

Join the Canvas!



DevLUp FSU

GBM #9

INTRO TO 3D MODELING IN BLENDER

Upcoming events: INNOVATION HUB HALLOWEEN SOCIAL
IMMEDIATELY AFTER THIS

Welcome!

Meeting Schedule

Date	GBM GBM Title	Secondary Event	Presenter
28 Aug	(No Meeting)	(Involvement fair?)	
4 Sep	Hello! Introduction and Icebreakers		Everyone
11 Sep	Intro to Unity		Jake & Ares
18 Sep	Art on a Budget (or How to Use Free Assets)		Calvin
25 Sep	Intro to Git and How to Work Together		Jackson & Hailie
2 Oct	PlayStation Recruiter Talk		Milan Sewell
9 Oct	Materialising Game Design: Planning and Prototyping		Marsh
16 Oct	1-Hour Design Jam	DevilUp Horror Jam (17-19)	David
23 Oct	Mechanics vs. Narrative: an Exploration	DevilUp Horror Jam Showoff	Calvin
16 Oct	Intro to Blender Modelling		Jake & Ares
6 Nov	Linear Narratives and the Almighty Flowchart		Calvin
13 Nov	3D Animation		Jake & Ares
20 Nov	Puzzle Design		Marsh
27 Nov	Thanksgiving		Squanto
4 Dec	What Have We Learned? A Discussion	Project milestone	Everyone
11 Dec	Finals Week!		No one?

Download Blender



<https://www.blender.org/download/>

# showoff recap

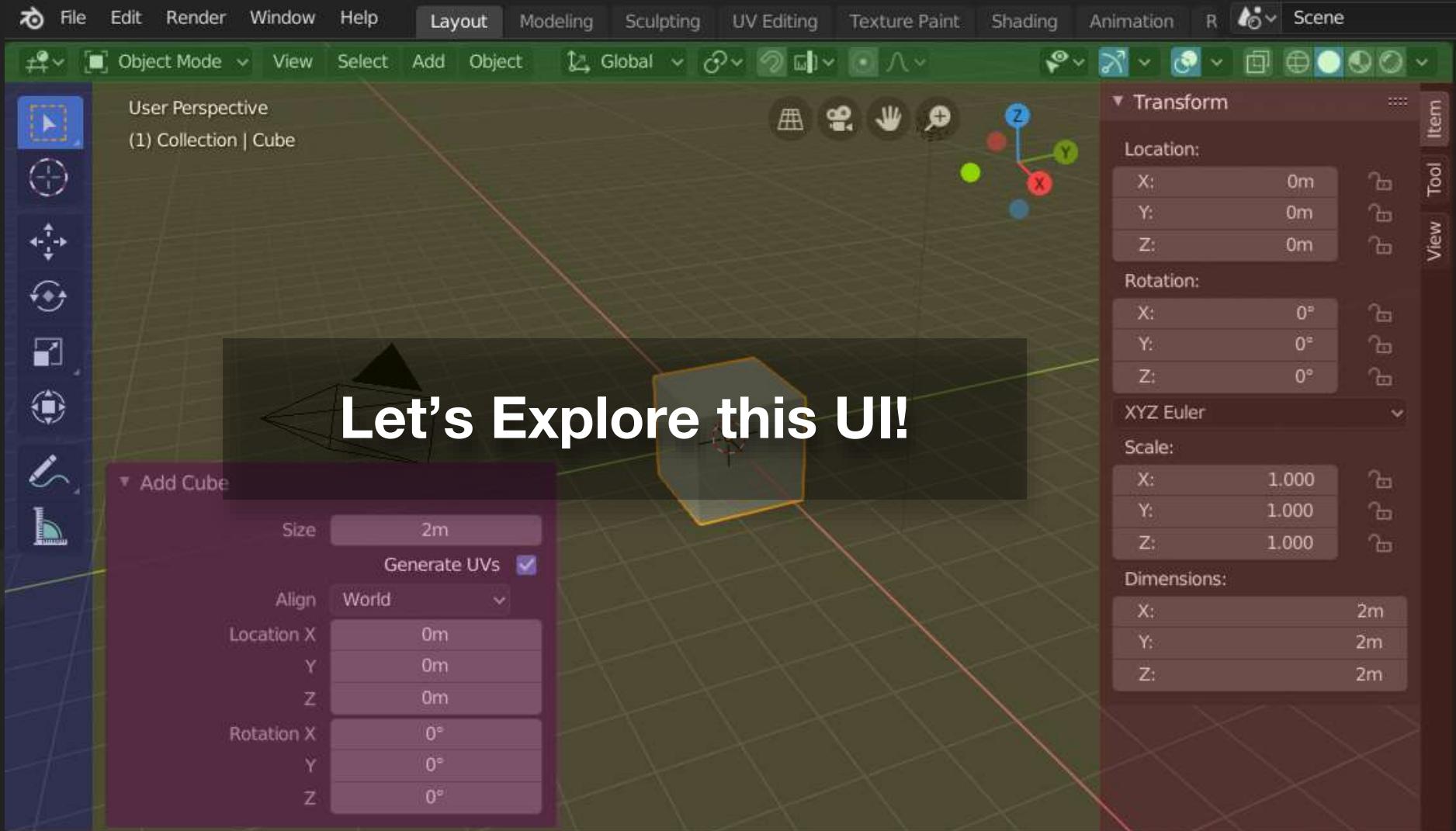
Intro to Blender

Lesson plan:

- UI basics
- Object mode
- Edit mode
- Modifiers
- Sculpt mode



Fig. O: The same joke as last year, again, again



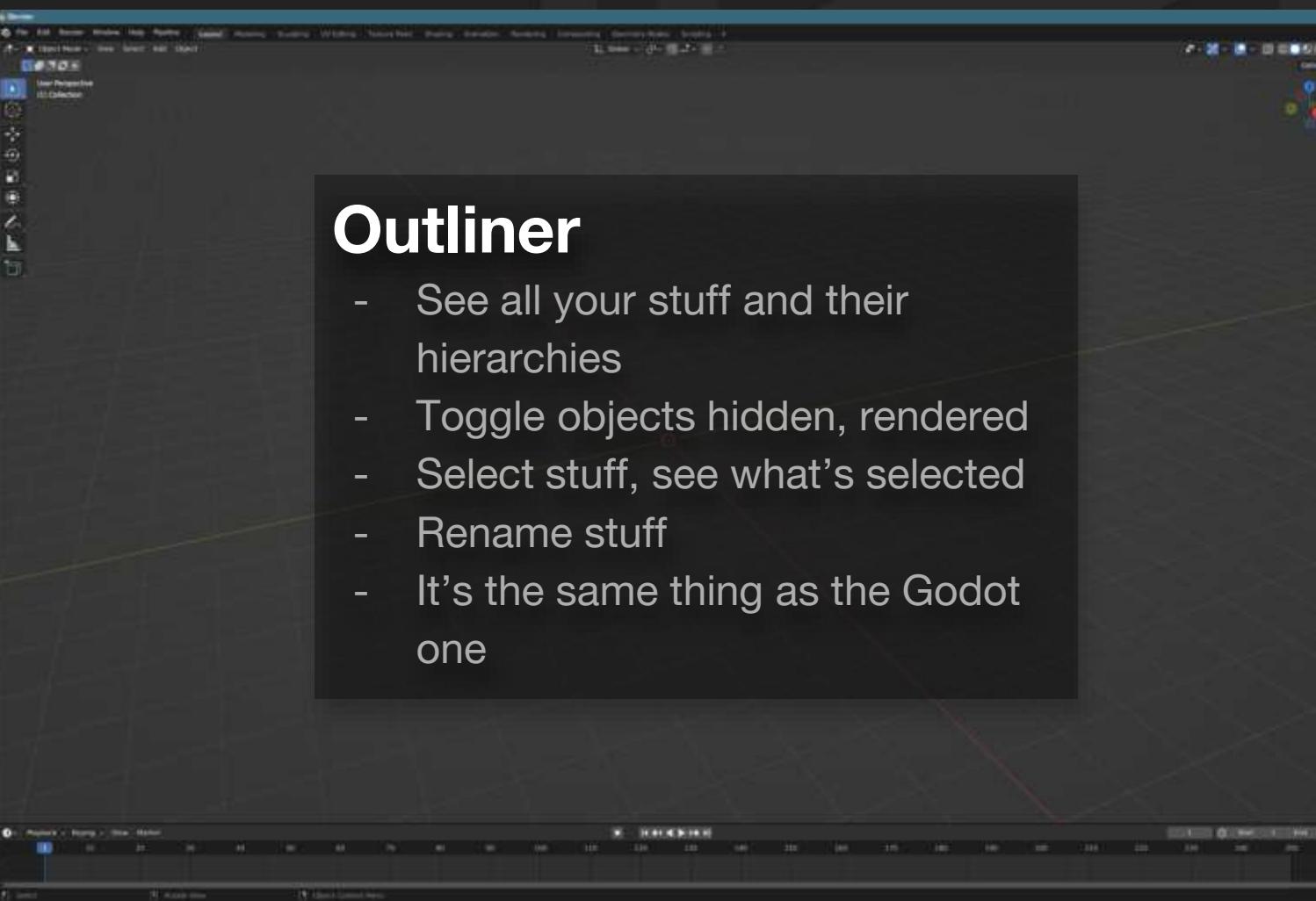
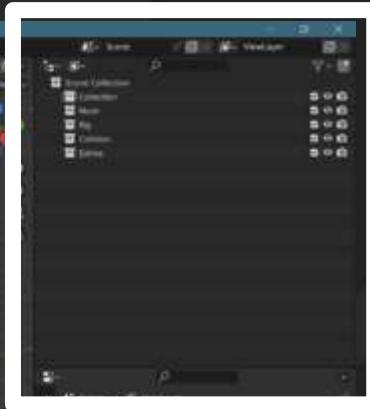
Viewport

Tool Shelf

- Select tools you can use in the viewport
 - Move
 - Rotate
 - Scale
 - Select
 - Etc

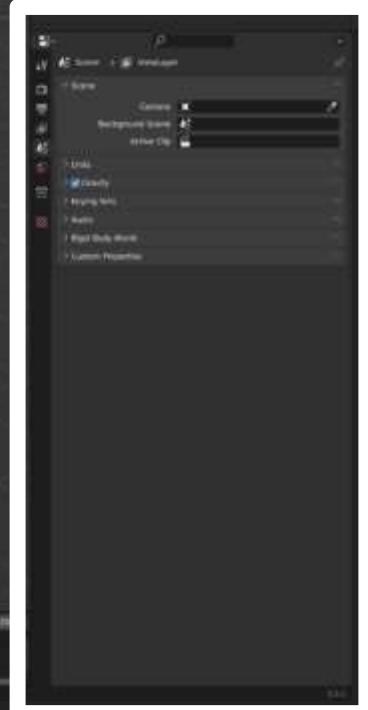
Outliner

- See all your stuff and their hierarchies
- Toggle objects hidden, rendered
- Select stuff, see what's selected
- Rename stuff
- It's the same thing as the Godot one



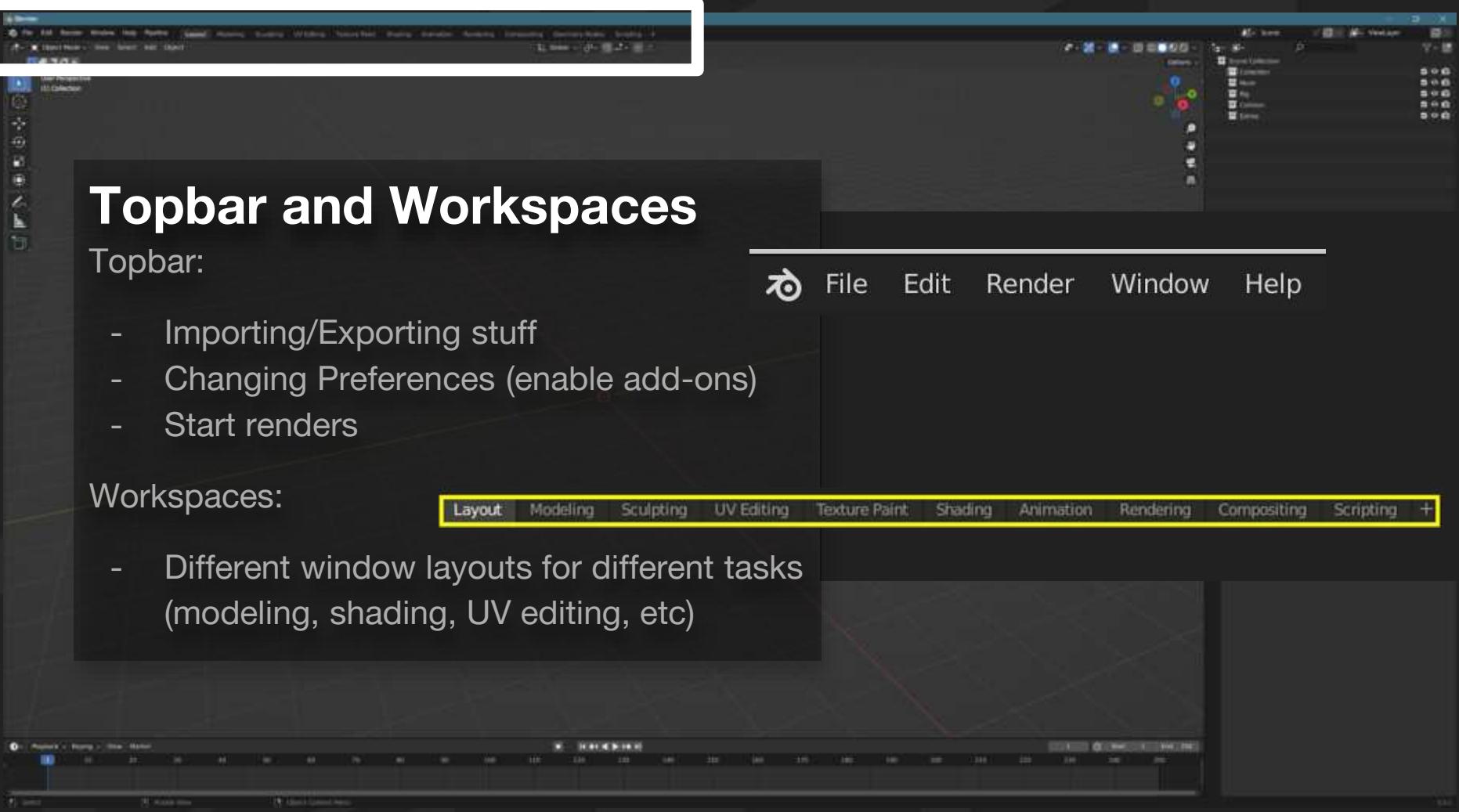
Properties

- Change object properties
 - Transforms
 - Modifiers
 - Materials
 - (lots of others)
- Render settings
- Render resolution
- (lots of others)



Viewport Toolbar

- Change modes (object mode, edit mode)
- Change selection type (vert, edge, face)
- Viewport view mode (x-ray, hide overlays, render type)



Topbar and Workspaces

Topbar:

- Importing/Exporting stuff
- Changing Preferences (enable add-ons)
- Start renders

Workspaces:

- Different window layouts for different tasks
(modeling, shading, UV editing, etc)

Essential Tools

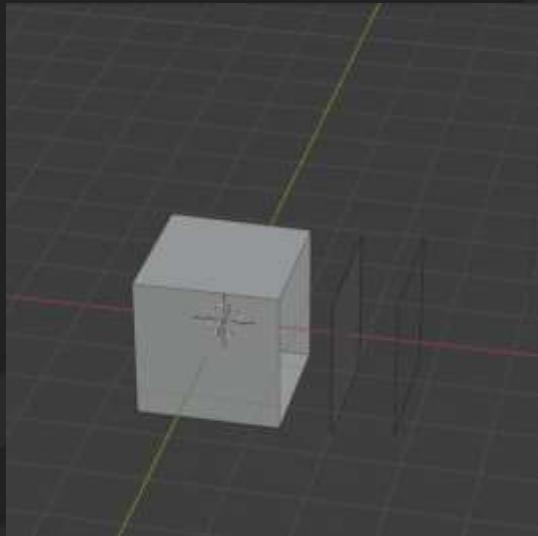


Fig. 4: *extrusion*

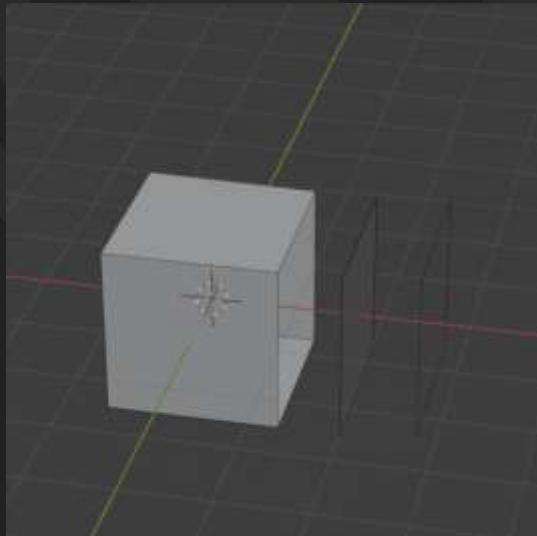


Fig. 5: *loop cut*

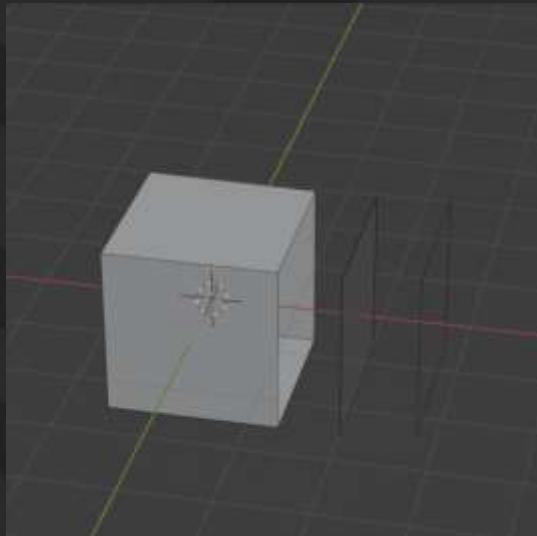


Fig. 1: *filling and merging*

Keyboard Shortcuts you can use for these:

Move: G

Rotate: R

Scale: S

Add objects: Shift + A

Extrude: E

Duplicate: Shift + D

Repeat Last Action: Shift + R

Change Mode: Tab

Loop Cut: Ctrl + R

 Try opening a
cheat sheet when you
work.

Now, with your new knowledge

MUTILATE YOUR CUBE

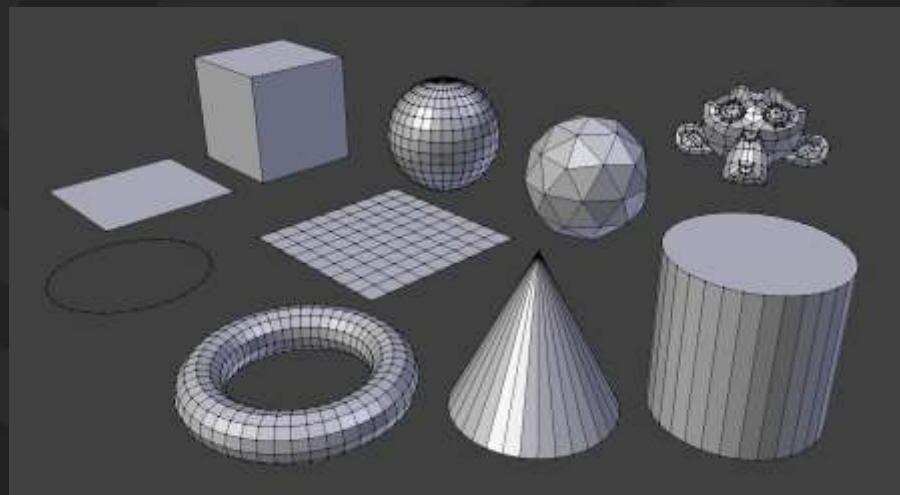
Most messed up cube wins



Object Mode

Primitives

- A common object type used in a 3D scene is a mesh. Blender comes with a number of “primitive” mesh shapes that you can start modeling from.
- You can also add primitives in Edit Mode at the 3D cursor.



Edit Mode

Transformations

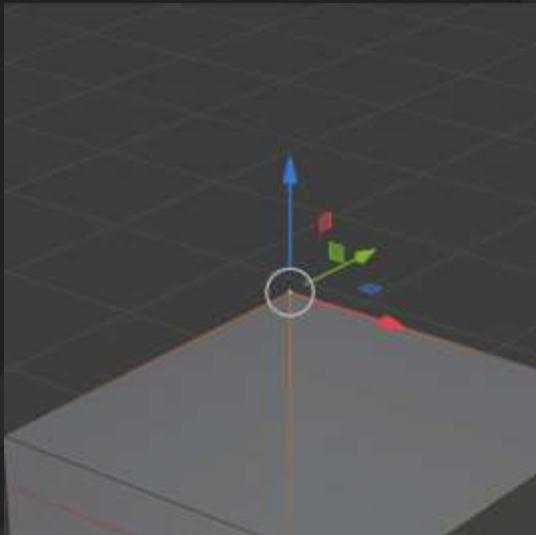


Fig. 1: *position*

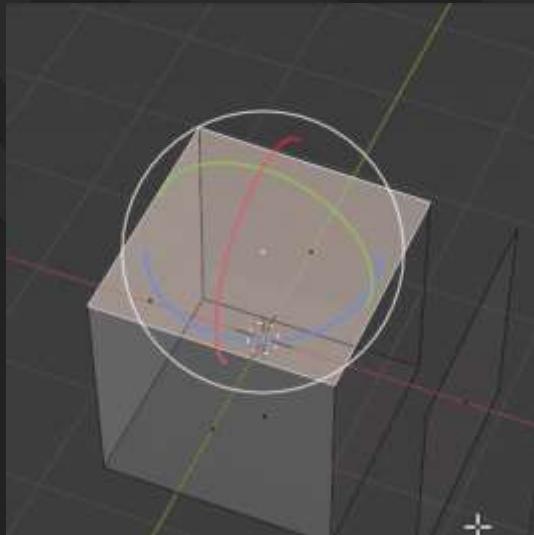


Fig. 2: *rotation*

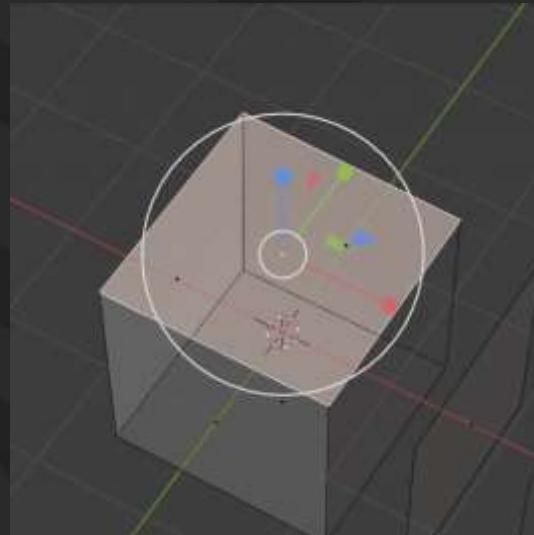
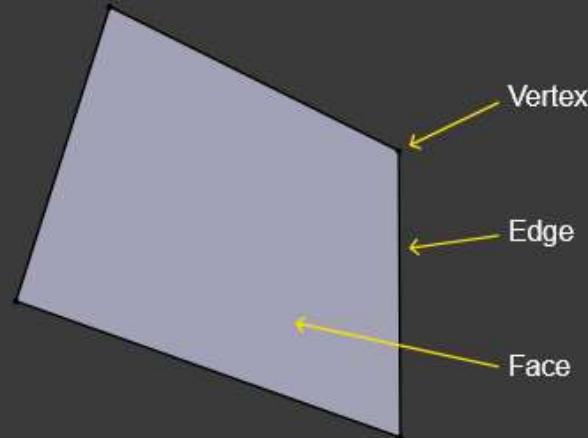


Fig. 1: *scale*

Entities in 3D space

- Meshes are made up of vertices
- Vertices connect to make edges
- Edges are bridged (filled) to make faces
- Faces connect to meshes



Quick Modeling Exercise: Make a Bed 😴

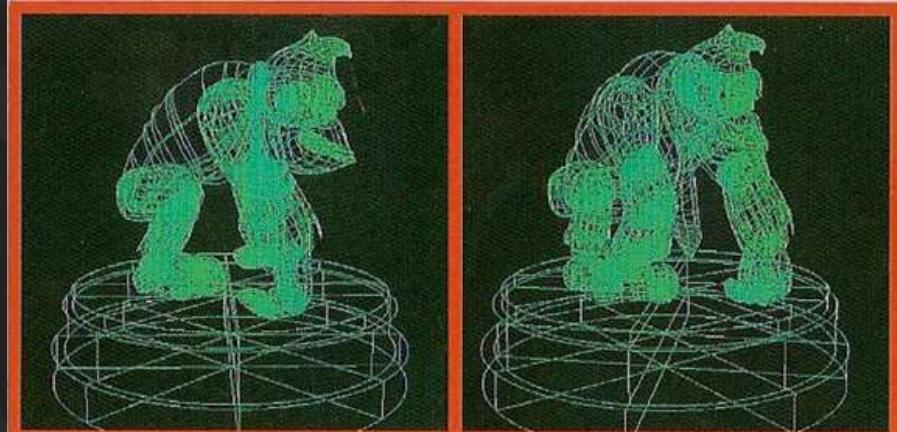
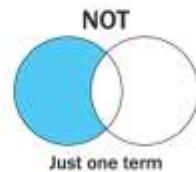
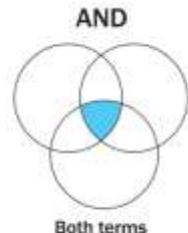
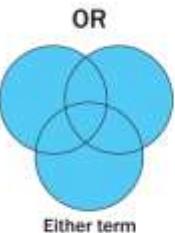


Back in primitive times

- Back in barbaric times, people used to model objects with 3D primitives using boolean operations.



BOOLEAN LOGIC



Actual SGI wire-frame models before hair and other textures are added.

Modifiers

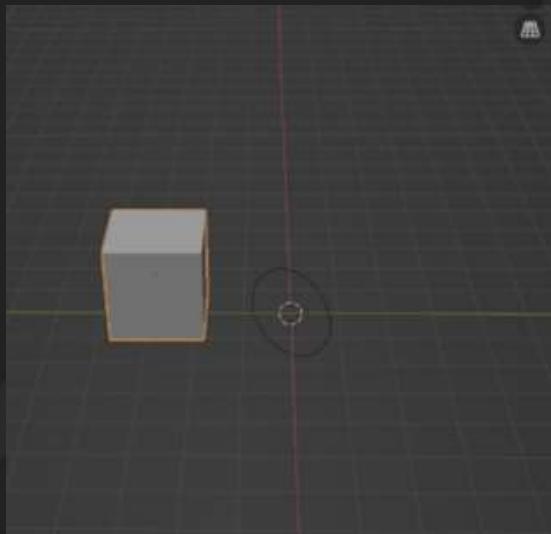


Fig. 4: *mirror*

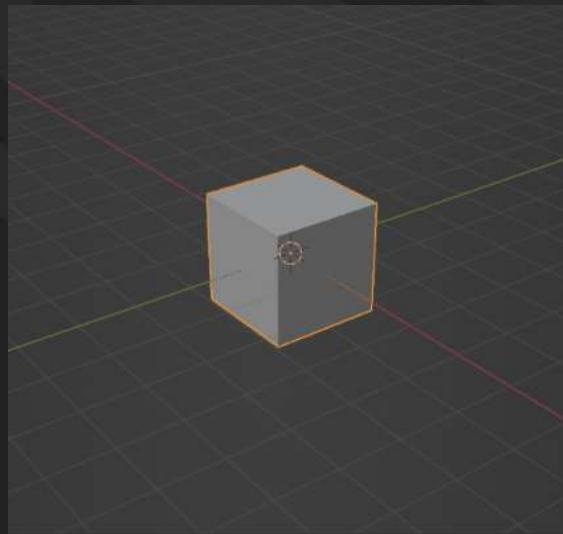


Fig. 5: *subdivision surface (sub-surf)*

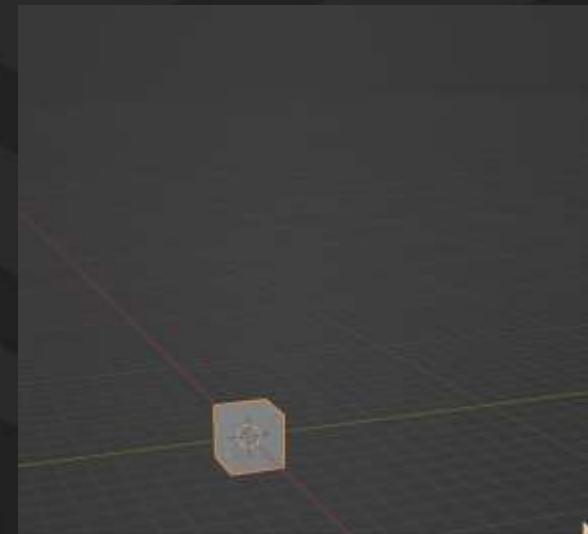
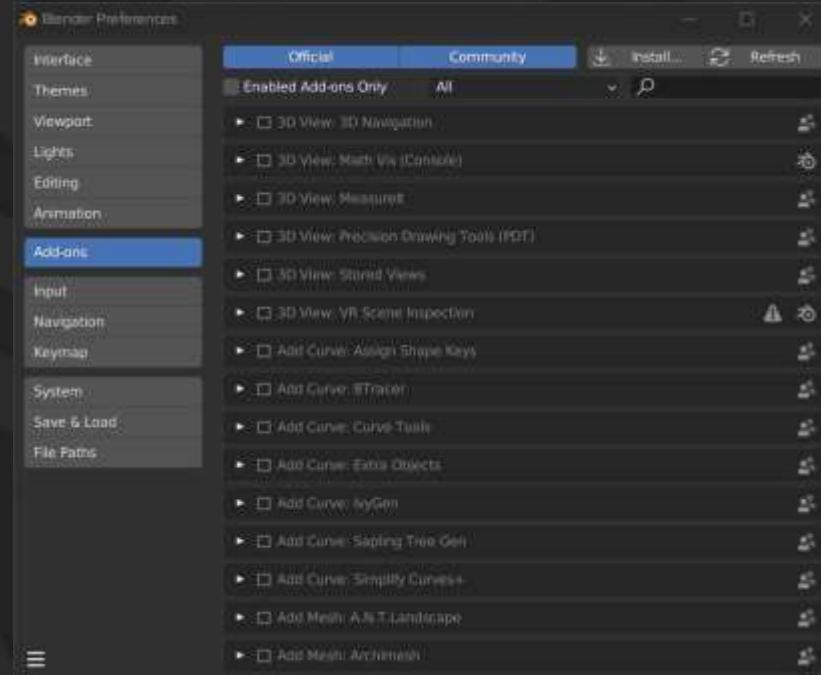


Fig. 1: *array*

(aside) Helpful and fun add-ons:

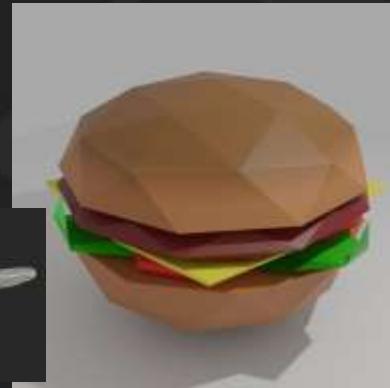
It would be helpful to enable:

- Import Images as Planes
- Looptools
- F2
- Node Wrangler
- Extra Objects (both)
- Sapling Tree Gen



Now time to model something cool!!!

Let's use those think tanks of ours to decide on something cool we can all attempt to model!



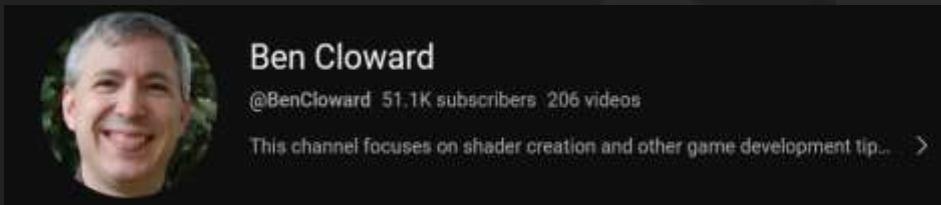
Go home and model your room

- If you want more practice this is your homework assignment
- Start with the big things like your walls, doorway, bed, and desk. Then just go from there adding in detail. This is my room model from when I first started using blender 2 years ago and it got me a job with blender:

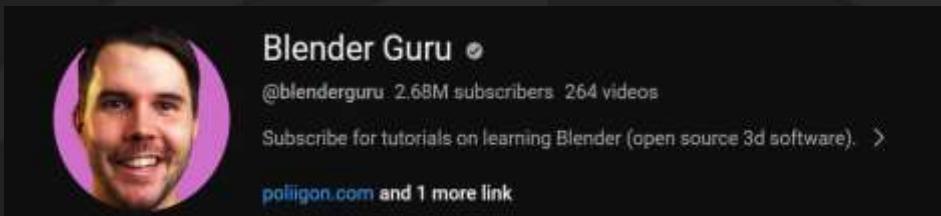


Additional Resources:

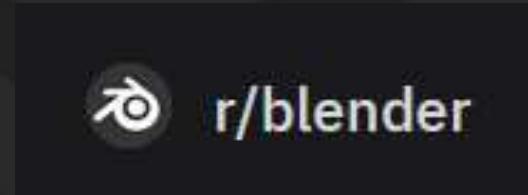
Tech Artist who makes really great shader tutorials:



Blender guy:



[blender reddit](#) (i don't like reddit but it's still really useful)



[Artstation](#) (many artists post great breakdowns)

