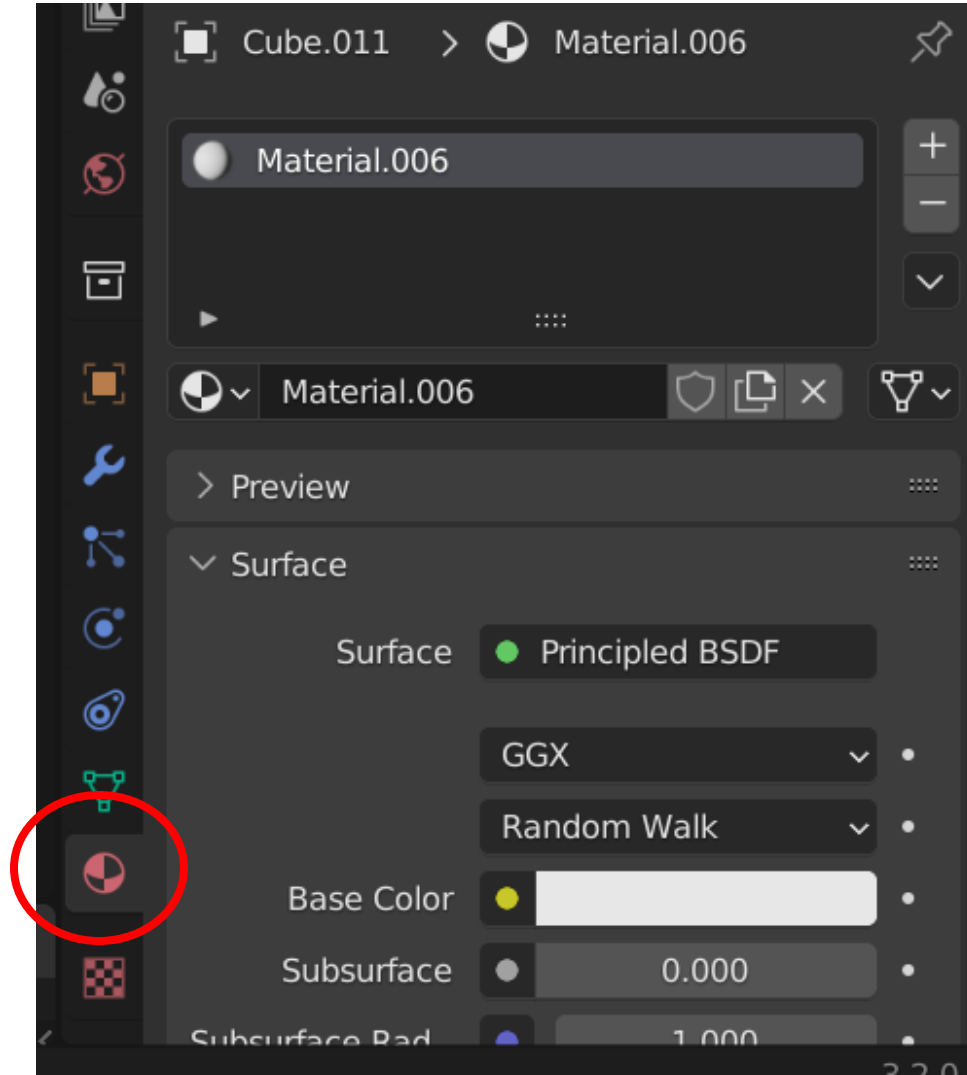
Click 'New'

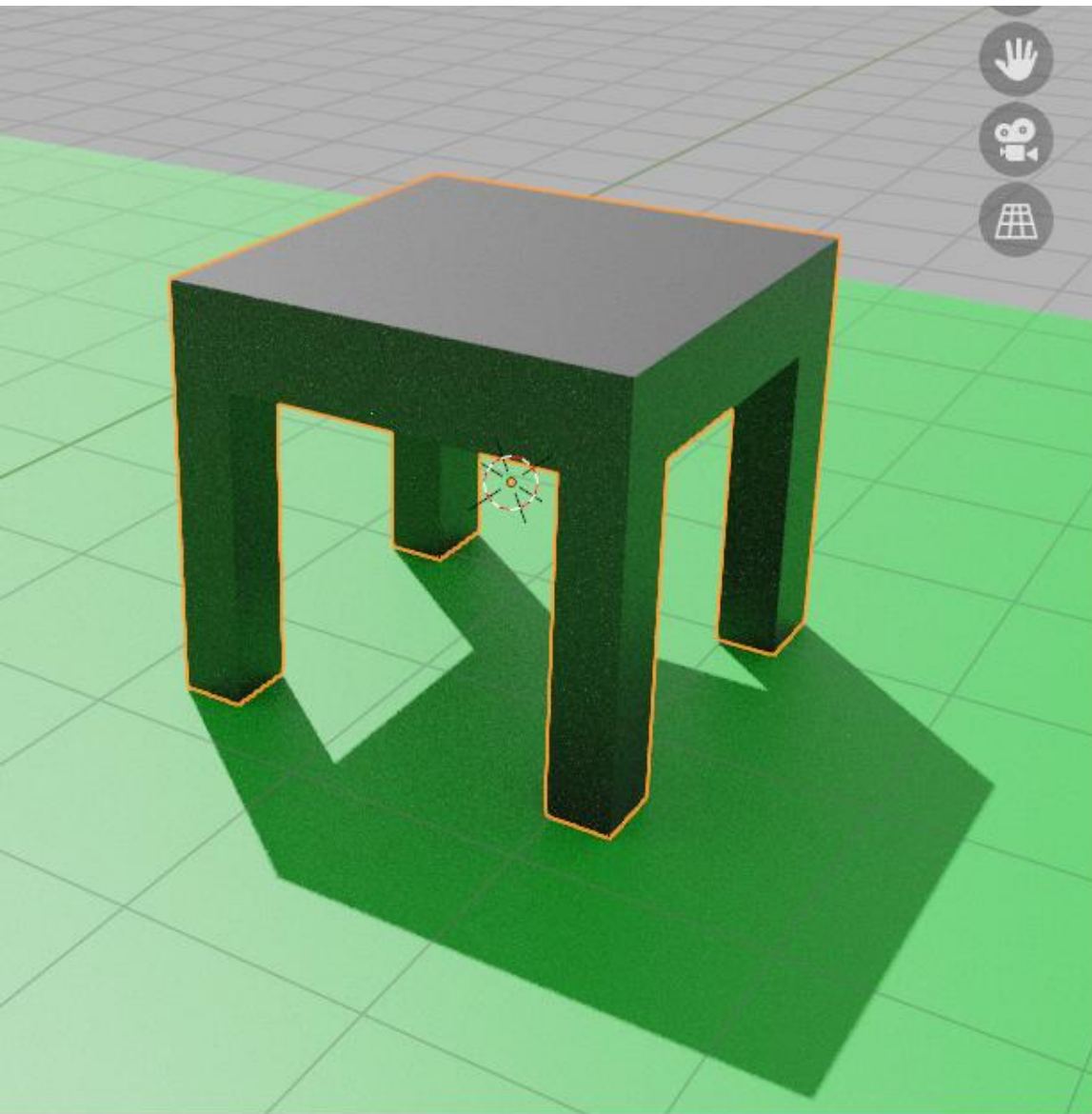


Add a Material

Change Base Color

Click "Base Color"





Rail Windows Panel Wind...

Cabinets Shelves

Stairs Roof

⚡ Props

Books Lamp

Venetian bli... Roller curtai...

Japanese curtains

❓ Display hints

▶ Show

☰ Me... a Na... 👤 All

Text 14 Text 16

Separation 0.10

🔧 Pencil Tools

Create

▶ Camera

▶ Cube.010

▶ **Cube.011**

▼ Room

🔍

Cube

Material

▶ Preview

▼ Surface

RGB HSV Hex

H	0.000
S	0.000
V	0.011
A	1

Base Color

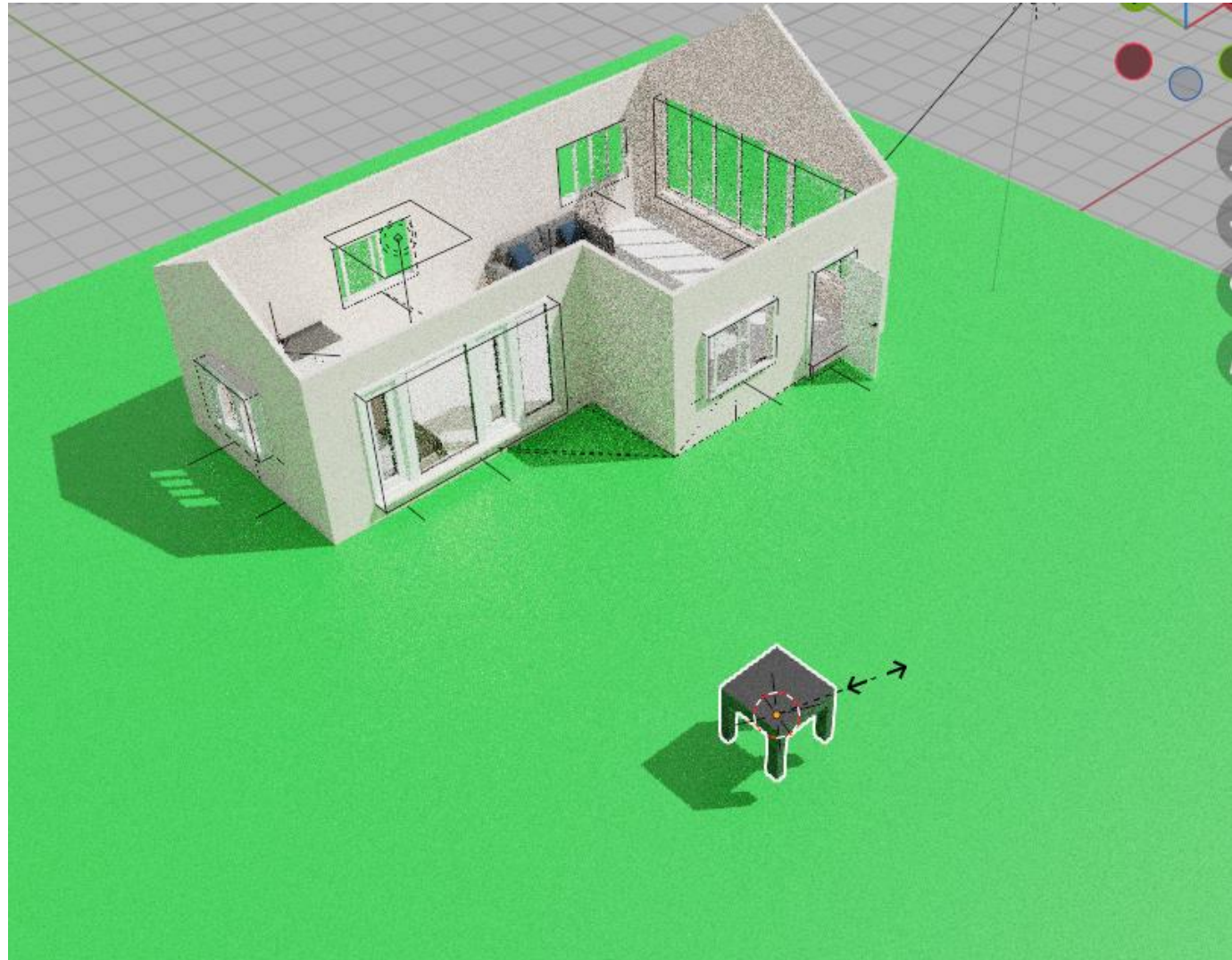
Subsurface

E.g., Black Color

Next: Reposition
the Table

Scale the Table
Down and Put
it in the Room

or Shortcut:
's' key

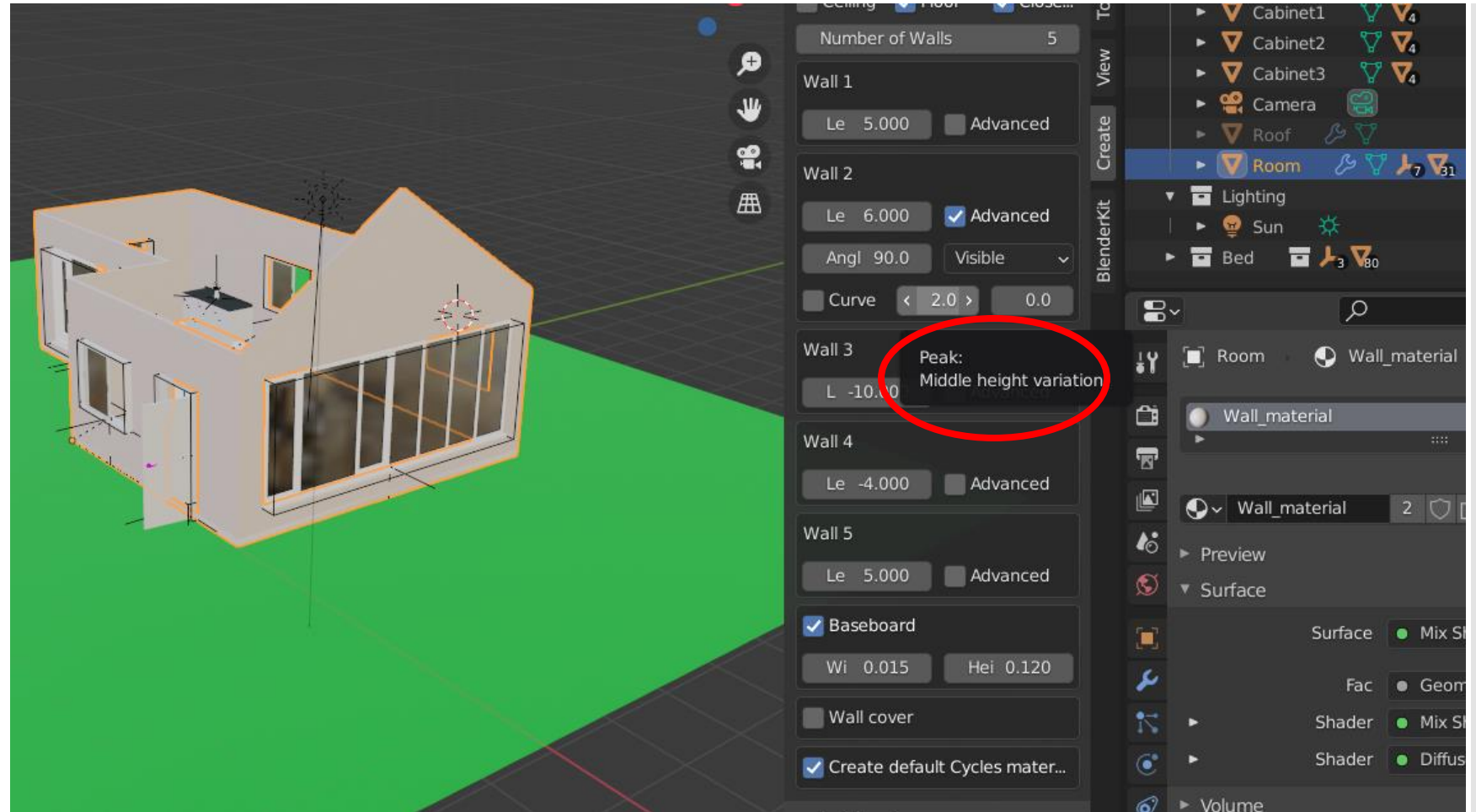


Part 2

Complete the House - Roof

Prepare walls for adding roof panels

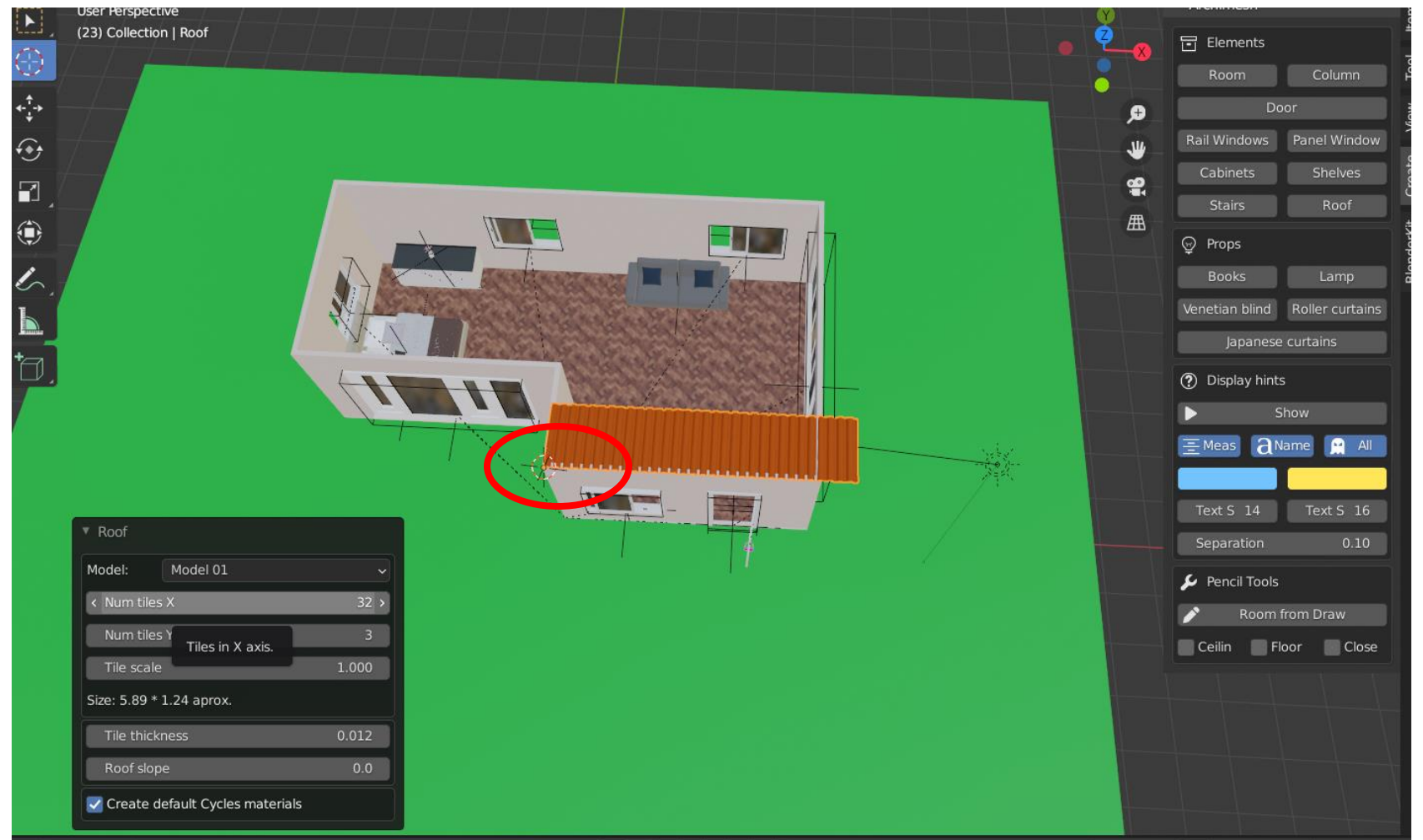
- Wall 2



Selected Room => Wall 2 => Tick Advanced => Adjust Peak

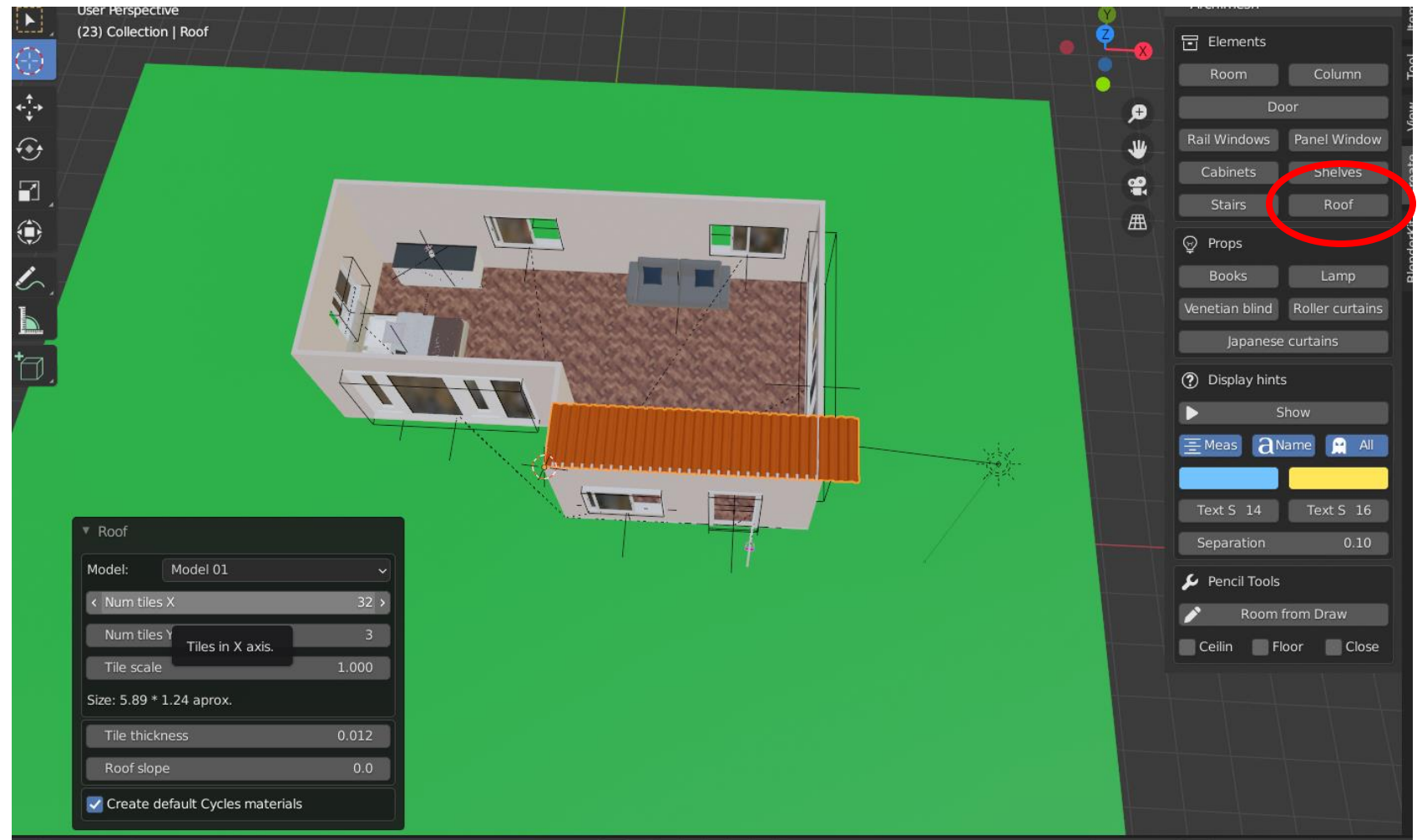
Add Roof Panels

- Use 3D Cursor for initial position



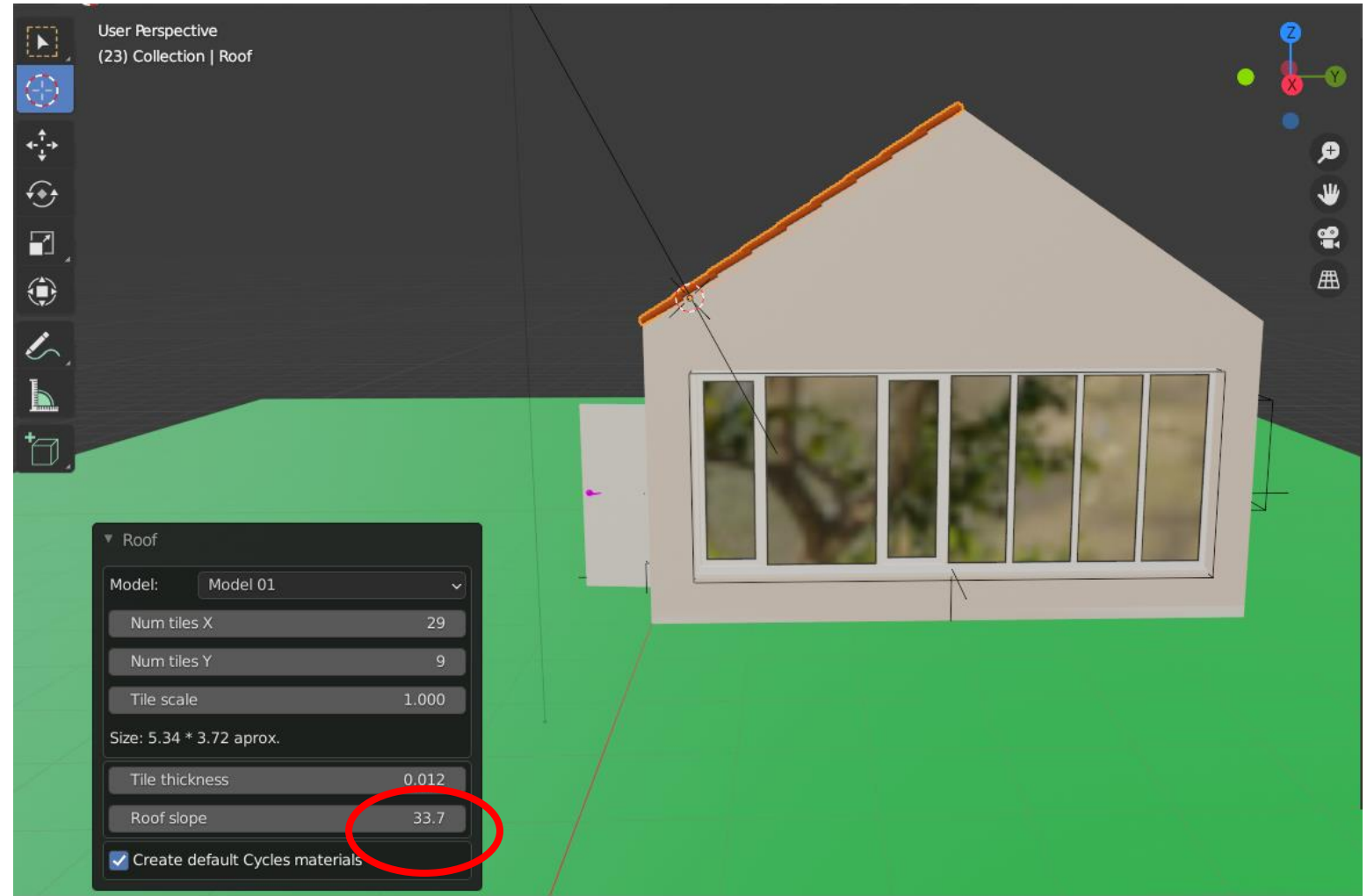
Add Roof Panels

- Add one panel with Archimesh Create
- Change Num tiles X, Num tiles Y



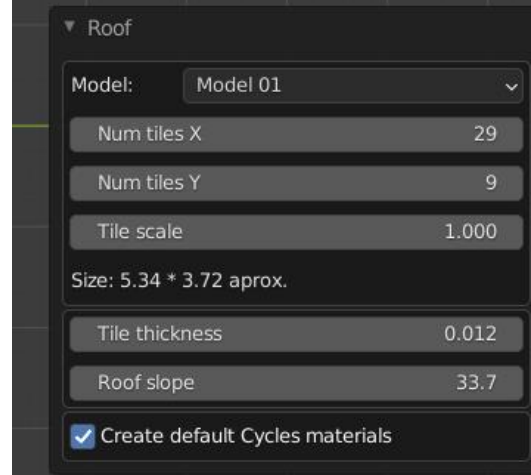
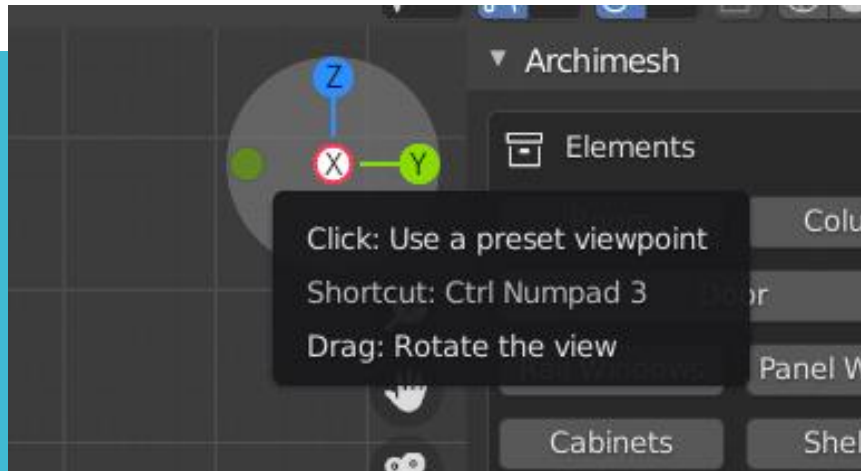
Add Roof Panels

- Change Roof slope to make it fit the wall



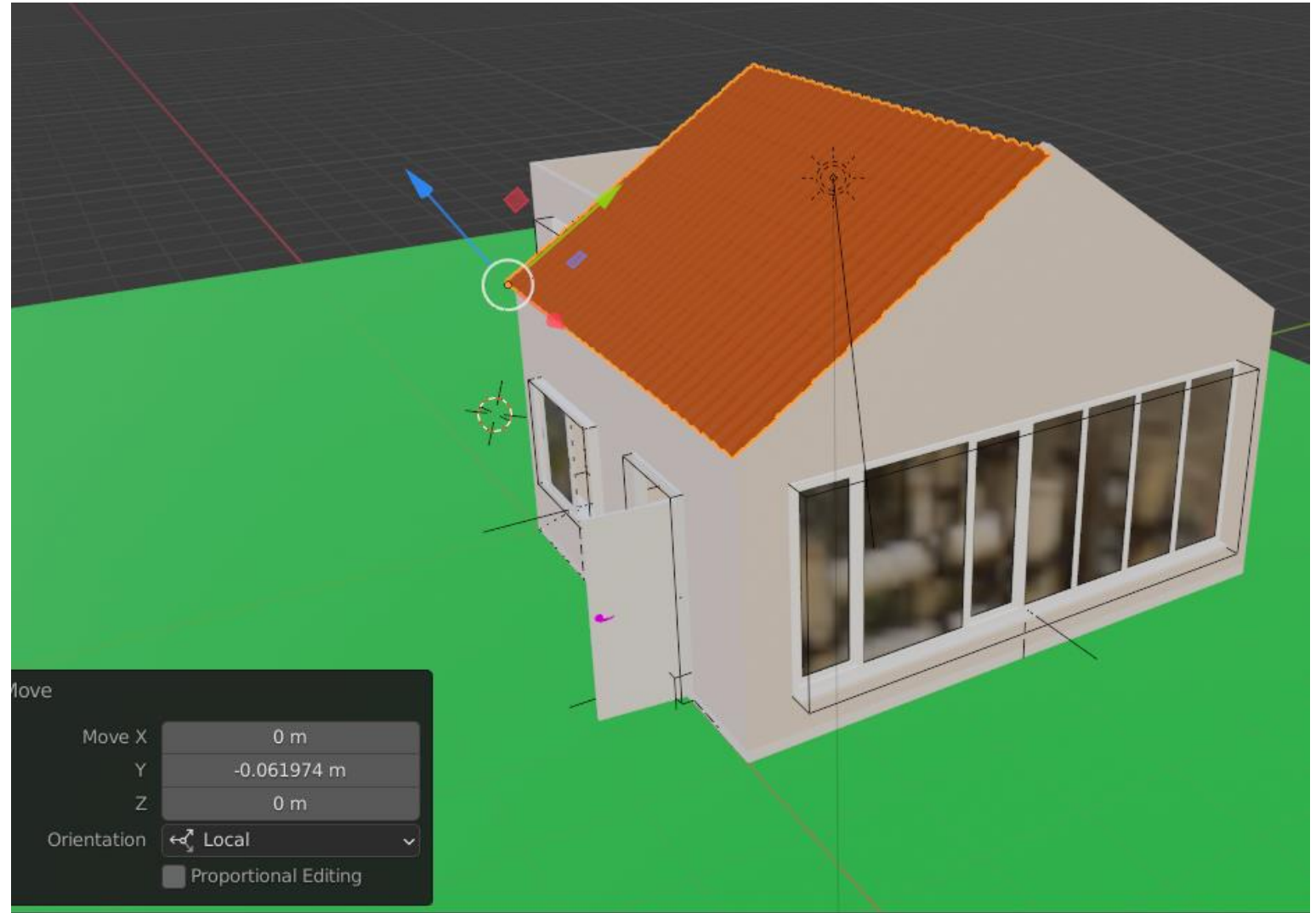
Add Roof Panels

- Use **X Right View** to adjust



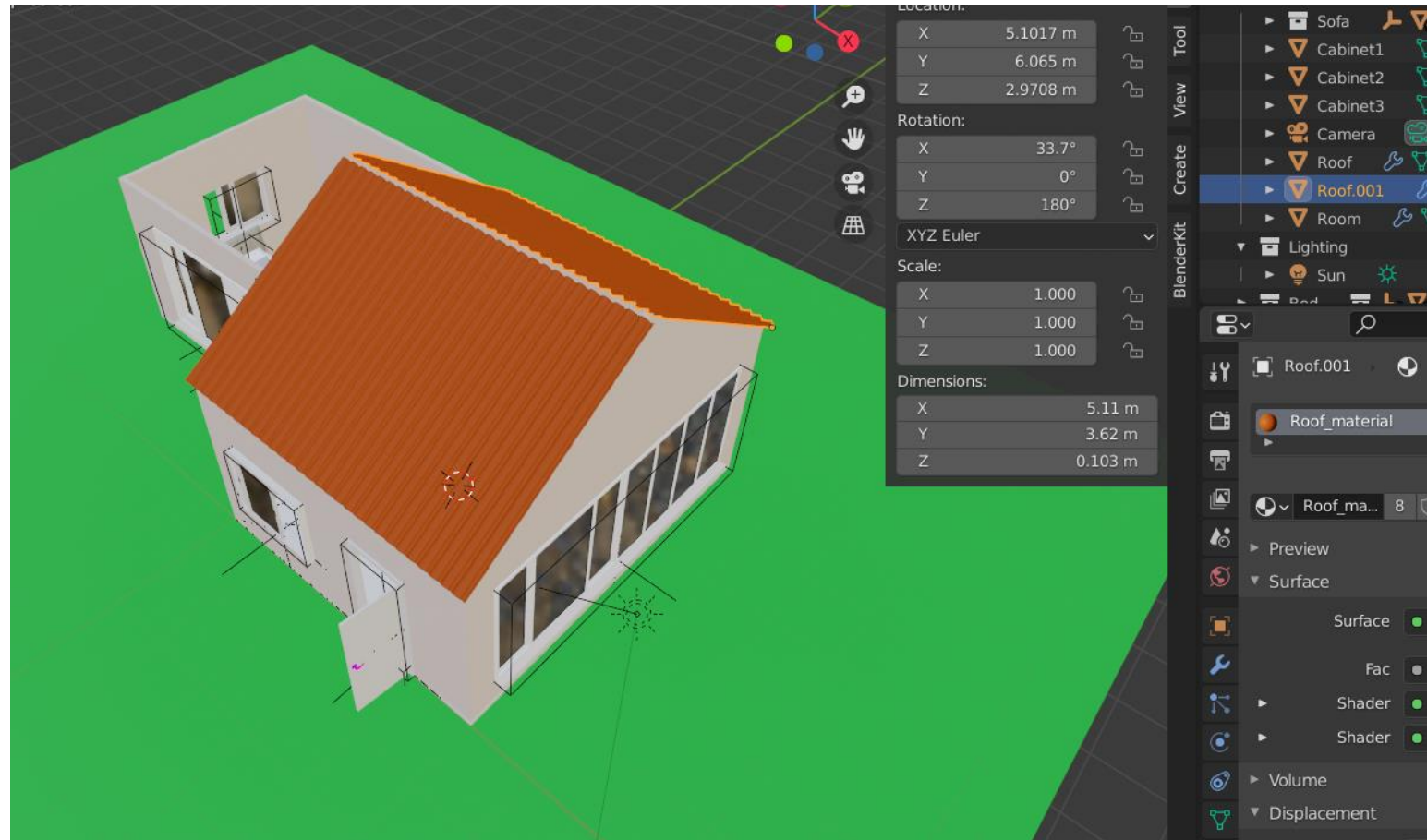
Add Roof Panels

- Move the panel



Add Roof Panels

- Duplicate the Panel



github.com/tlsrhodes/youthcreate3d



Session03-Starter Project File.blend

Add files via upload



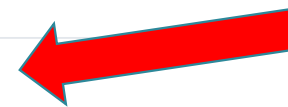
Tutorial 1-add a 2nd roof panel.gif

Add files via upload



Youth Create 3D World 01 final.pdf

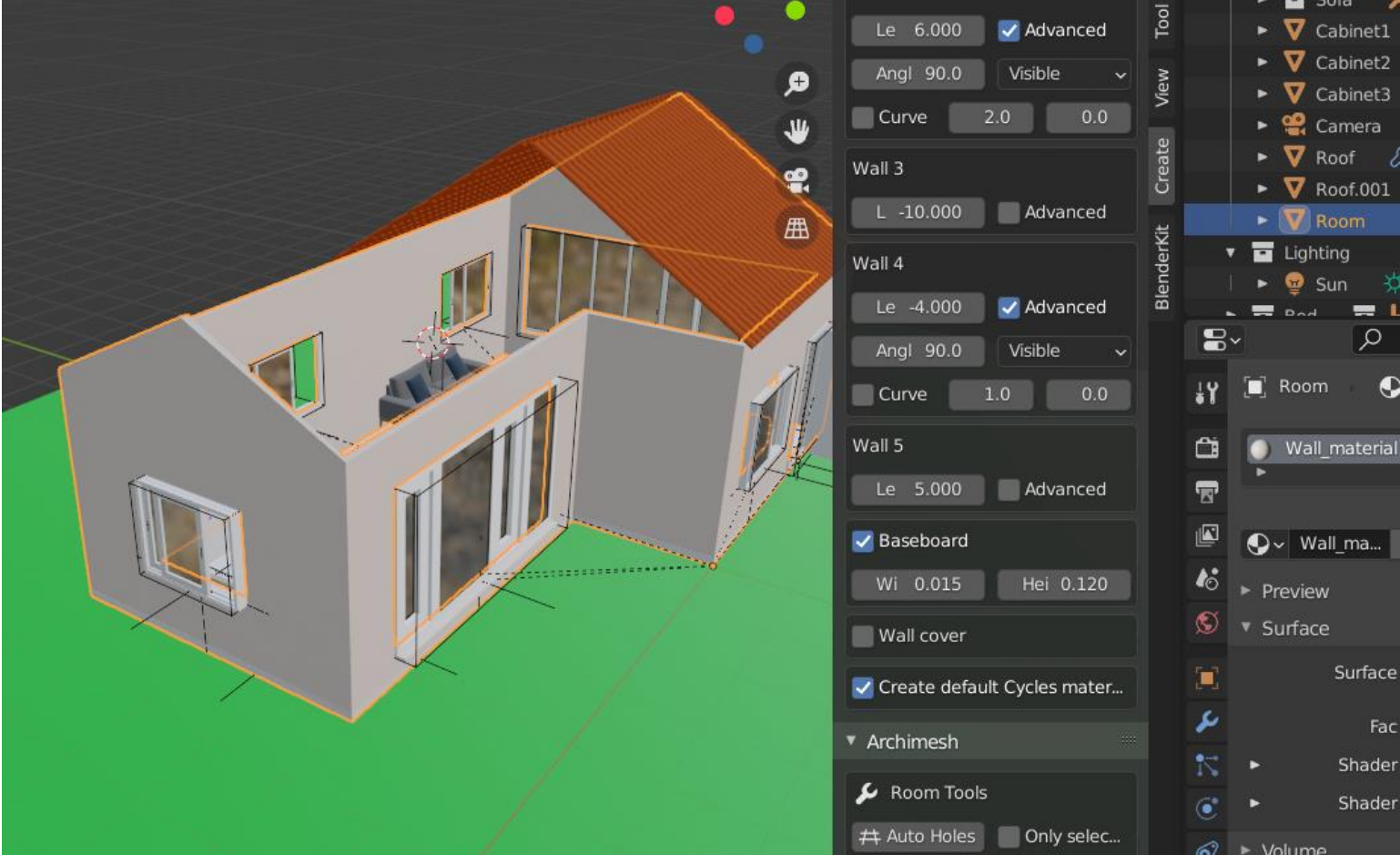
Add files via upload



You can check
one approach
here

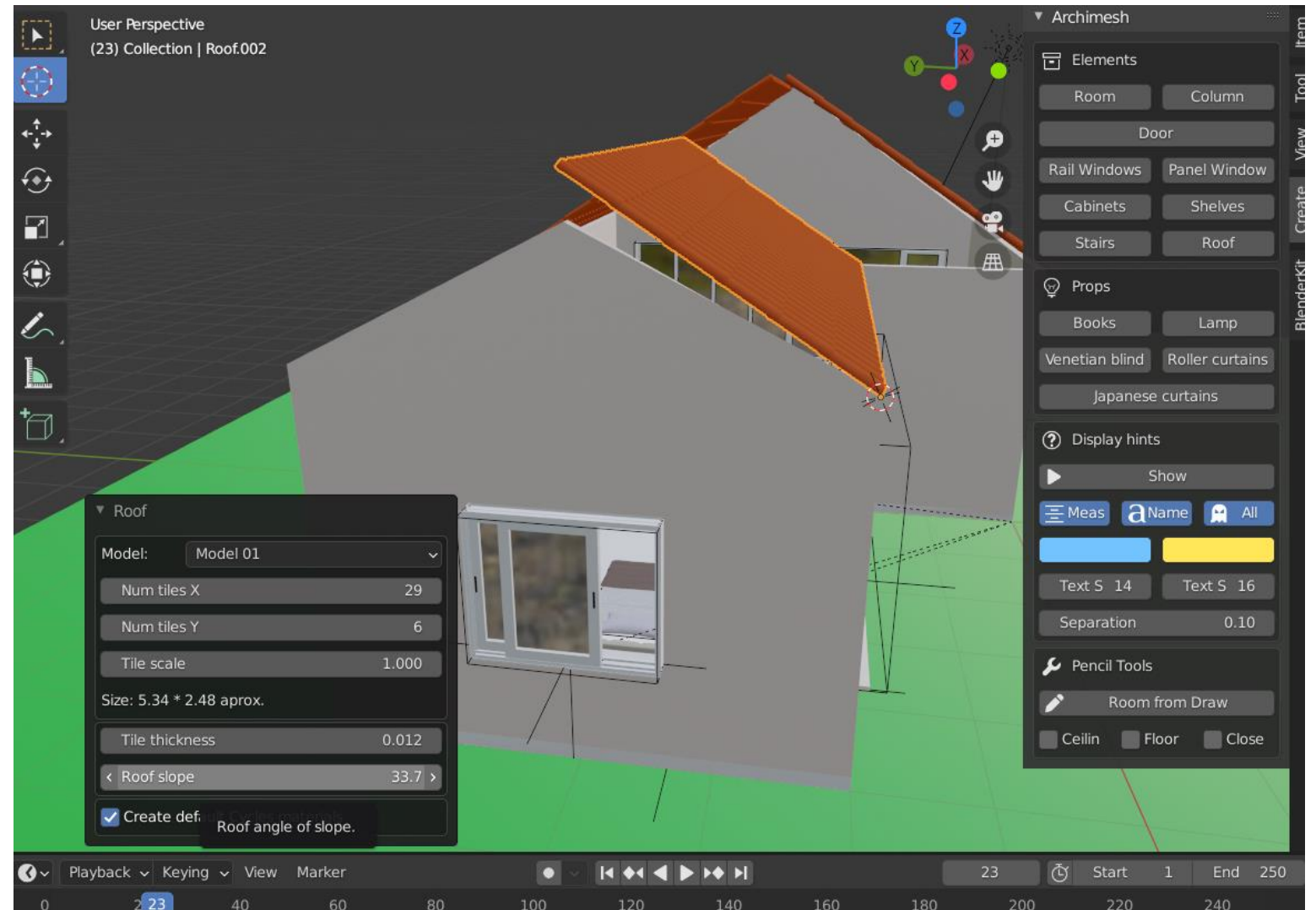
Add Roof Panels

- Repeat the previous steps for the other side
- Wall 4



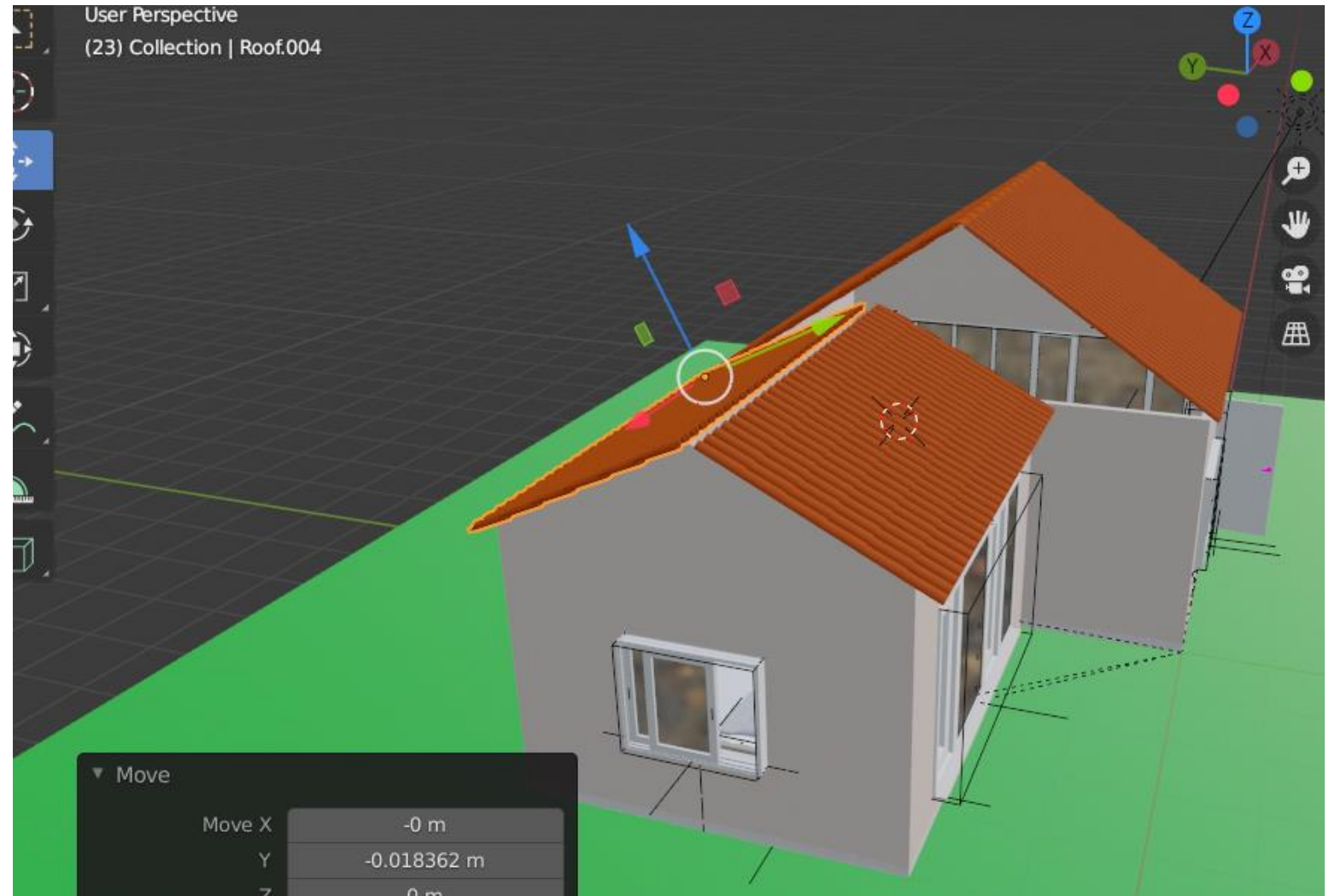
Add Roof Panels

- Adjust Num tiles Y
- Adjust Roof Slope



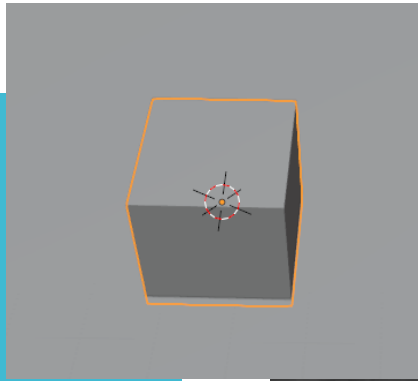
Add Roof Panels

- Repeat the previous steps for the other side



Add the middle beam (with a cube)

- Scale the cube to fill the gap



Add the middle beam (with a cube)

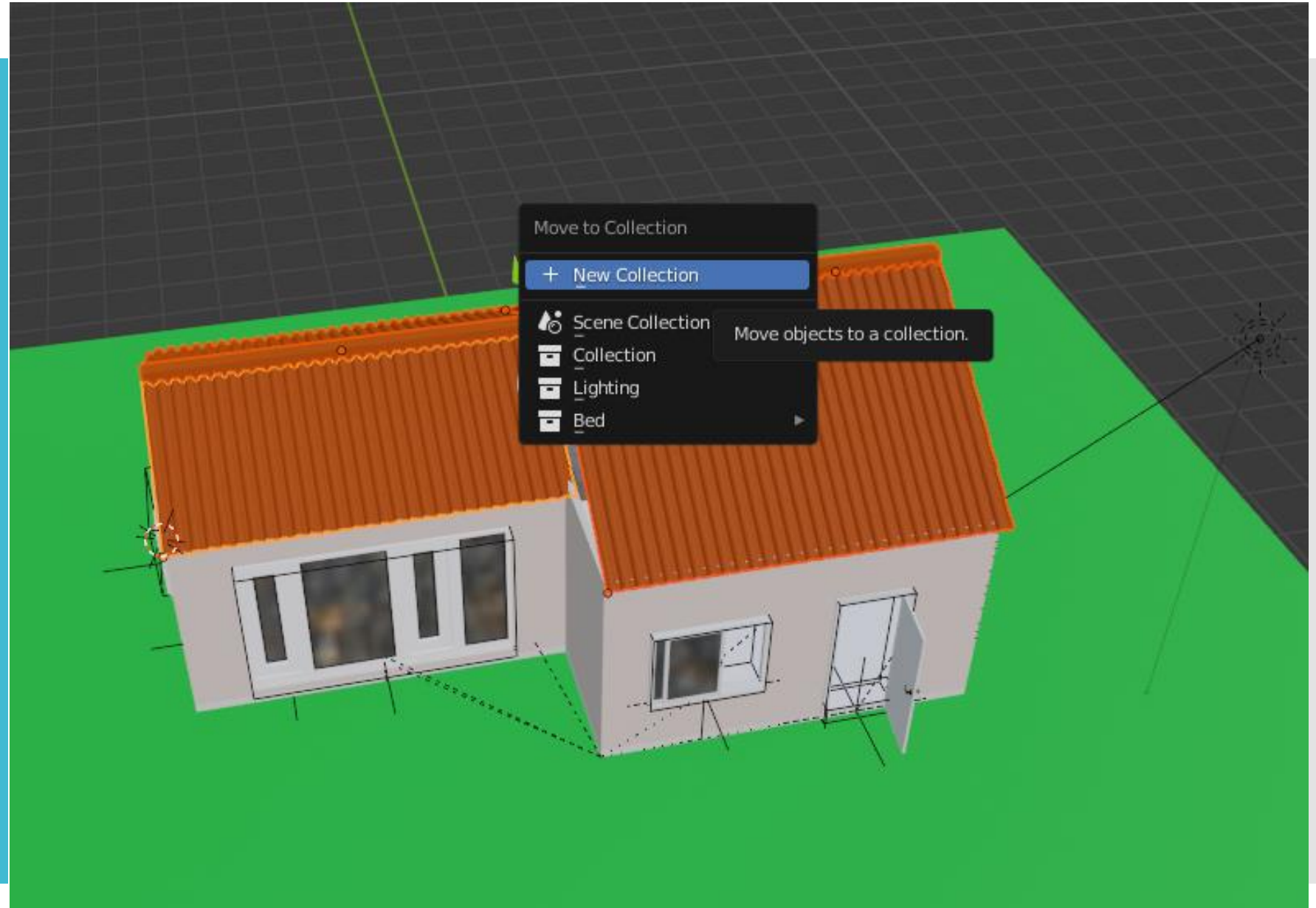
- Apply the roof material



Find the Roof Material

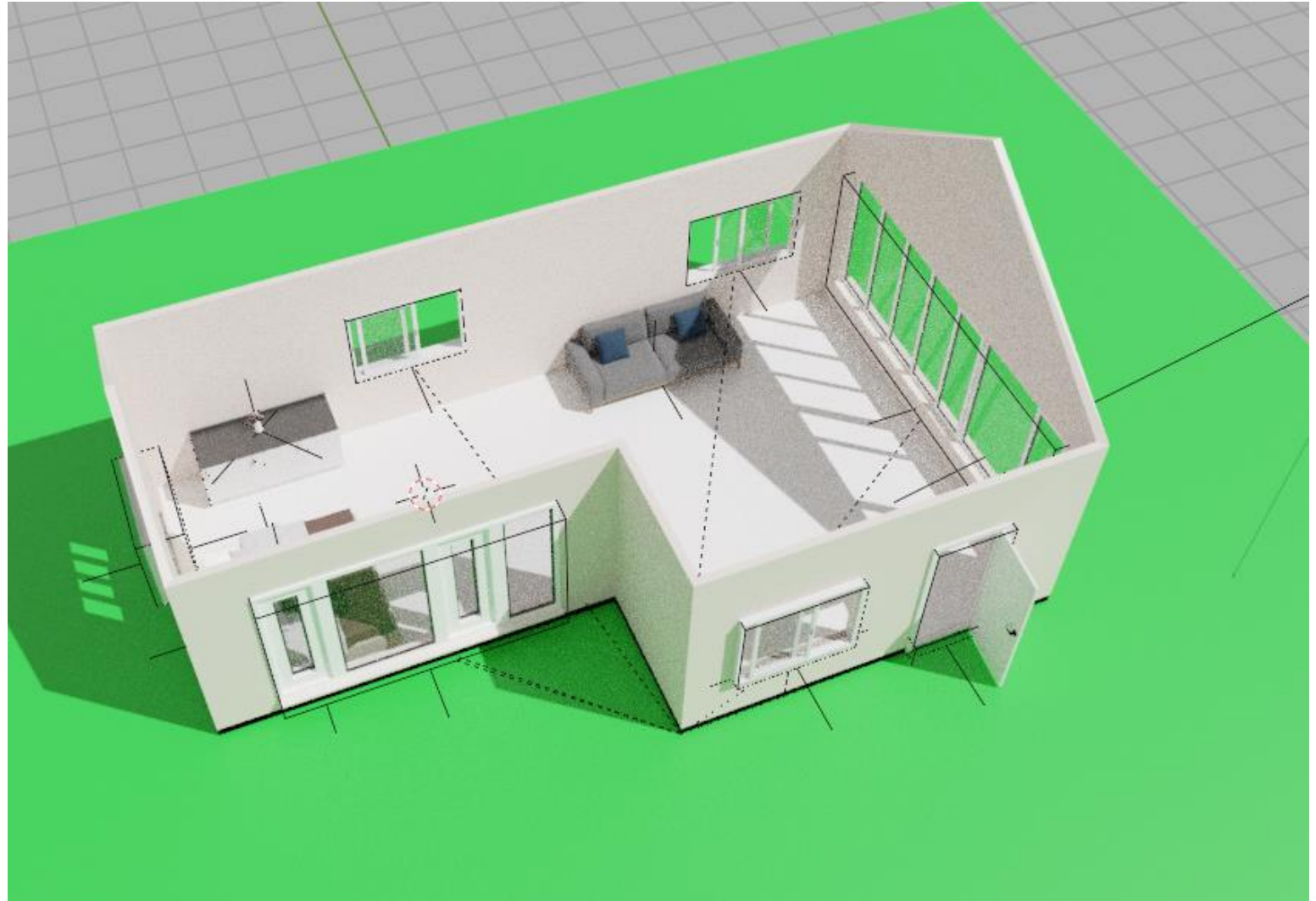
Add Lights in the room

- Put roof panels in a single collection (M key)
- Then hide this new group in the hierarchy



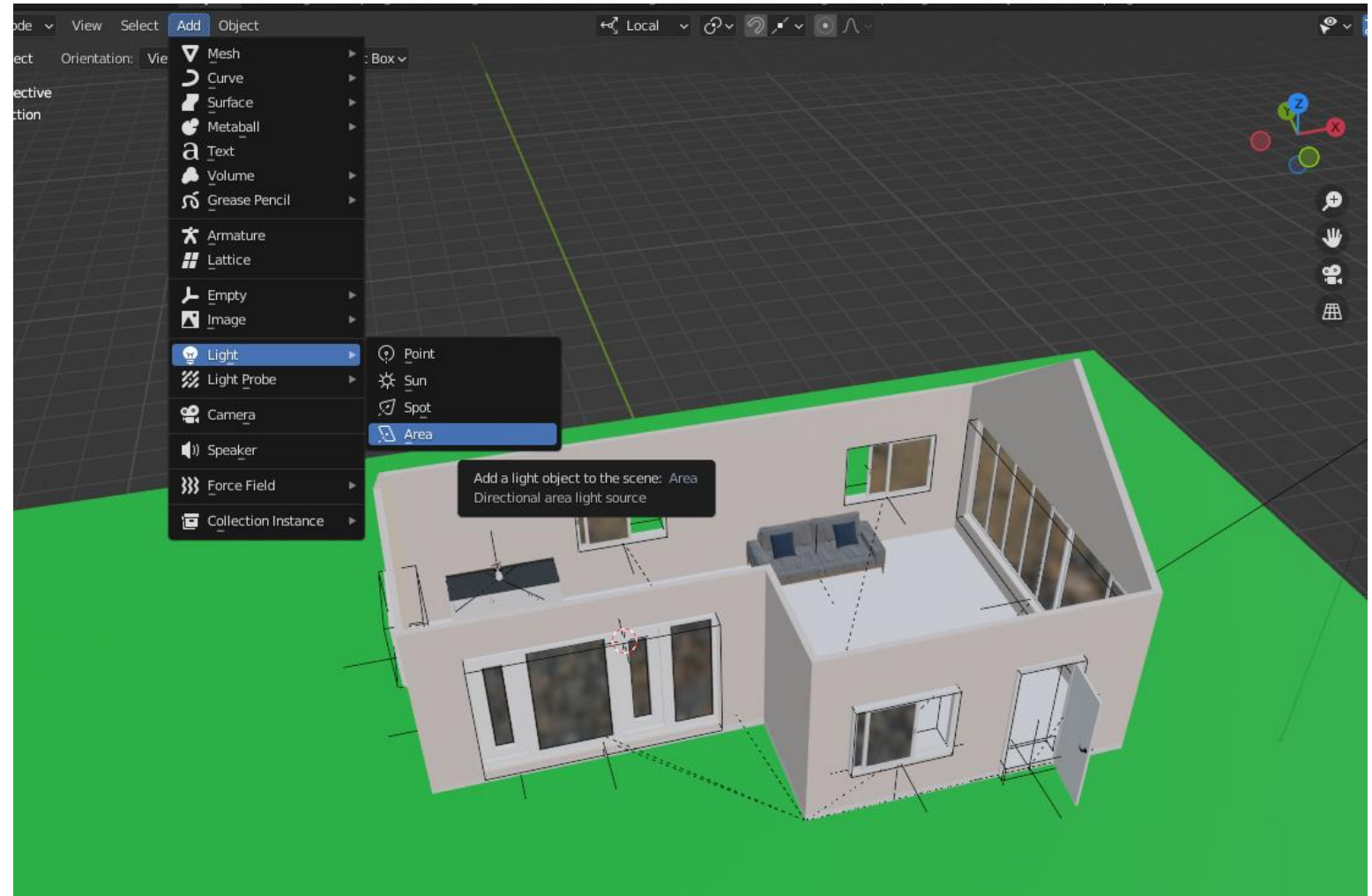
Add Lights in

- Use 3D cursor on the floor
- Move up along Z later



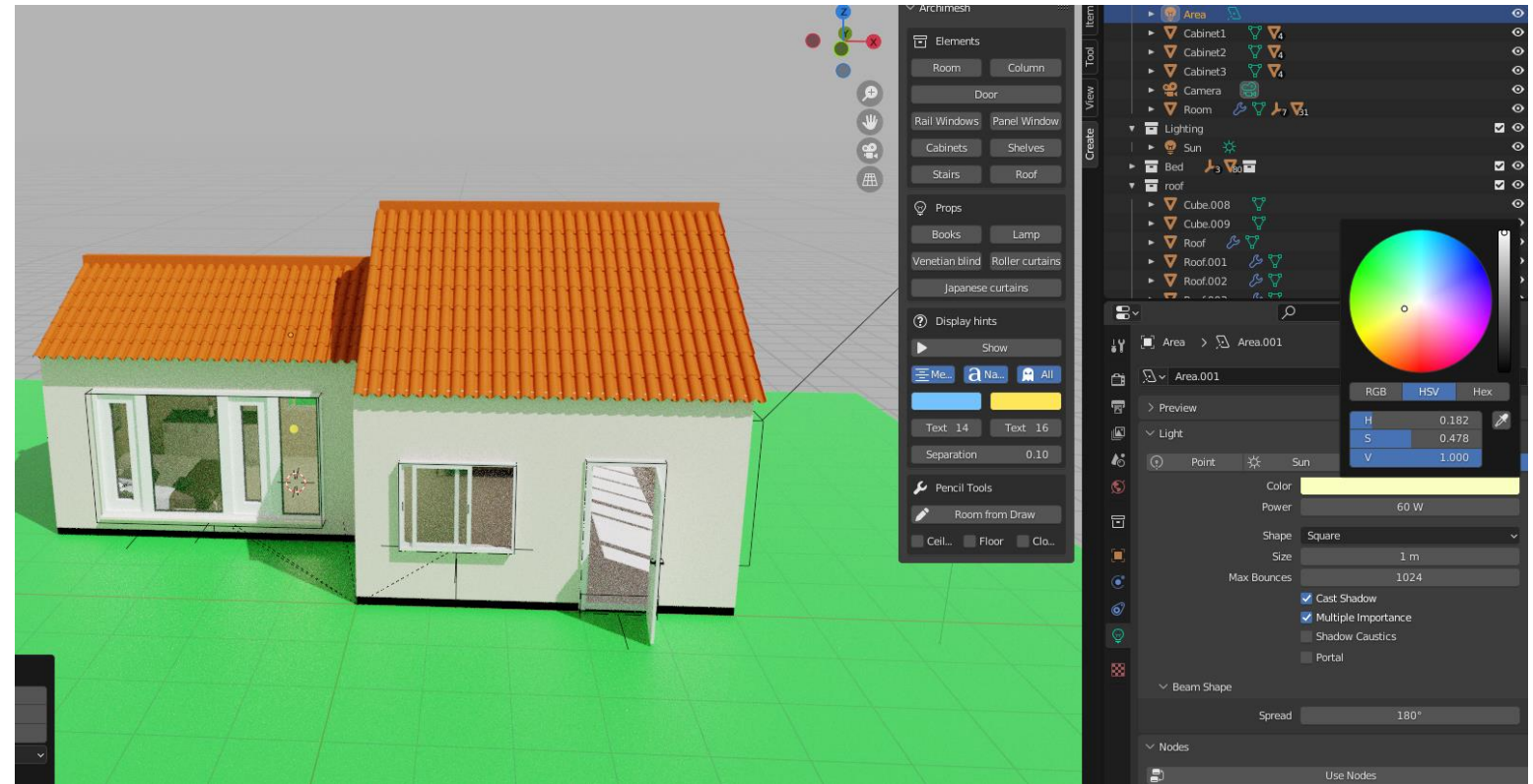
Use Area Light

- Use 3D cursor on the floor
- Move up along Z later



Change Light Setup

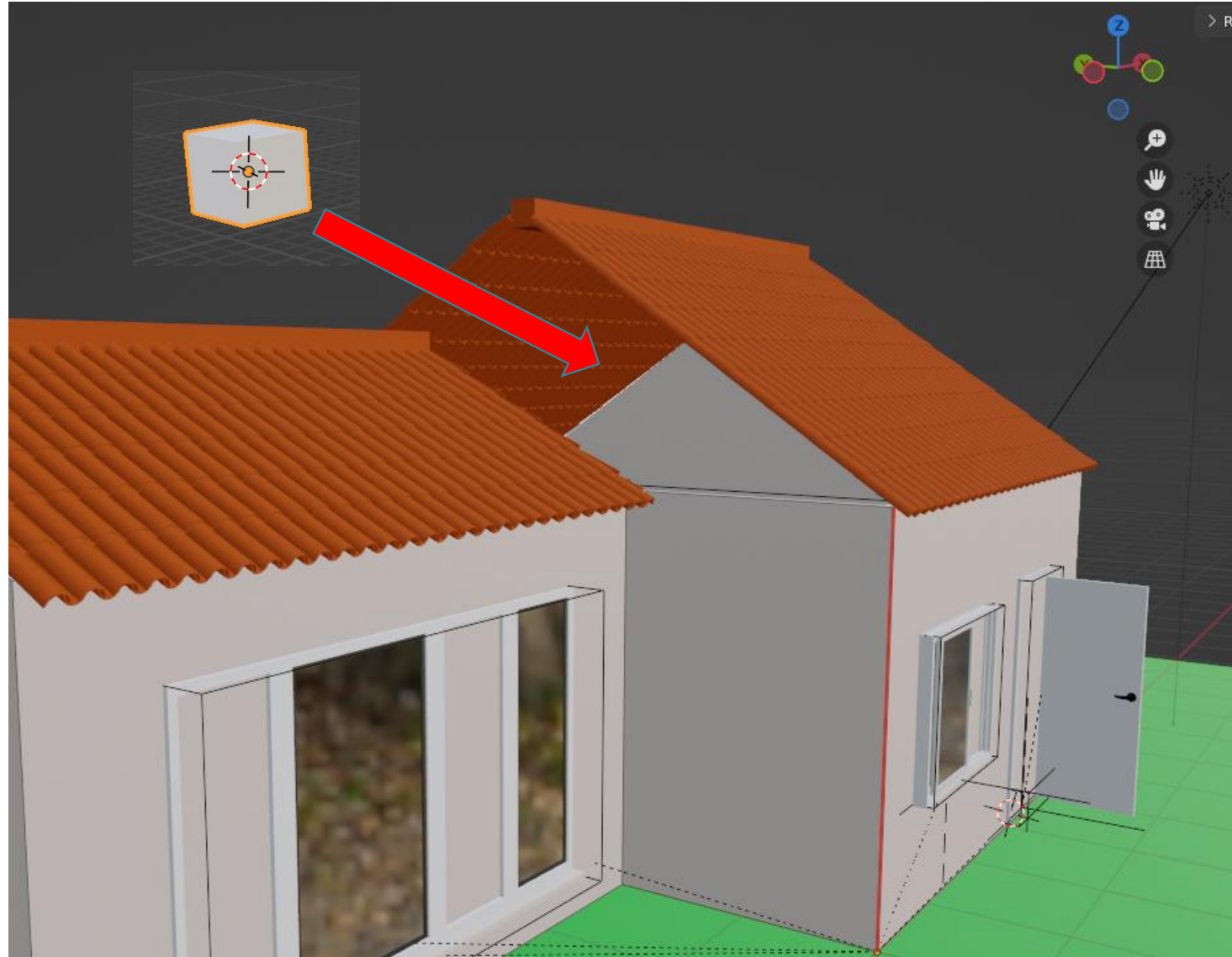
- Try different colors
- Increase the Power



Homework

Can you use a cube to fill the Gap?

Hint: Edit Mode, move edges ...

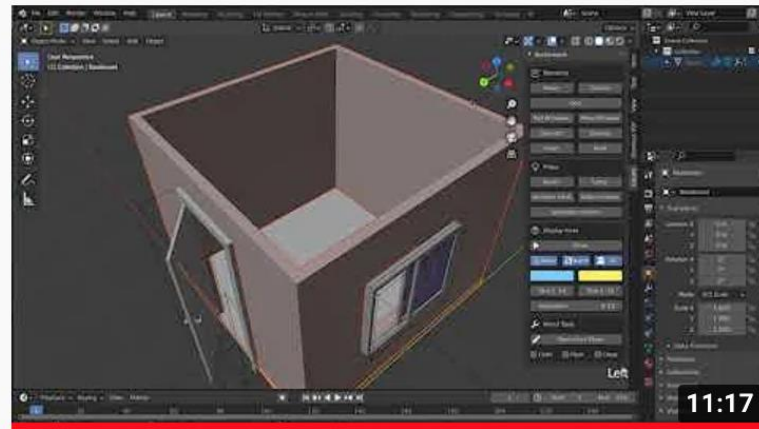


Play time:

- add furniture
- change materials
- add or change lighting
- render new images
- work on your own house



Some Good Learning Resource



Blender 2.9 3D Architecture 1- Build a Simple House

82K views • 1 year ago

A Applied Adaptive Learning

We built a simple house model using the Archimesh package in blender, which al

<https://youtu.be/LaUVDQ8eFSY>



Part 3-Blender Beginner Tutorial (Modelling the House)

21K views • 1 year ago

 Ryan King Art

Welcome to part 3 of my Complete Blender Beginner Tutorial Series. In this part, we wi



A: Select All Objects | X: Delete Selected Objects | Shift + A: Add Menu | Sc

<https://youtu.be/gyPHCDPvkoI>



Blender 3.0 Beginner Donut Tutorial

Blender Guru ✓

Blender 3.0 Beginner Tutorial - Part 1 • 16:43

Blender 3.0 Beginner Object Editing Tutorial (Donut part 2) • 21:17

[VIEW FULL PLAYLIST](#)

<https://youtu.be/nIoXOpIUvAw>

Thank you 😊

lailei.huang@canadabay.nsw.gov.au

Feedback
Welcome!