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Object modification – Extrude

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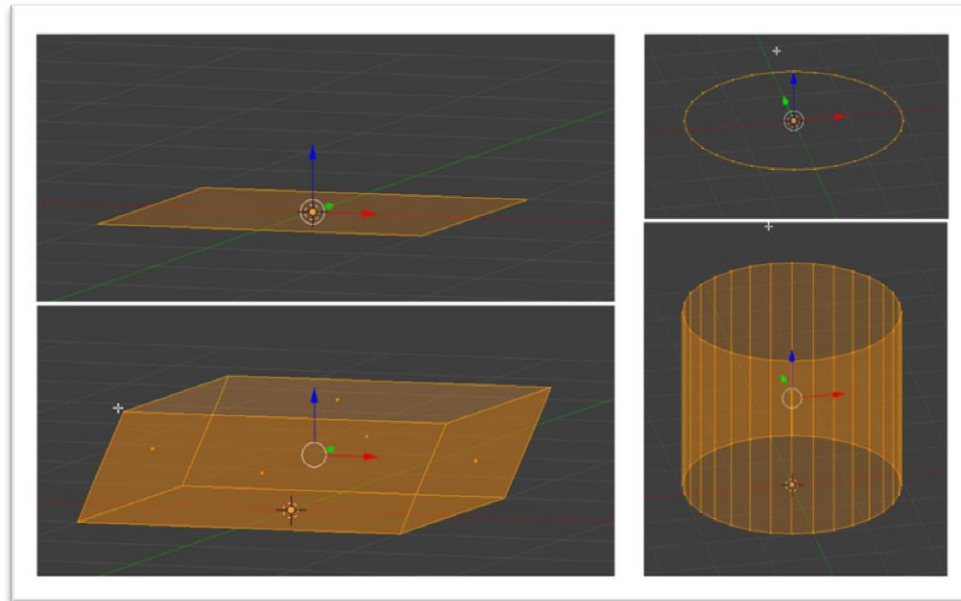
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Outline

- Extrude
  - Region
  - Edges Only
  - Vertices Only
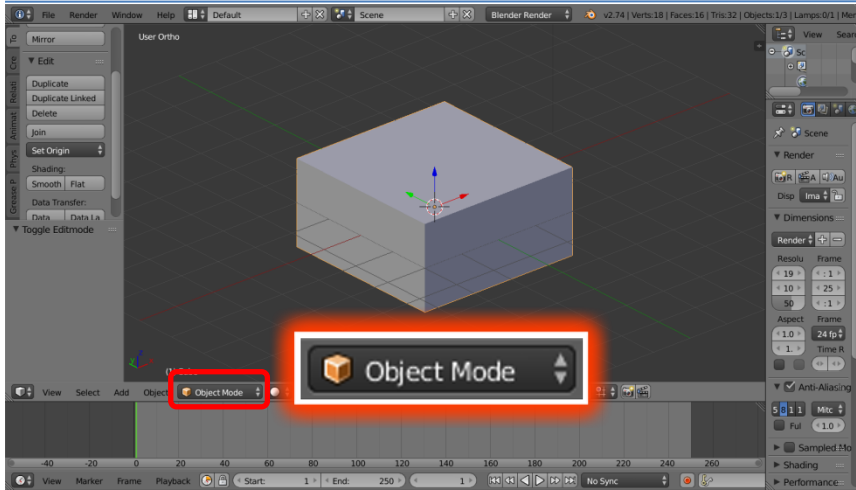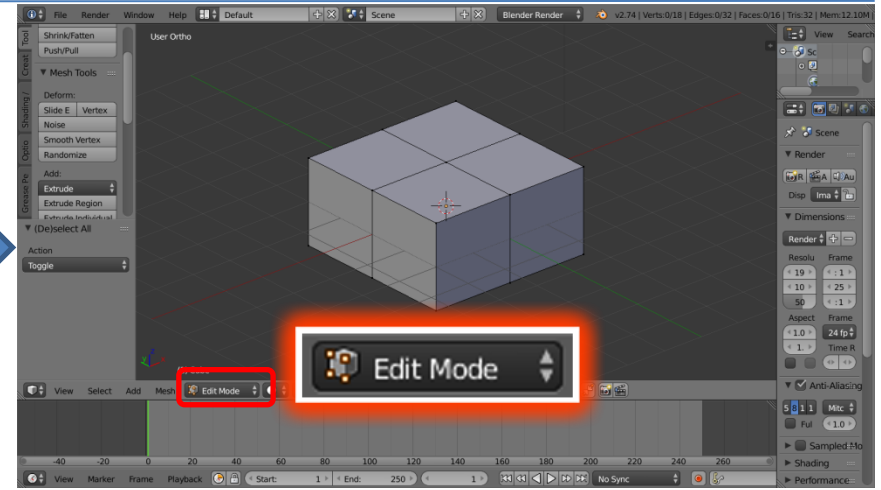- Create a 3-level Podium

Extrude

Extrude

- One of the most frequently used modelling tools in Blender
- Allows to create parallelepipeds from rectangles and cylinders from circles

Edit mode

Object mode

Edit mode
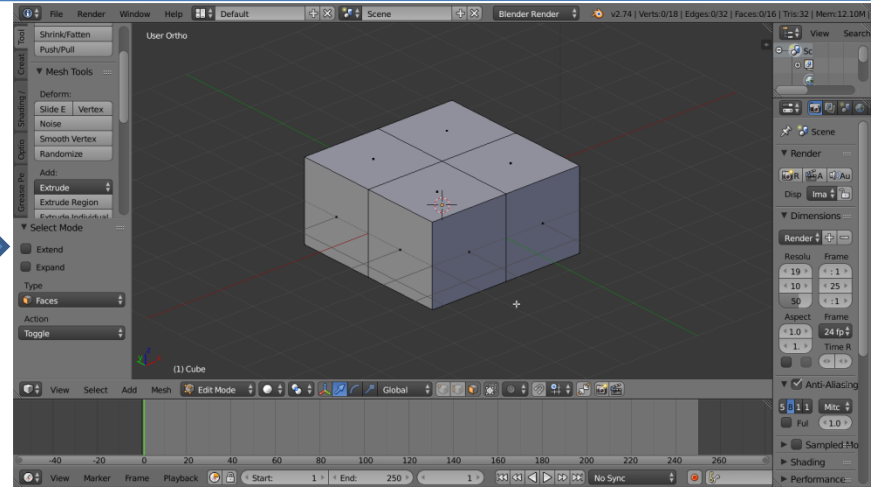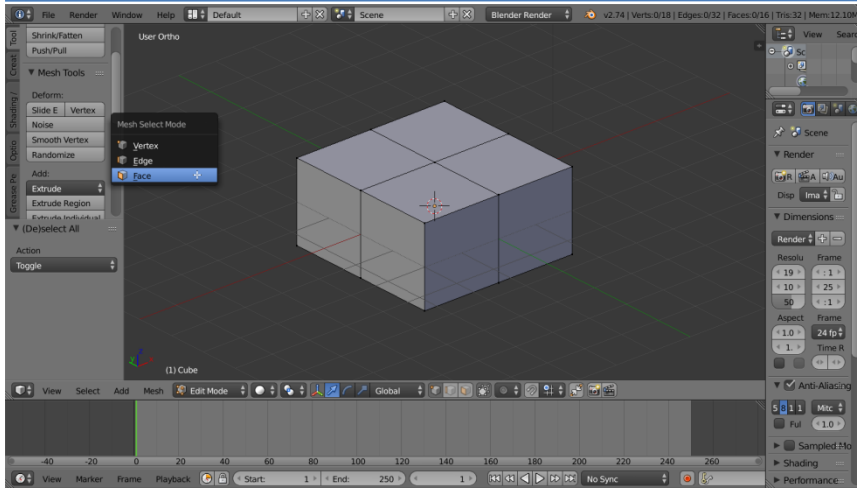
⌨ **Keyboard**	**Actions**
Tab	Toggle between Edit mode and Object mode

Face select mode

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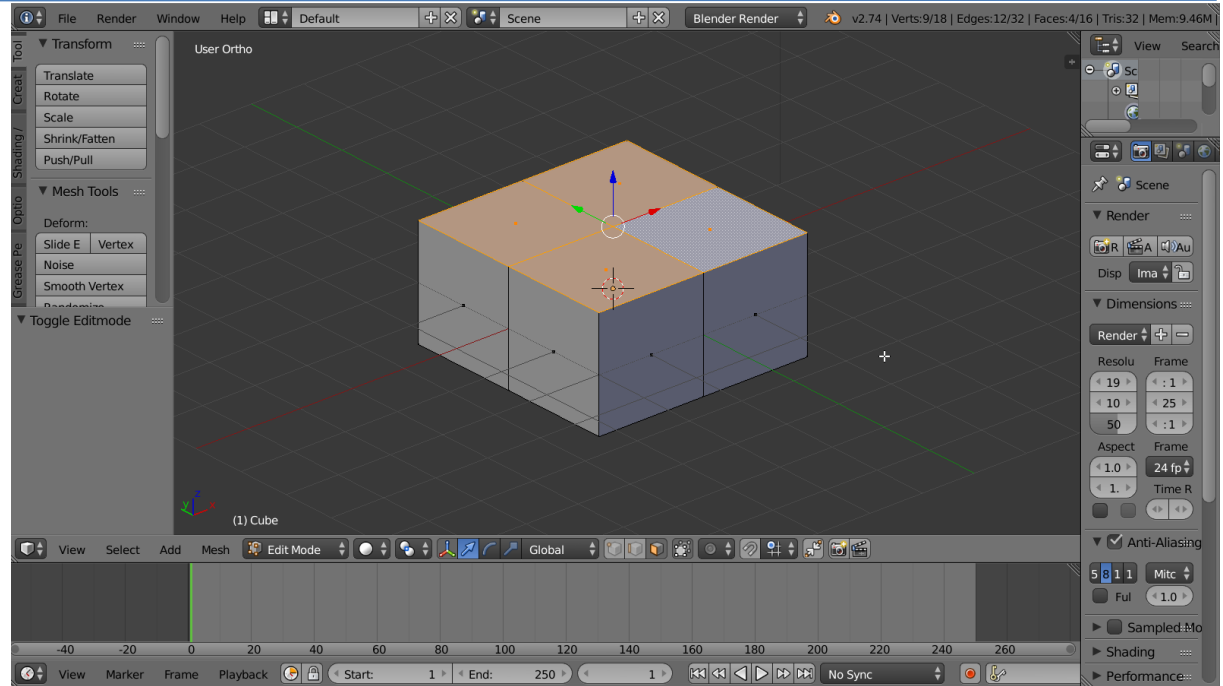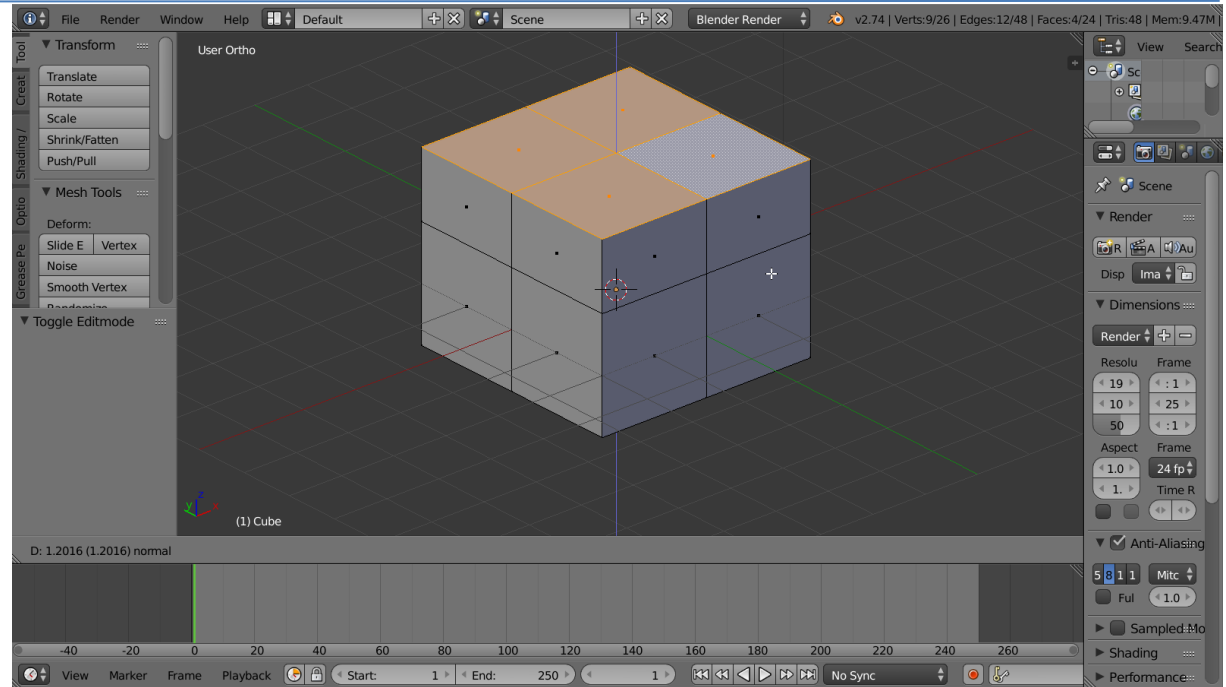| ⌨ **Keyboard**	**Actions**
Ctrl + Tab	Mesh select mode – Select Face option

Select faces

- Select top four faces
  (Shift + Right click)

Extrude - Region

- Extrude (E)

- Move mouse to extend the extruded faces

- To accept
  (Enter or Left click)
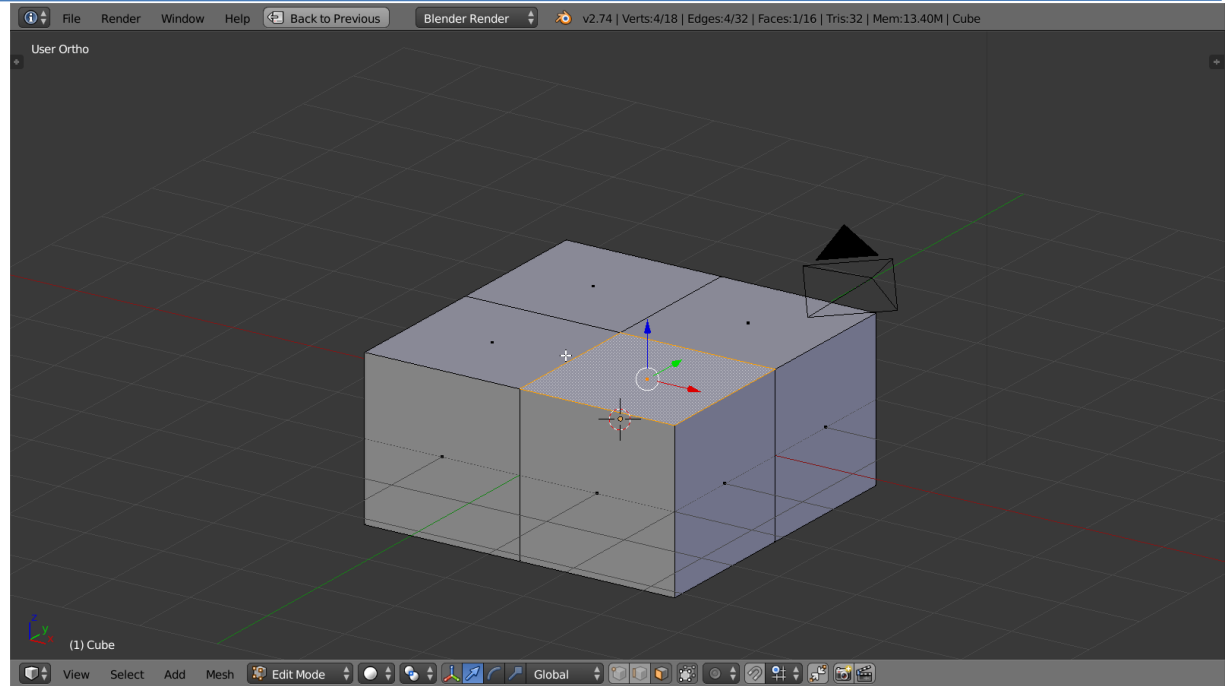
- To cancel
  (Esc or Right click)

Tip

- Extrusion can be limited to a single axis by specifying an axis (e.g. X to limit to the X axis or Shift-X to the YZ plane)

- Press Ctrl + Z after cancelling the Extrude command:
  - Faces are already created when the Extrude command is activated. Cancelling the Extrude command does not delete the already created faces
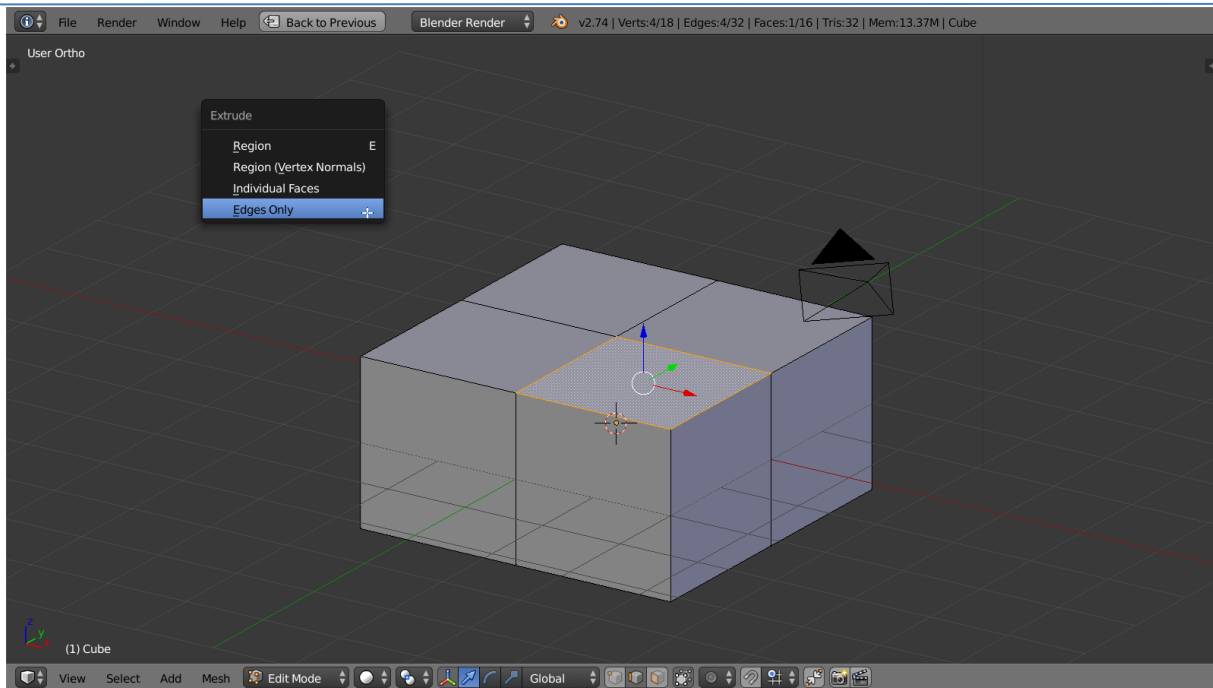 - Undo action is required to remove the unwanted faces

Extrude – Edge Only

Extrude – Edge Only

- Go to edit mode (Tab)
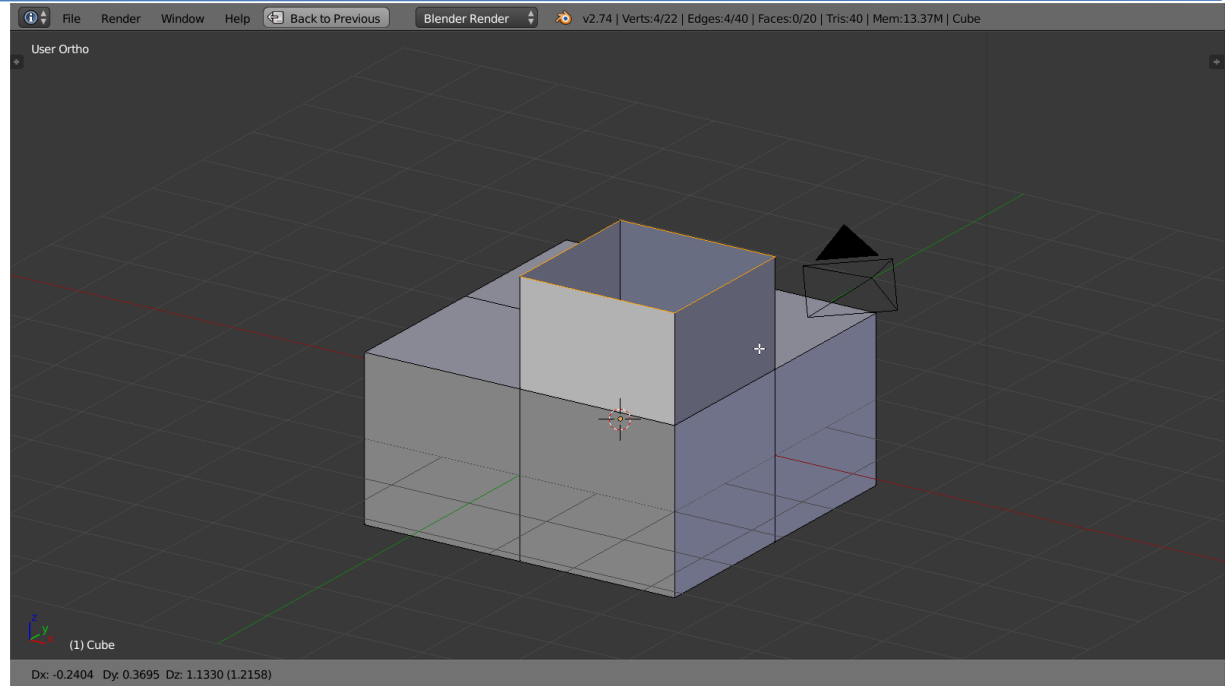
- Select a face
  (Right click)

Extrude – Edge Only

- Go to Edge selection mode (Ctrl + Tab)

- Extrude (Alt + E)

- Select Edges Only (Left click)

- Move mouse to extend the extruded faces

- To accept (Enter or Left click)

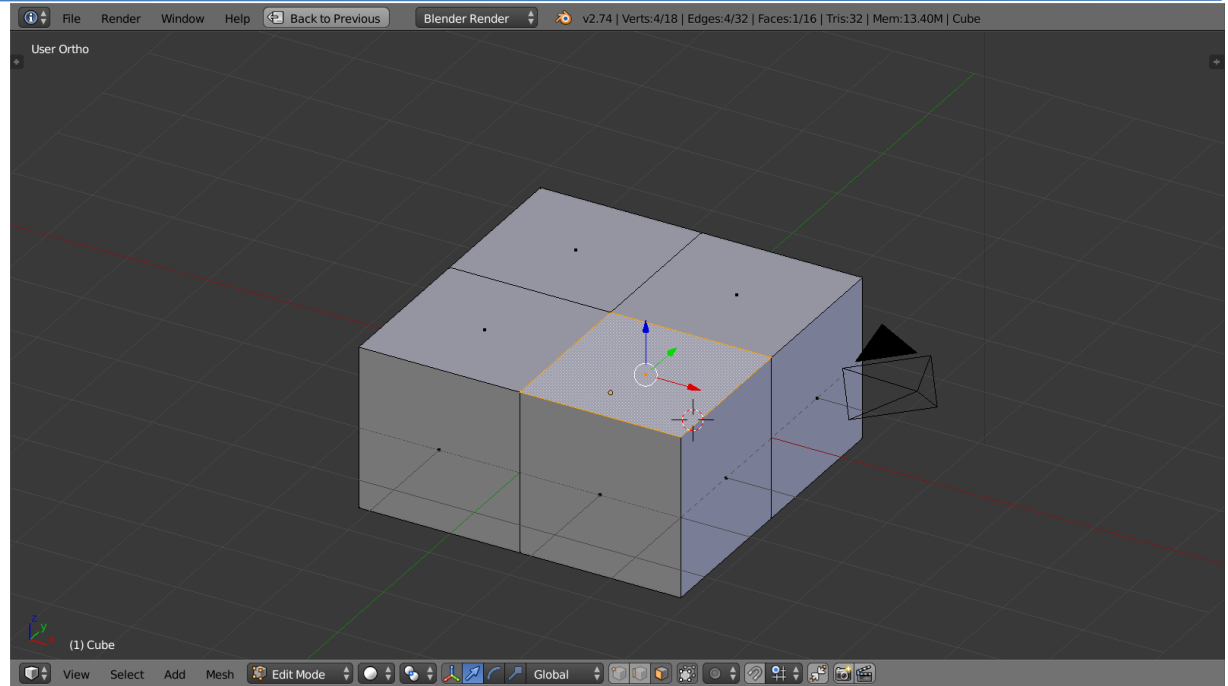- To cancel (Esc or Right click)

Extrude – Edge Only

It extrudes only edges of the selected face.
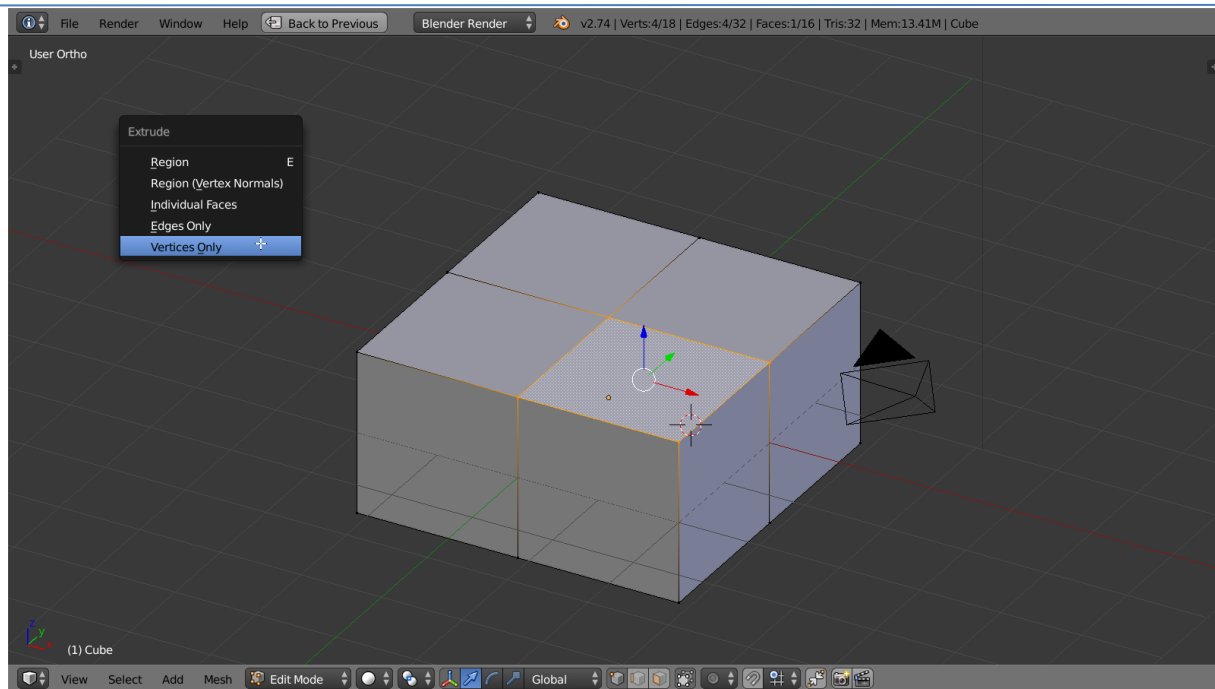
Extrude – Vertices Only

Extrude – Vertices Only

- Go to edit mode (Tab)
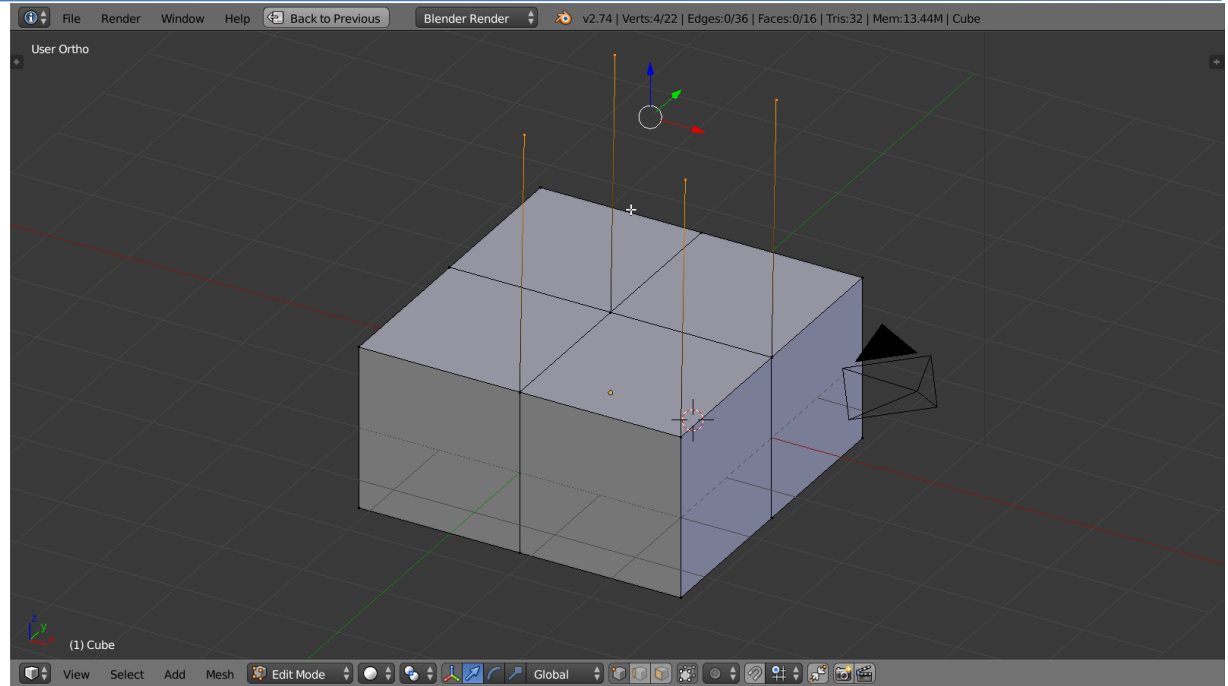- Select a face
  (Right click)

Extrude – Vertices Only

- Go to Vertex selection mode (Ctrl + Tab)

- Extrude (Alt + E)

- Select Vertices Only (Left click)

- Move mouse to extend the extruded faces

- To accept (Enter or Left click)

- To cancel (Esc or Right click)

Extrude – Vertices Only
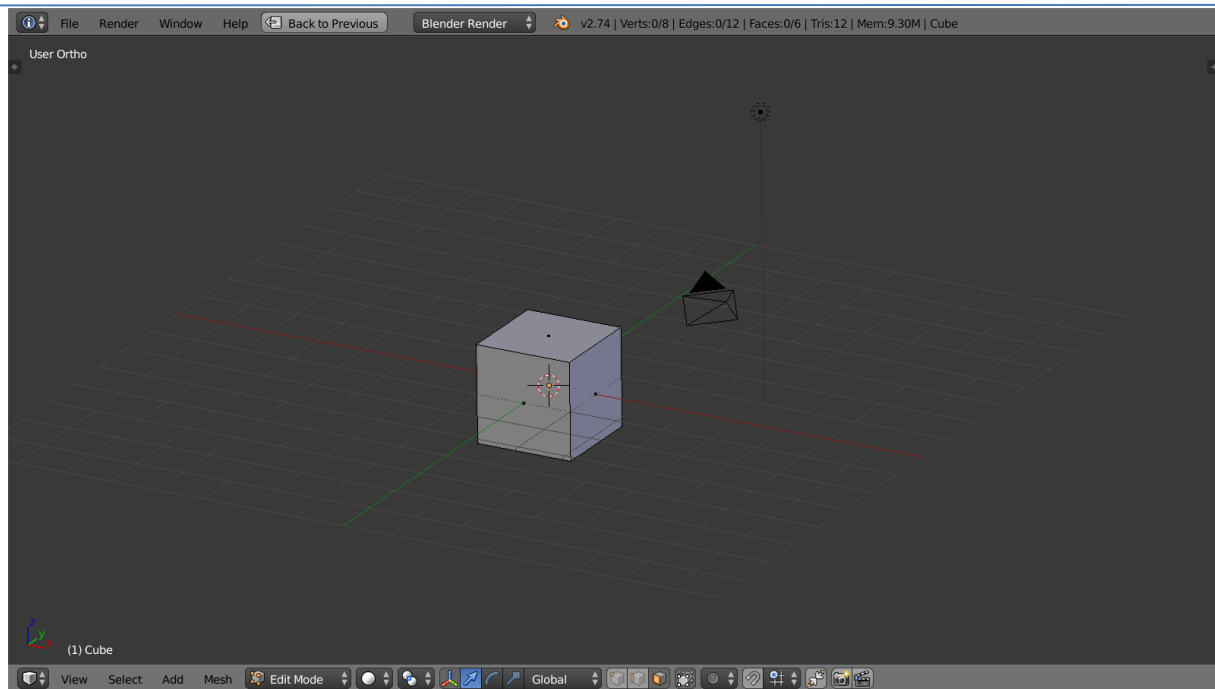
It extrudes only vertices of the selected face.

Create a 3-level podium

Step 1 – Default cube

- **Start new Blender file**
  (Ctrl + N)

- **Select the cube**
  (Right click)

- **Go to Edit mode (Tab)**

- **Go to Face select mode**
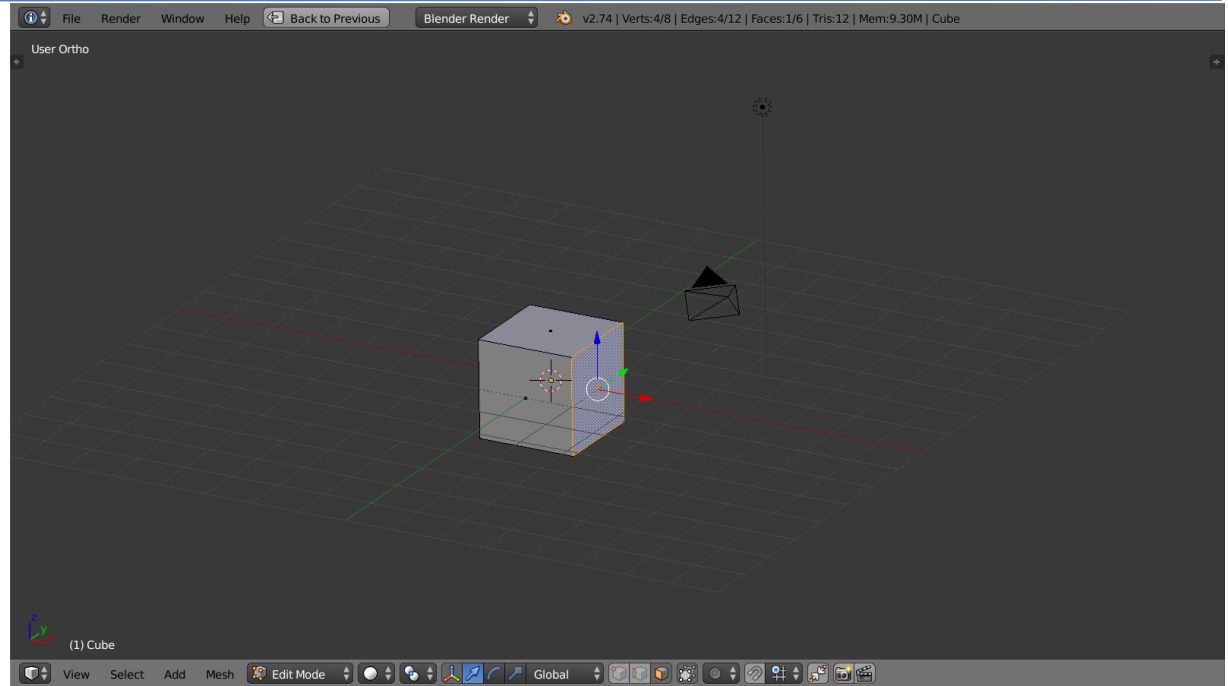 **(Ctrl + Tab)**

- **Deselect all the faces (A)**

Switch to orthographic view
(Numpad 5) for accuracy

Step 2 – Select face

To create the base of the podium
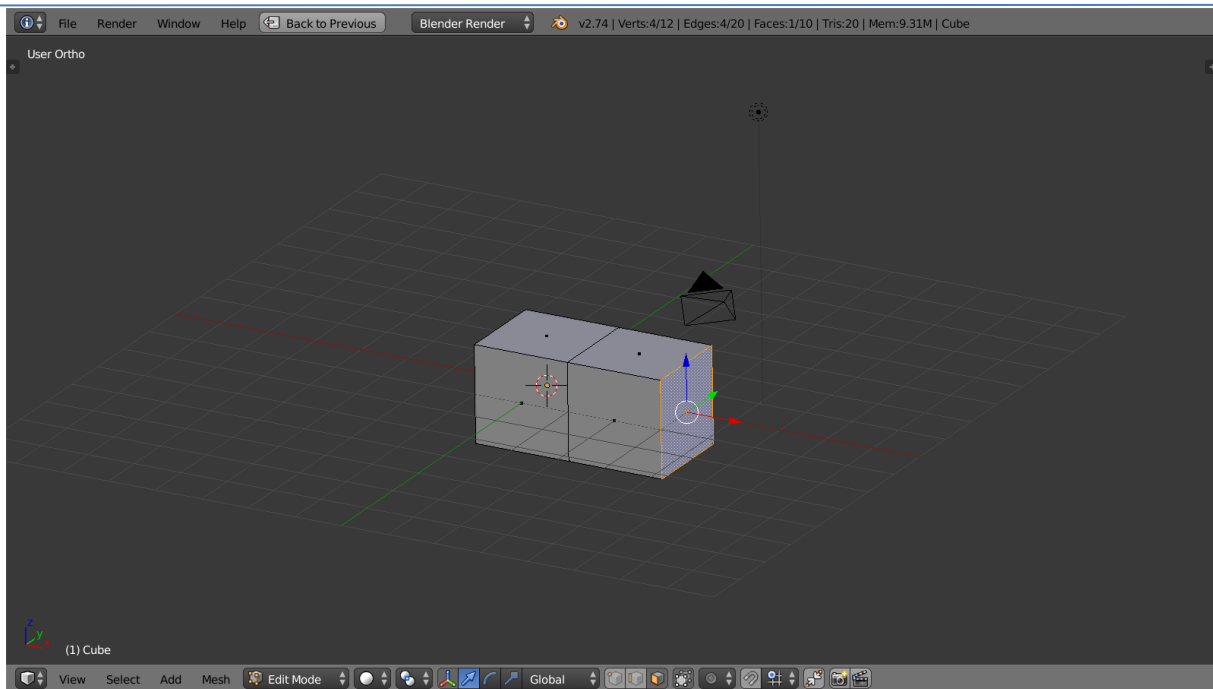
- Select the face on the right (Right click)

Step 3 – Extrude

To create the base of the podium

- Extrude horizontally by 2 units (E + 2)

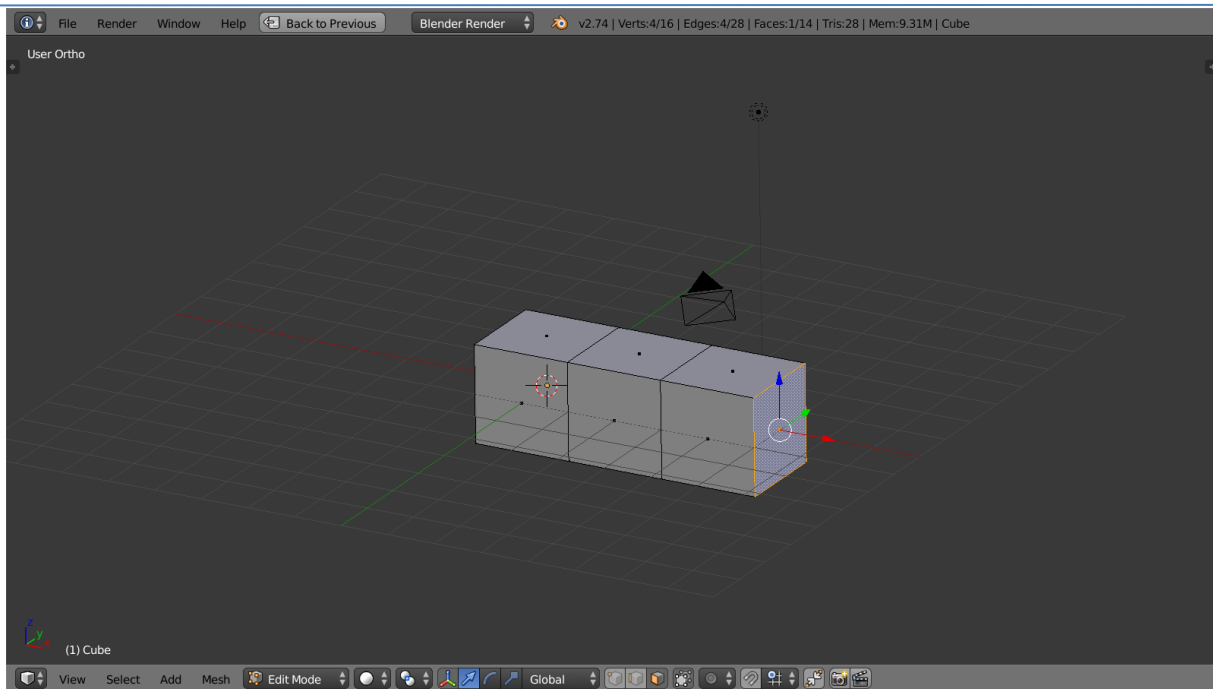By default, Extrude will be applied, perpendicular to the surface selected.

- To accept (Enter or Left click)

Step 3 – Extrude

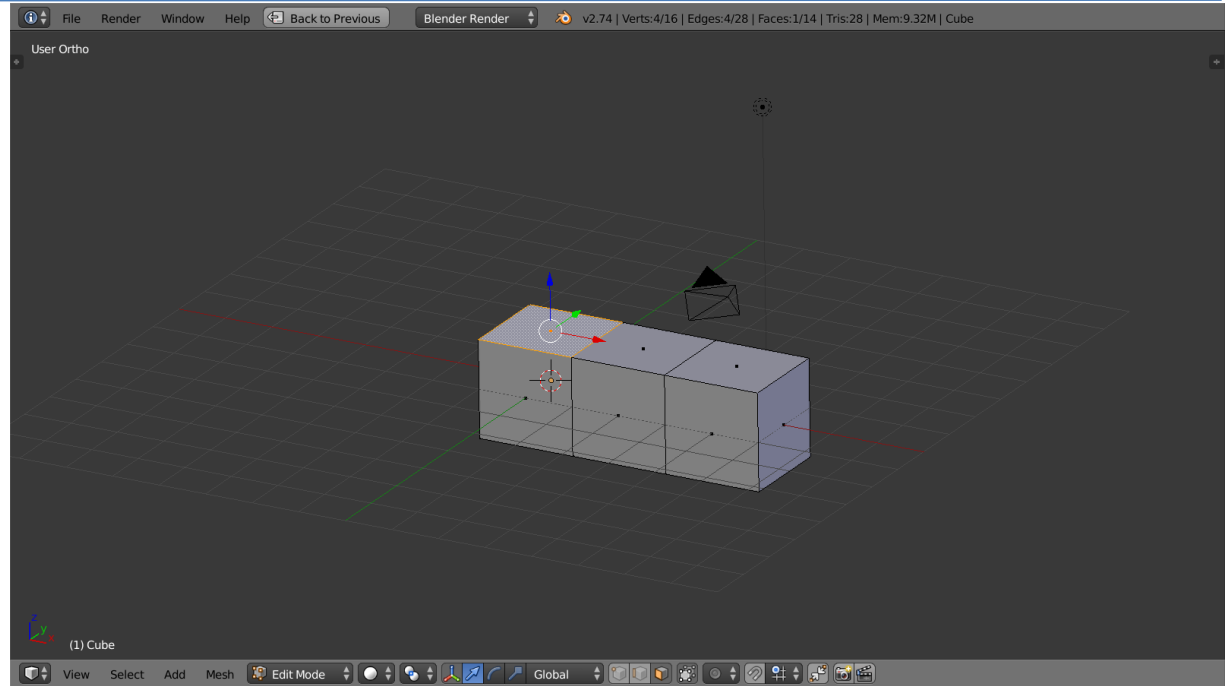Repeat the command, while the face on the right is selected.

- Extrude horizontally by 2 units (E + 2)

- To accept (Enter or Left click)

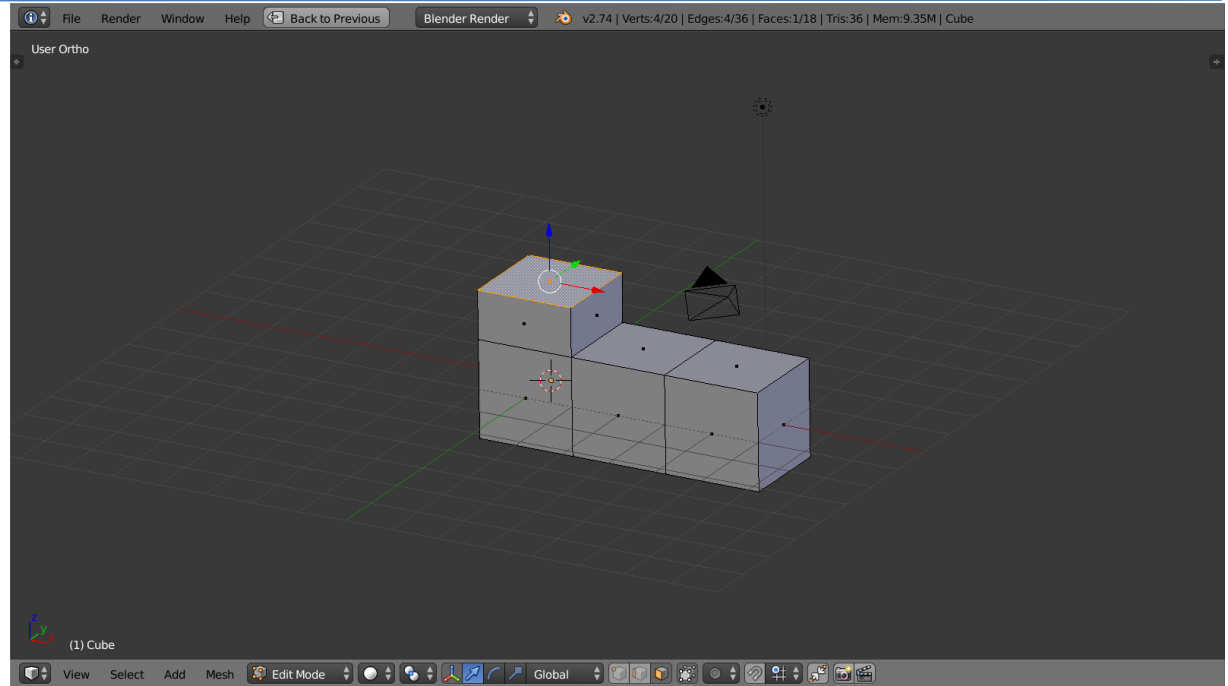# Step 4 – Podium levels

Bronze level (shortest)

- Select the rightmost
  face on the top surface
  (Right click)
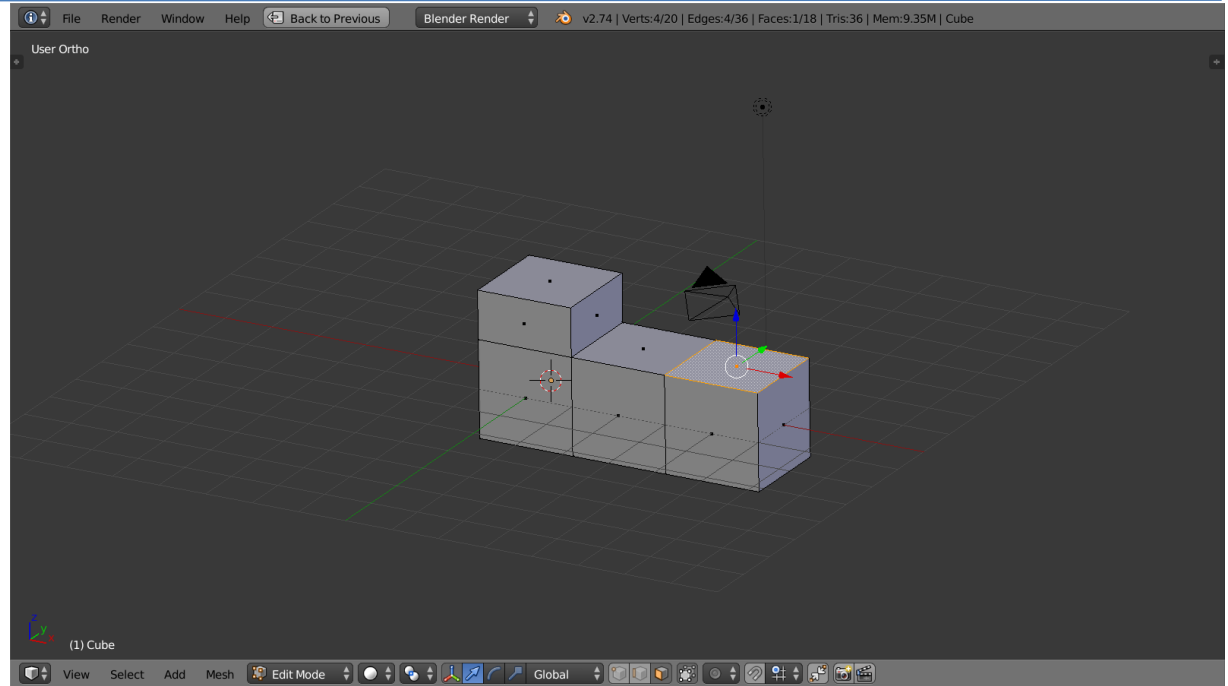
Step 4 – Podium levels

Bronze level (shortest)

- Extrude by one unit
  (E + 1)
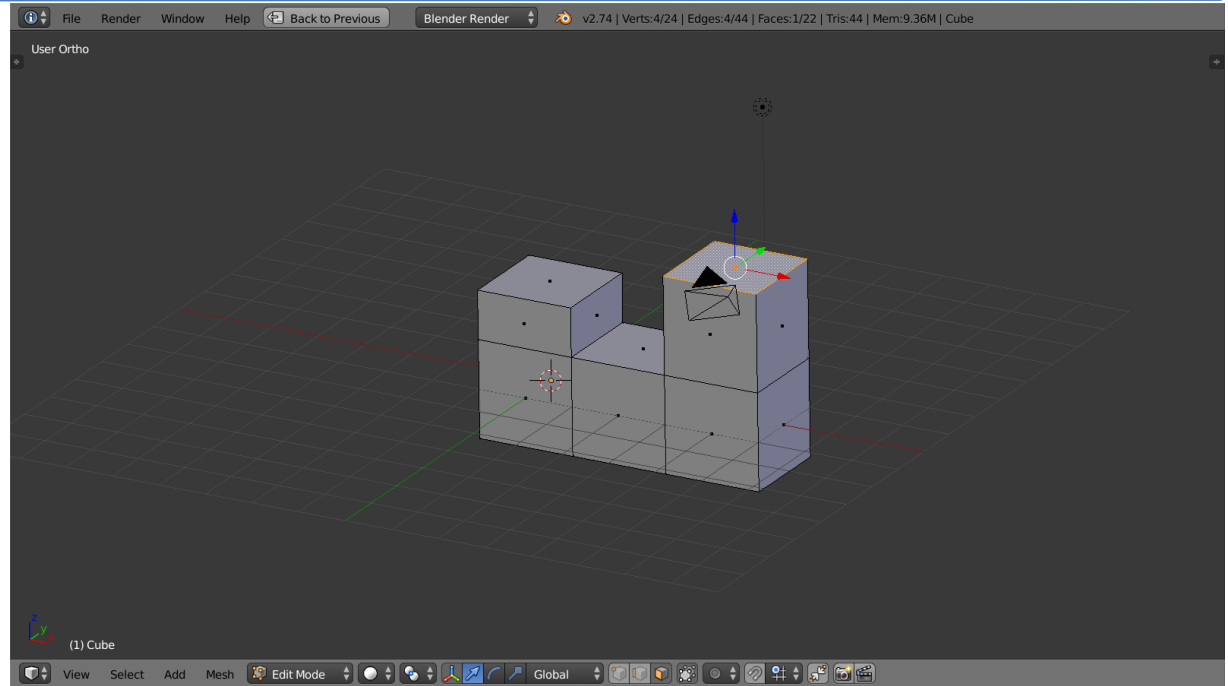
Step 4 – Podium levels

Silver level (middle)

- Select the leftmost face on the top surface (Right click)
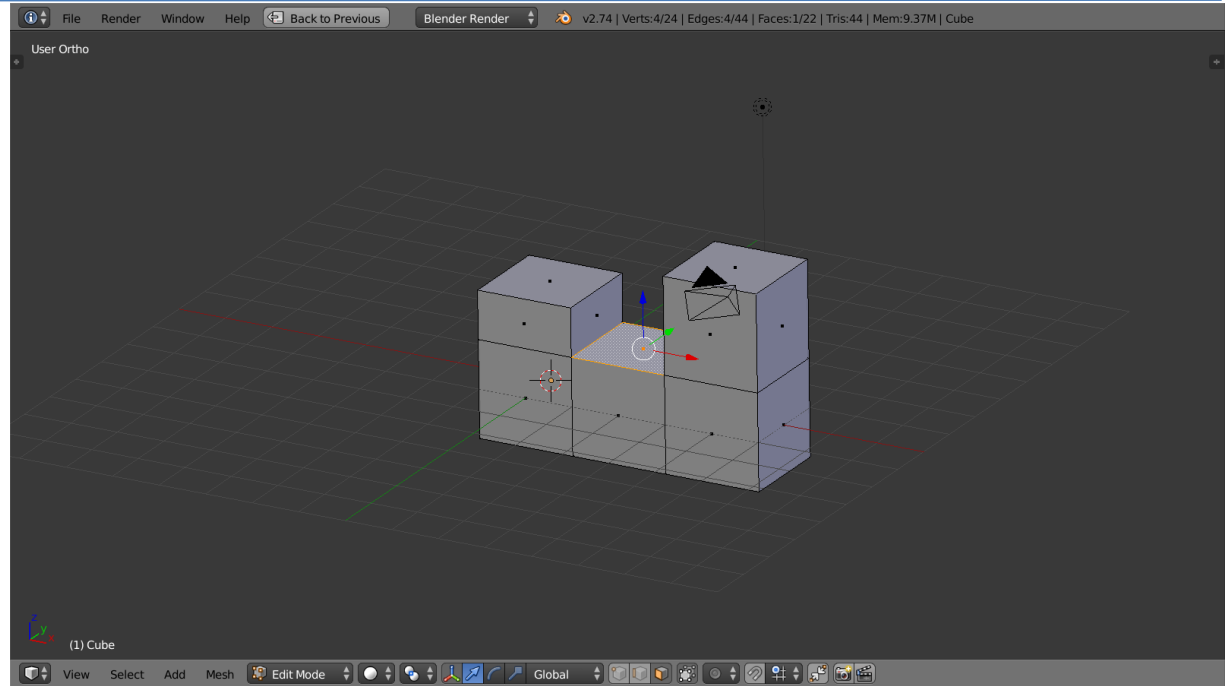
Step 4 – Podium levels

Silver level (middle)

- Extrude by two units
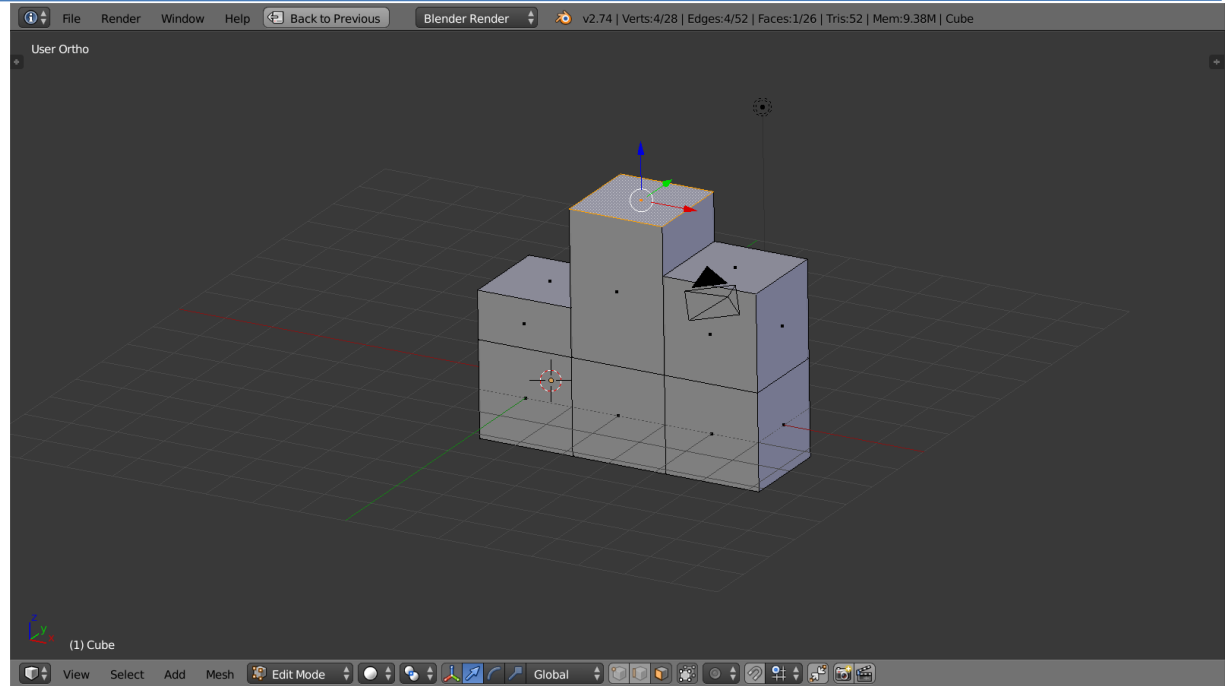 (E + 2)

Step 4 – Podium levels

Gold level (highest)

- Select the middle face on the top surface
  (Right click)
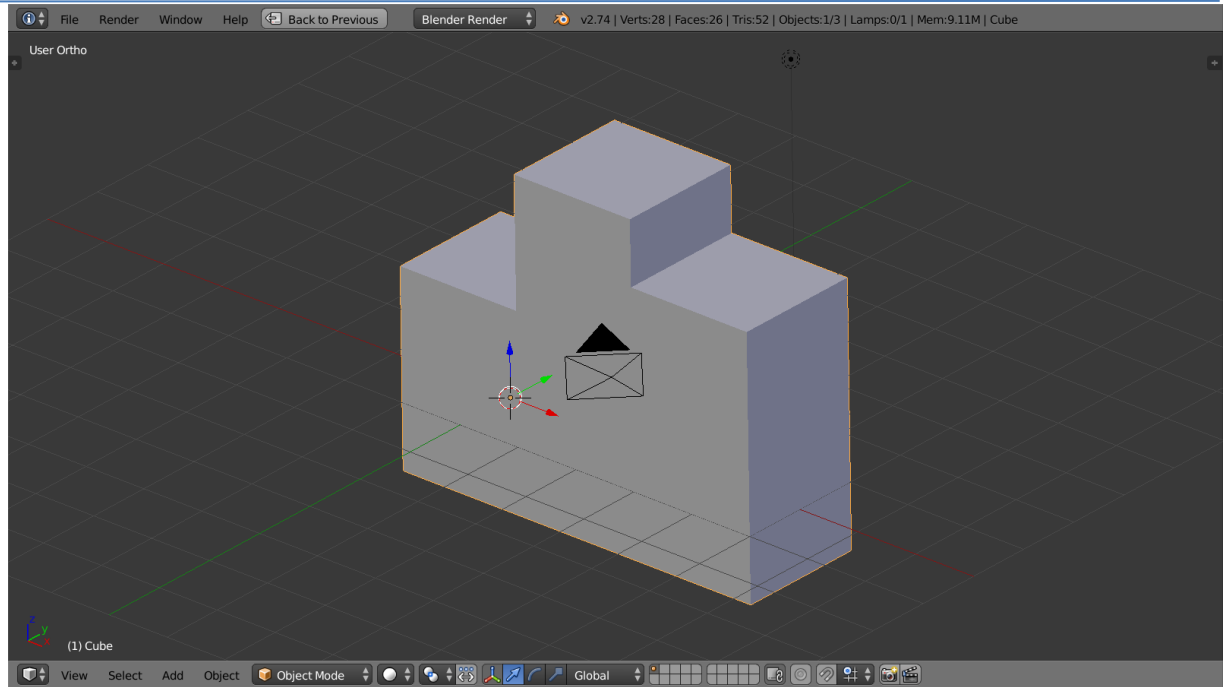
Step 4 – Podium levels

Gold level (highest)

- ▪ Extrude by three units (E + 3)

Step 4 – Podium levels

- Object mode (Tab)

Podium is ready!

Next session

Modeling demo

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