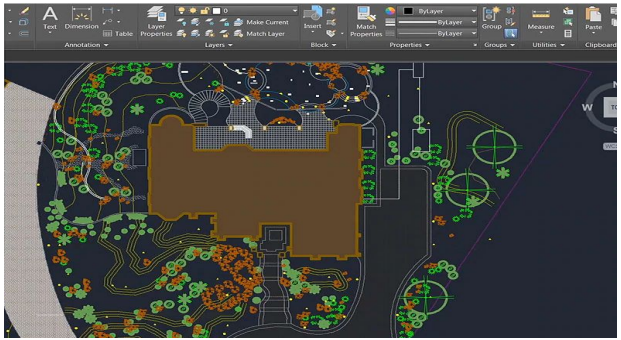
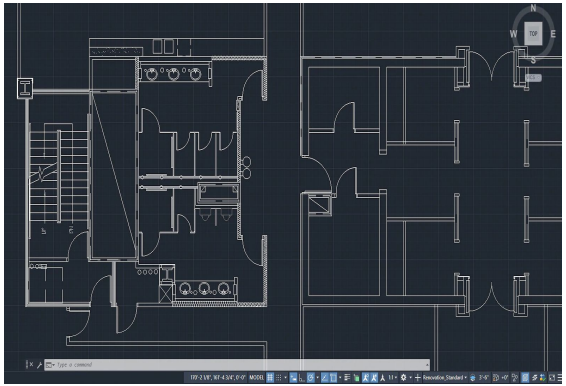
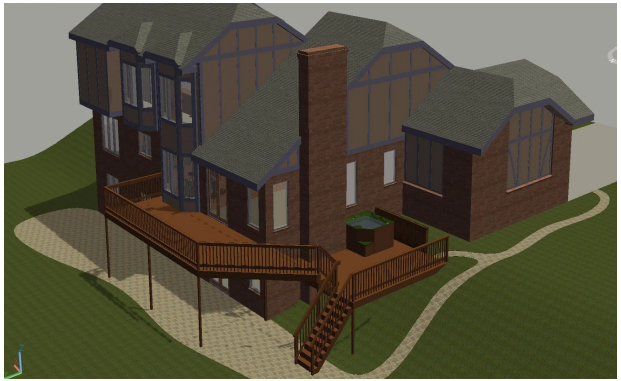
AutoCAD Workshop #1

ARCH@UCSD

How can you use AutoCAD?







Shortcuts Using “Function” Keys

F1: Help

F2: Switch Between Command Line/Dynamic Input

F3: OSnap On/Off (ex: midpoint, center, node, etc)

F7: Grid On/Off

F8: Ortho On/off

F9: Snap On/Off

F10: Polar On/Off

F11: Object Snap Tracking On/Off

More “Function” Shortcuts (More Advanced)

F4: 3D-OSnap On/Off (Specific Snaps like endpoint, midpoint, center, etc.)

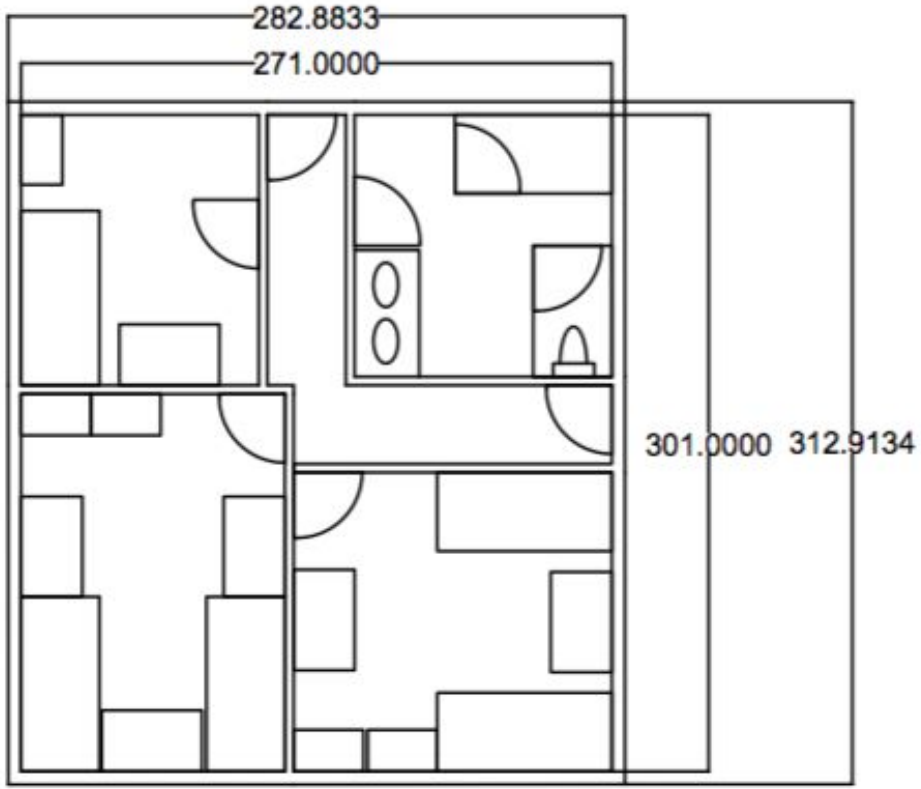
F5: Isoplane Top/Left/Right (3-D)

F6: Dynamic UCS On/Off (X-Y Axis)

All commands can be typed out as well

Floor plan example

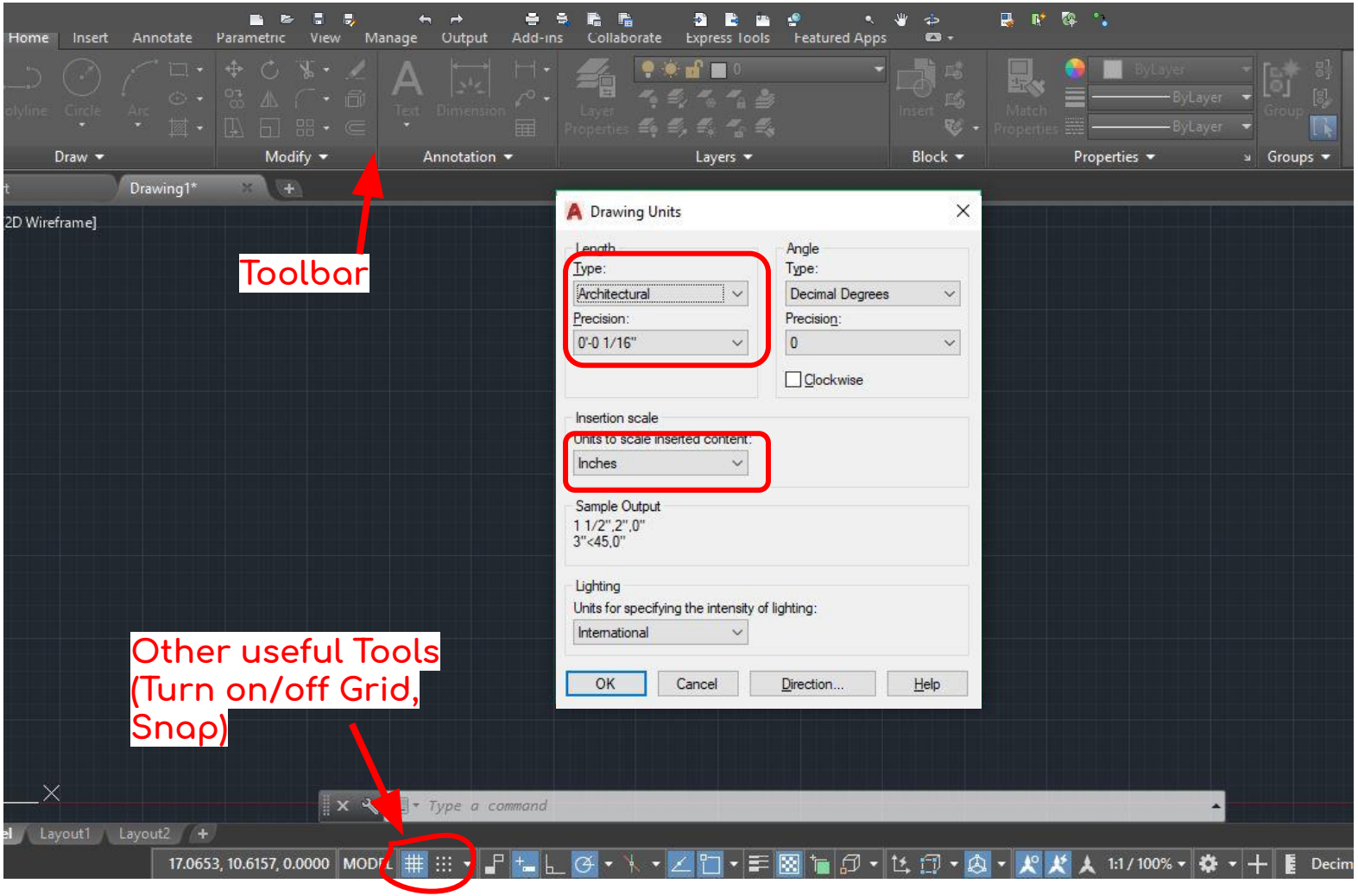
Residential room
From 7th College
Project



This is what we're going to try to create

But first we're going to start off with the basics

(Ignore the dimensions cuz it wacky)

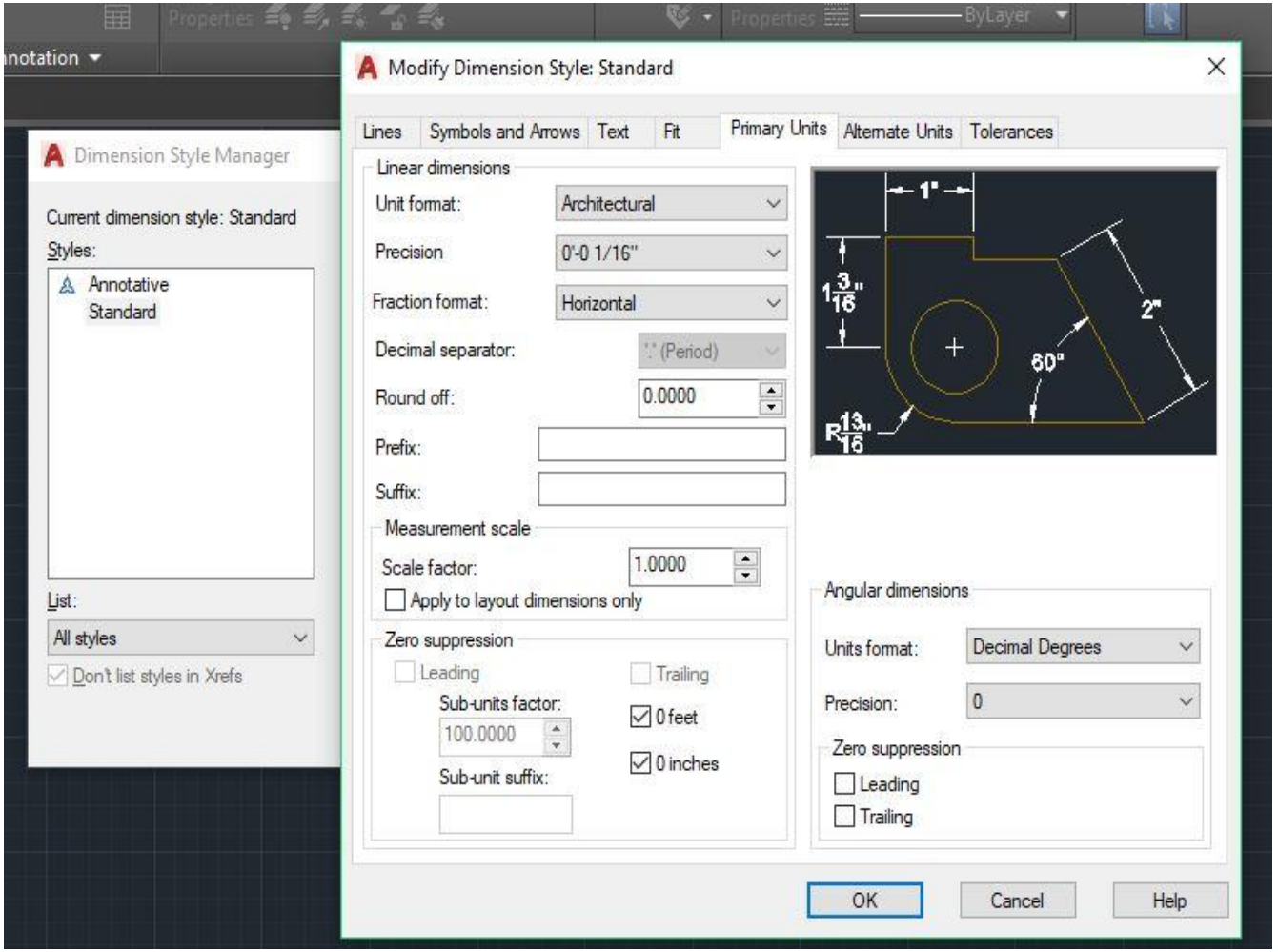


1. Open up AutoCAD

2. Set file unit in menu bar **Format → Unit**

3. Set page size if possible

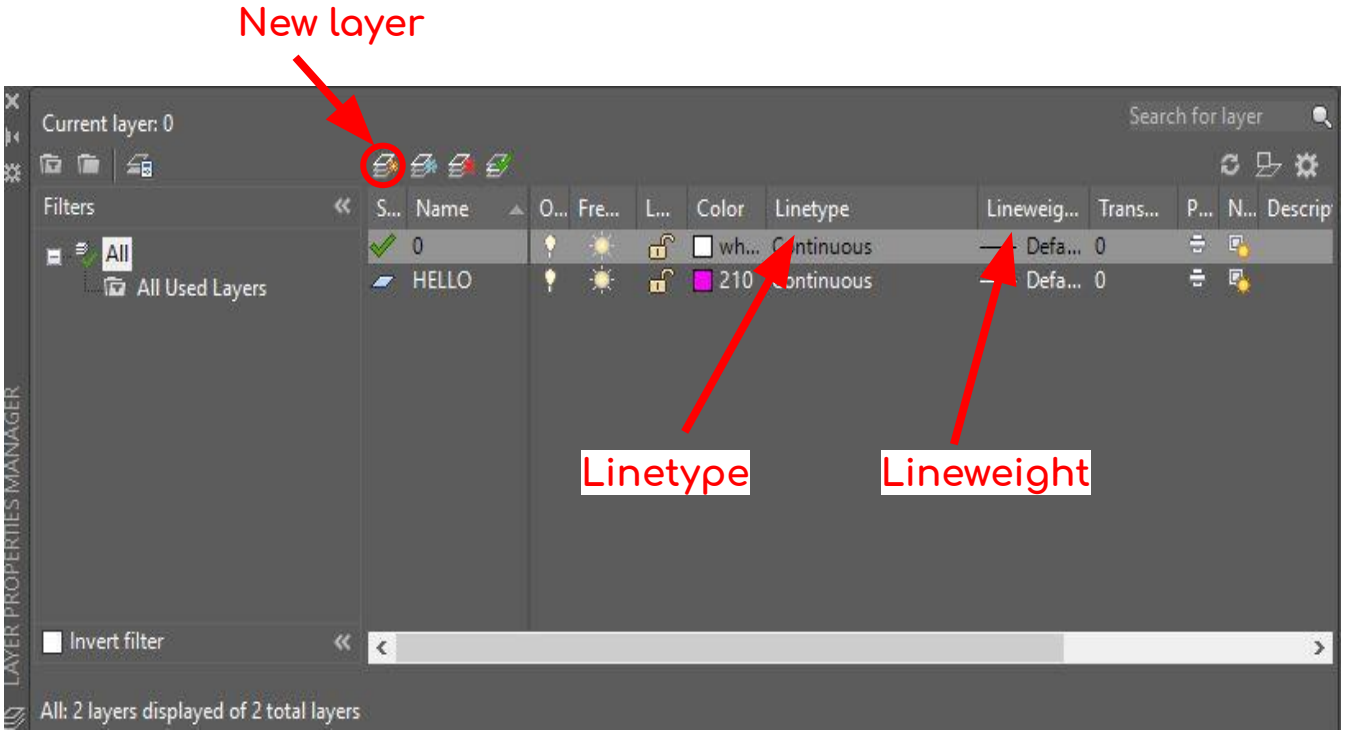
4. Play with **Tools**



5. Set dimension unit by typing "dimsty" (AutoCAD allows typing command)

6. Then click modify and set unit to architecture and precision to 0'-0 1/16"

Click text → height change to 1"

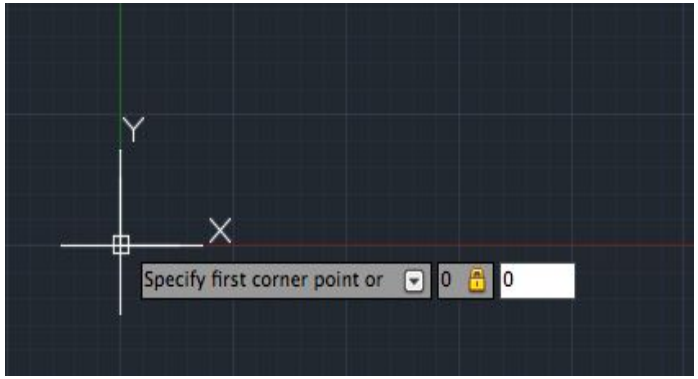


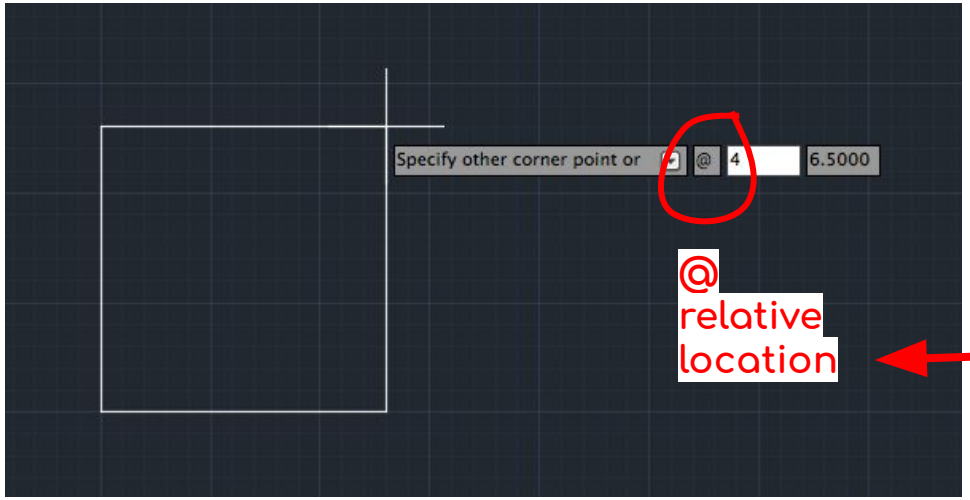
5. Set layers by typing "layer"

6. Then create new layers accordingly with different colors, lineweight, and linetype

You can create more layers as working on your design

Let's draw a simple floor plan!
Start with a rectangle - room outline





7. Turn on
Grid (F7)

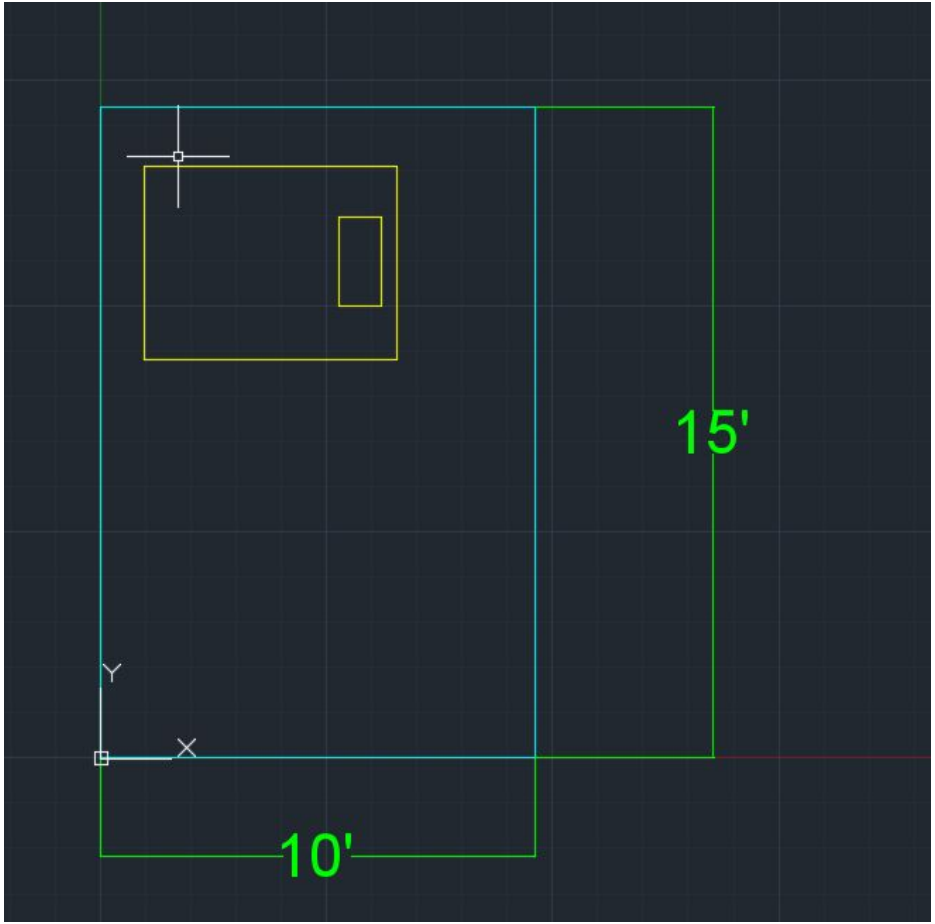
bottom right

8. Choose
Rectangle tool

9. Two ways to draw

- Directly type start and end coordinates #,#

- Choose a start point and enter the relative coordinate @#,# (# number)

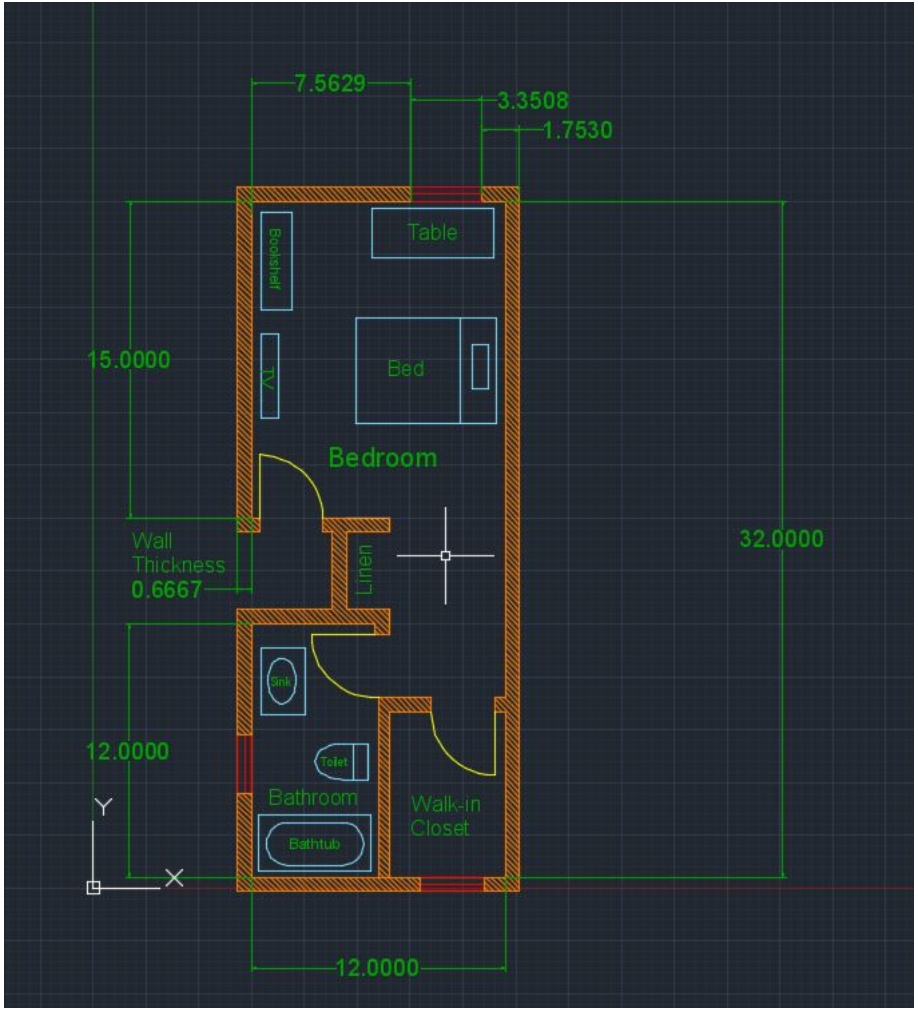


10. Draw dimensions on the wall

11. Type “line”
Or choose
to draw furnitures

You can use other tools!
Feel free to explore :)

Remember to draw in the right layer!!!
In this example, the blue indicates the walls **and** yellow**, the** furniture



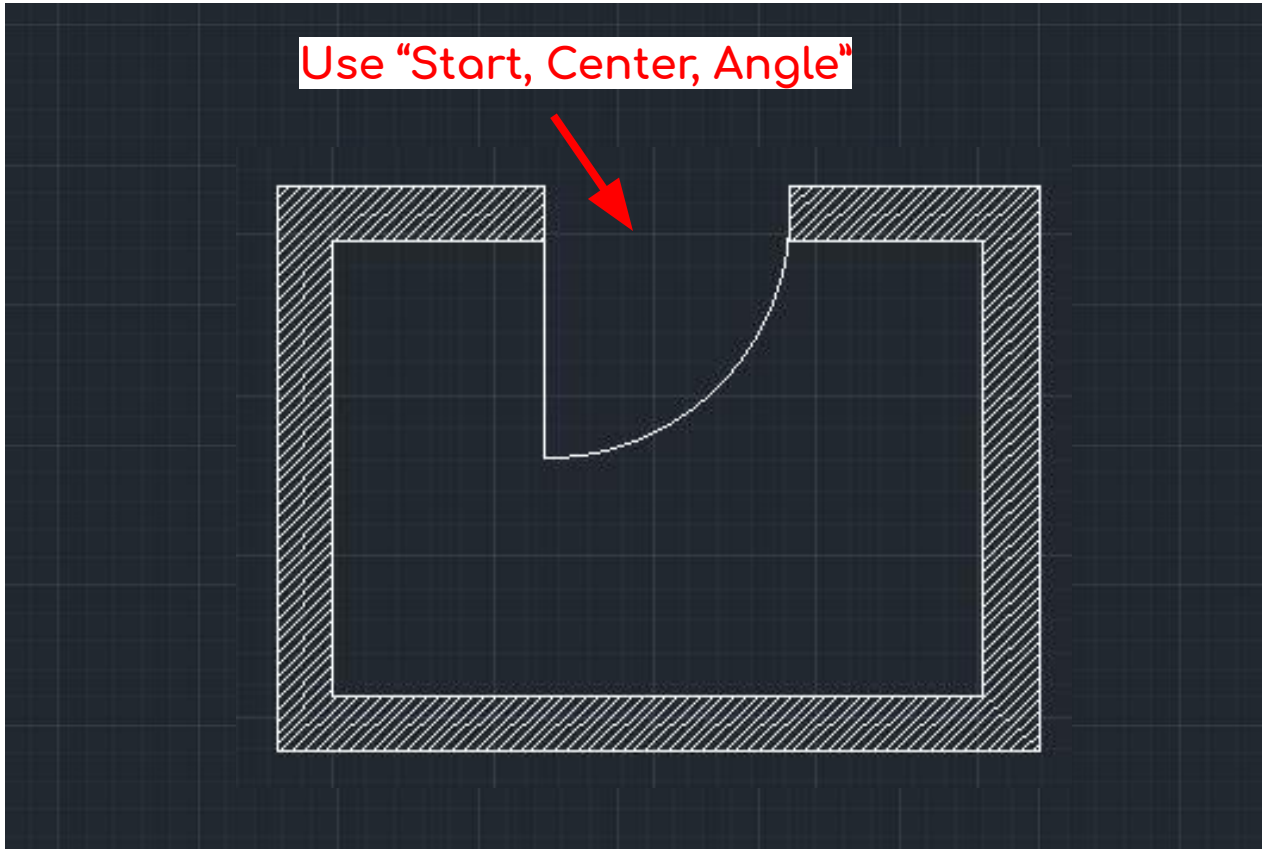
This is an example room plan

Type in offset to create the walls

Use the hatch tool to fill patterns inside the wall

You can also turn on/off other layers to see specific layers

Layer Off



Let’s draw out a simple **door symbol**!

Go to Arc (top left of Home Tab) and click the the **drop-down menu**

Choose **“Start, Center, Angle”**

After, you’ll want to trim to get rid of excess lines

Helpful links (they're short videos)

How to **trim/extend** (helpful to cut out space for doors/windows)
https://www.youtube.com/watch?v=Yhzi0EMOpOQ

How to **offset** (super helpful to create walls)
https://www.youtube.com/watch?v=Isn3LcPvEiY

How to **stretch**
https://www.youtube.com/watch?v=BxSLyCAc5-I

How to **scale** a drawing/object
https://www.youtube.com/watch?v=pchTjPmpJtU

Try to draw this out!

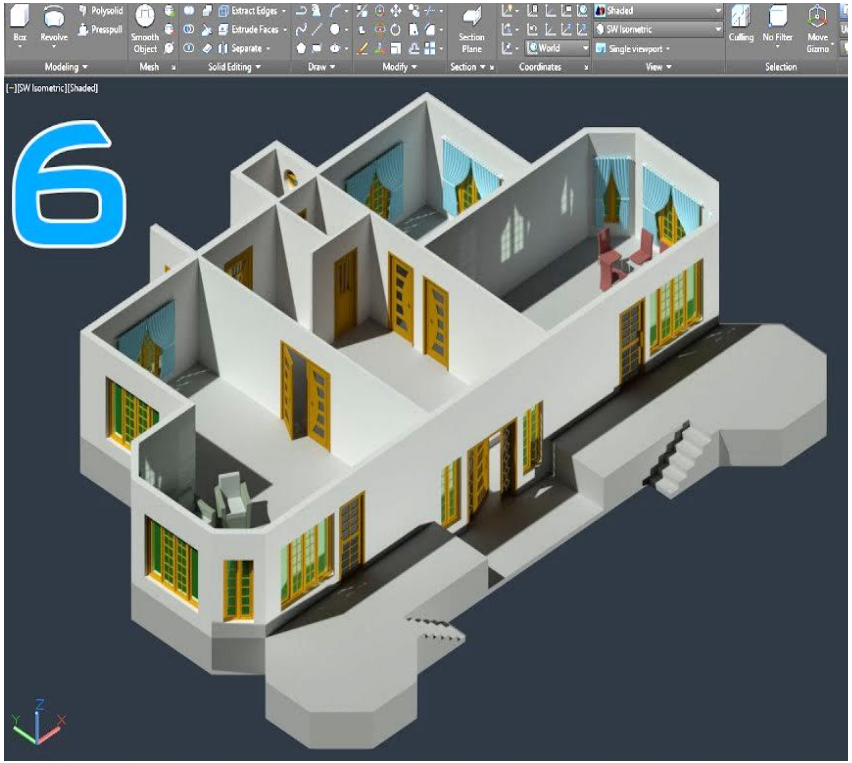
Please don't hesitate and ask others for help. It takes practice to get used to AutoCAD, so keep messing around with it :)

(Ignore the dimensions cuz it wacky)

PLAN D-1

Announcement

This is the first part of the workshop. Next time we'll work on 3-D modelling!

Next meeting will also be on **Friday 5-6pm** :)

Details will be emailed and posted on the FB group (ARCH@UCSD)