

Using Autodesk INVENTOR 2015

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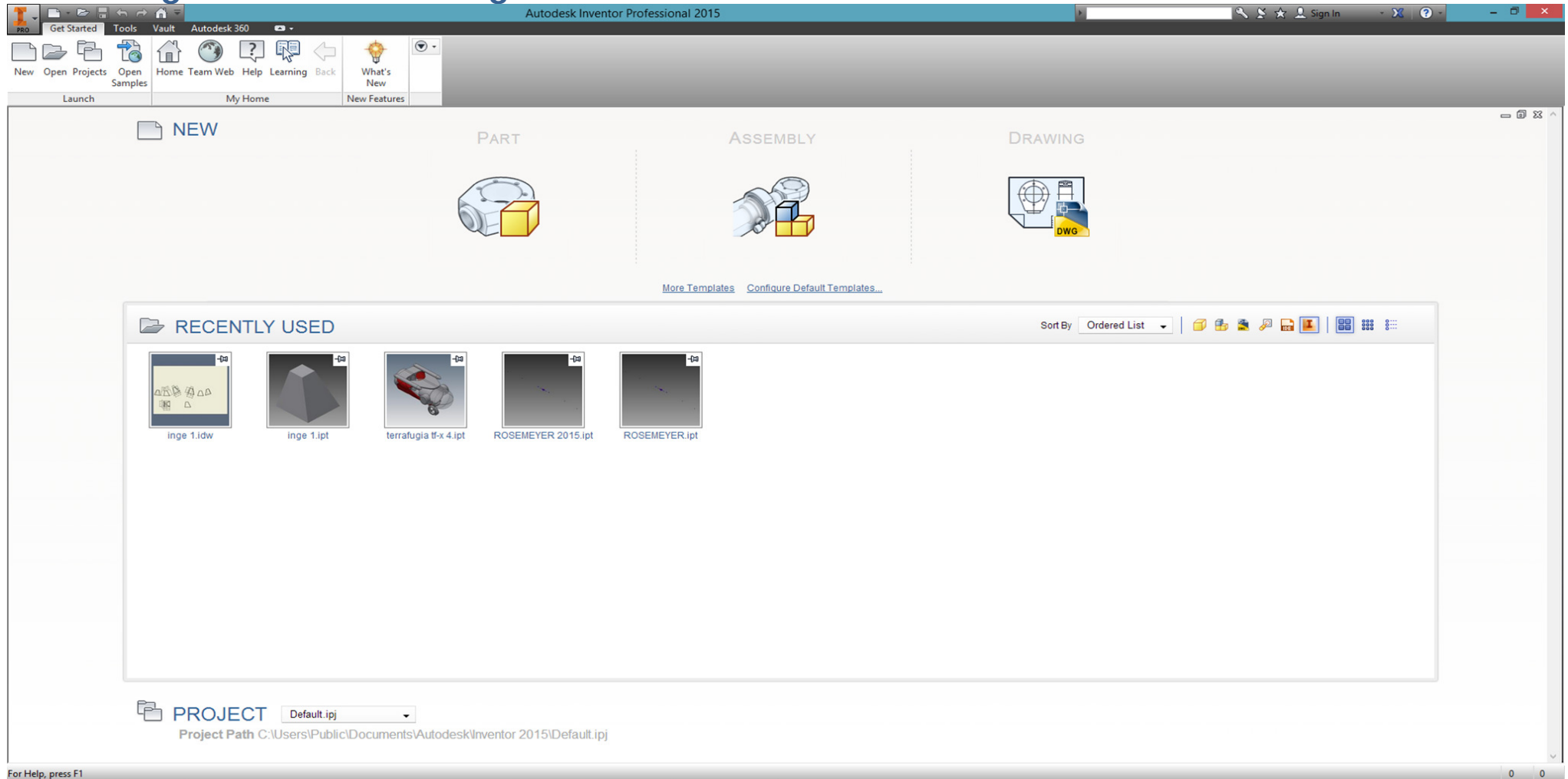
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Inventor file types

.ipt - part file extension
.iam - assembly file extension

.idw & .dwg - drawings file extension
.ipn - presentation file extension

Welcoming screen / Launch Page



Configure Default Templates...

Configure Default Template

Measurement Units - Default

☐ Inches

☒ Millimeters

Drawing Standard - Default

☒ ANSI

☐ BSI

☐ DIN

☐ GB

☐ GOST

☐ ISO

☐ JIS

OK

Cancel

Templates...

NEW

PART

ASSEMBLY

DRAWING

...and More templates...

NEW

PART

[Sheet Metal.ipt](#)

Standard.ipt

ASSEMBLY

Standard.iam

Weldment.iam

DRAWING

standard.dwg

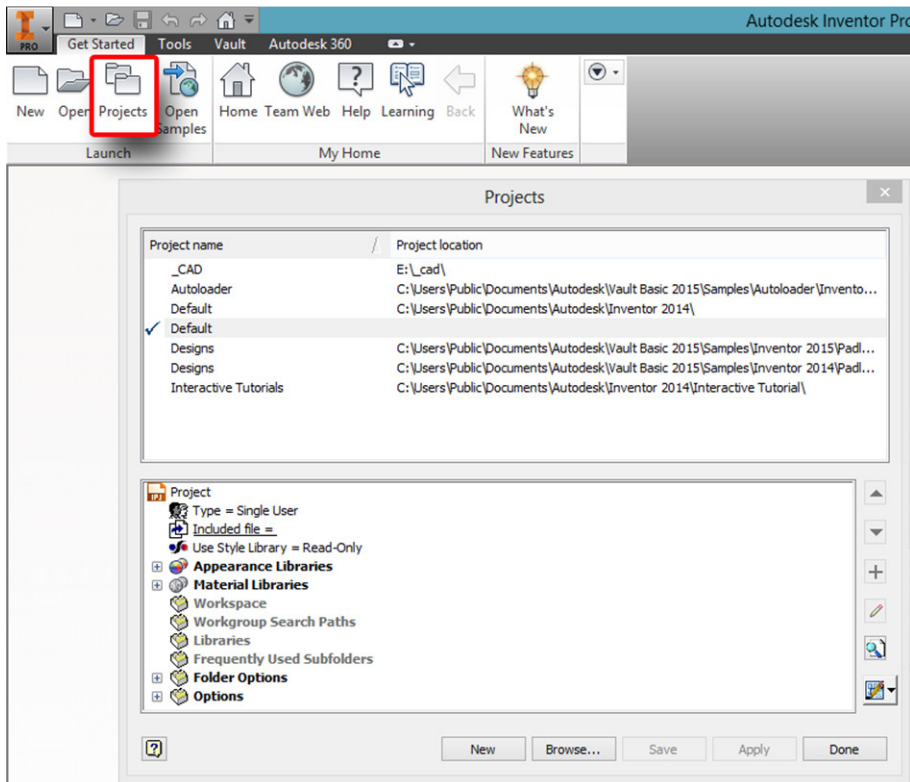
Standard.idw

PRESENTATION

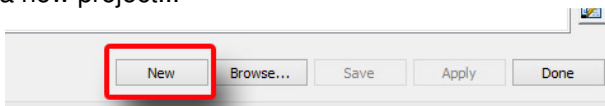
Standard.ipn

Project...

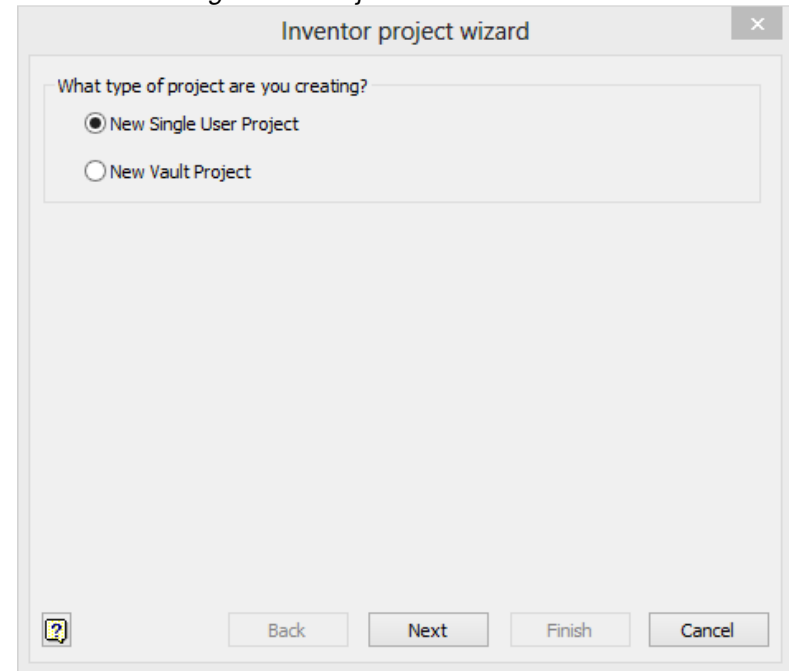
This your "workspace". All the files will be saved in the workspace specified in the project file (.ipj). Clicking on the Projects icon will bring up the Projects dialogue:



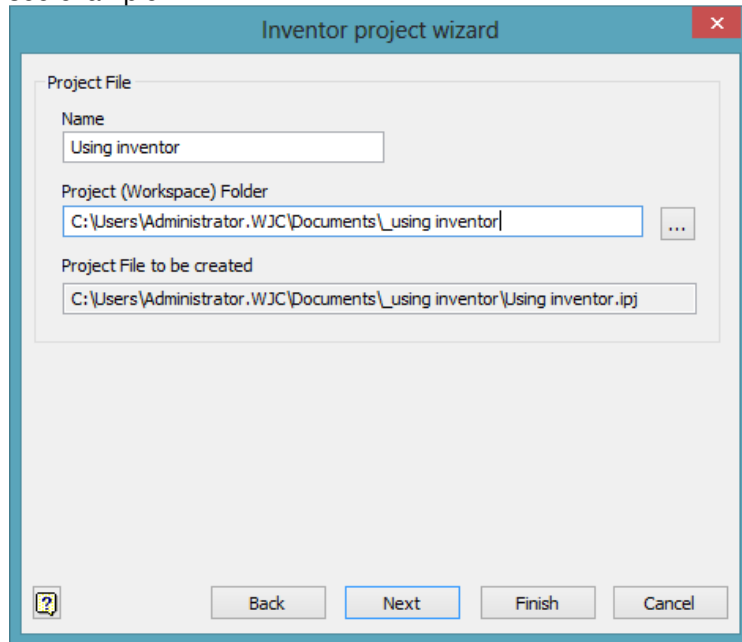
- Create a new project...



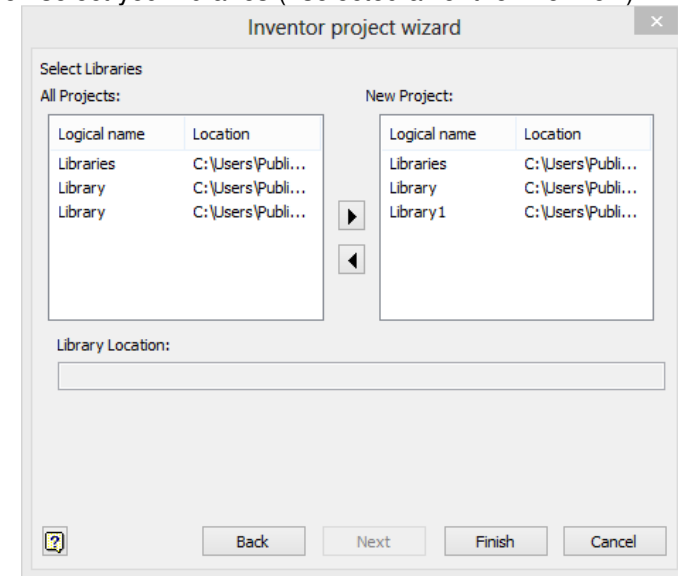
- ...select *New Single User Project*... then click on *next*...



- ...see example...



- ...then select your libraries (I selected all of them for now)...



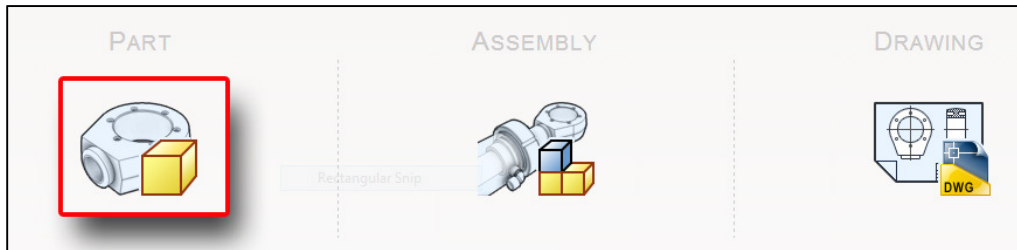
- ...and click *Finish*...
- ...and *Done*.

A

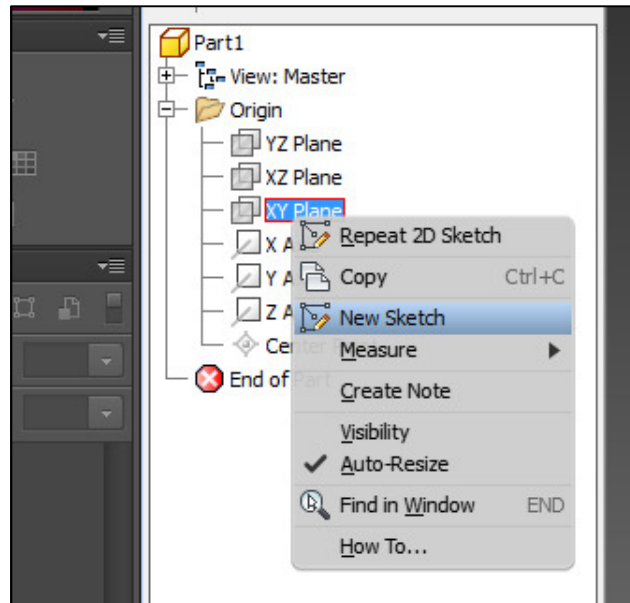
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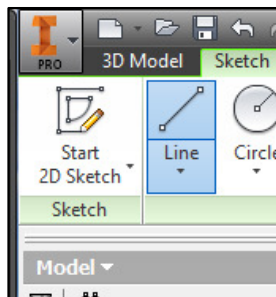
- Begin with a new *part*...



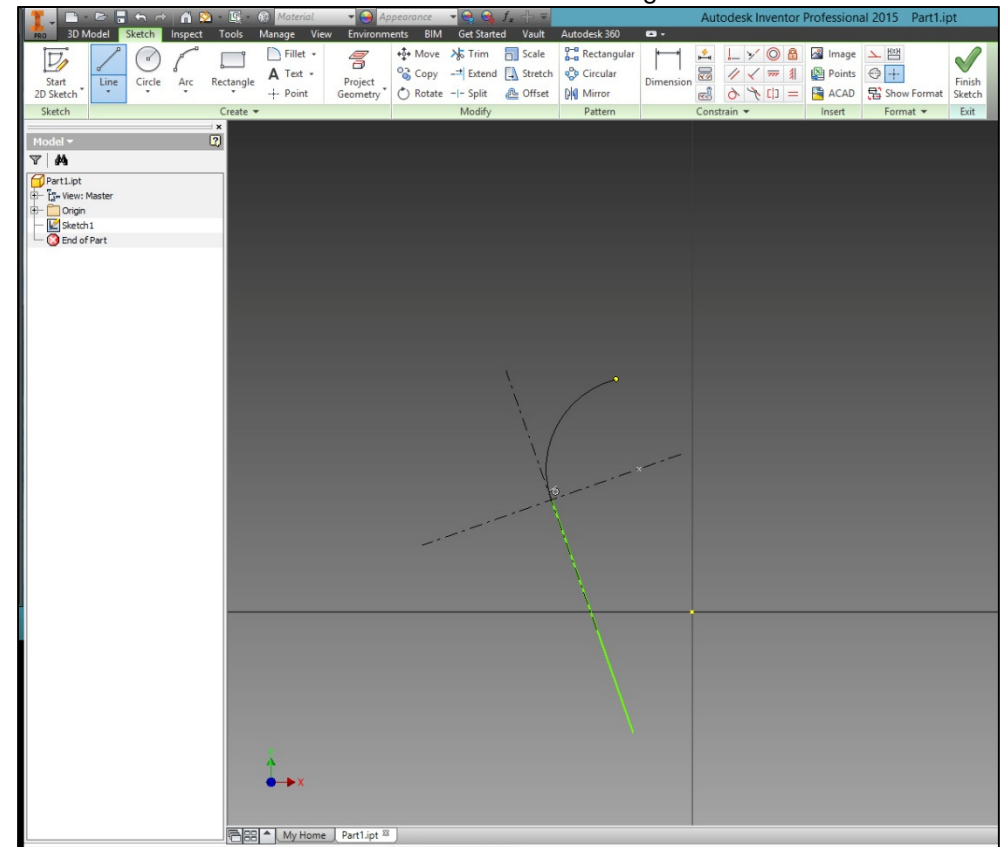
- <right-click> on XY Plane... new sketch



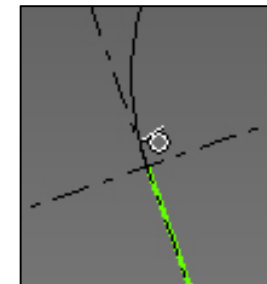
- Click on line...



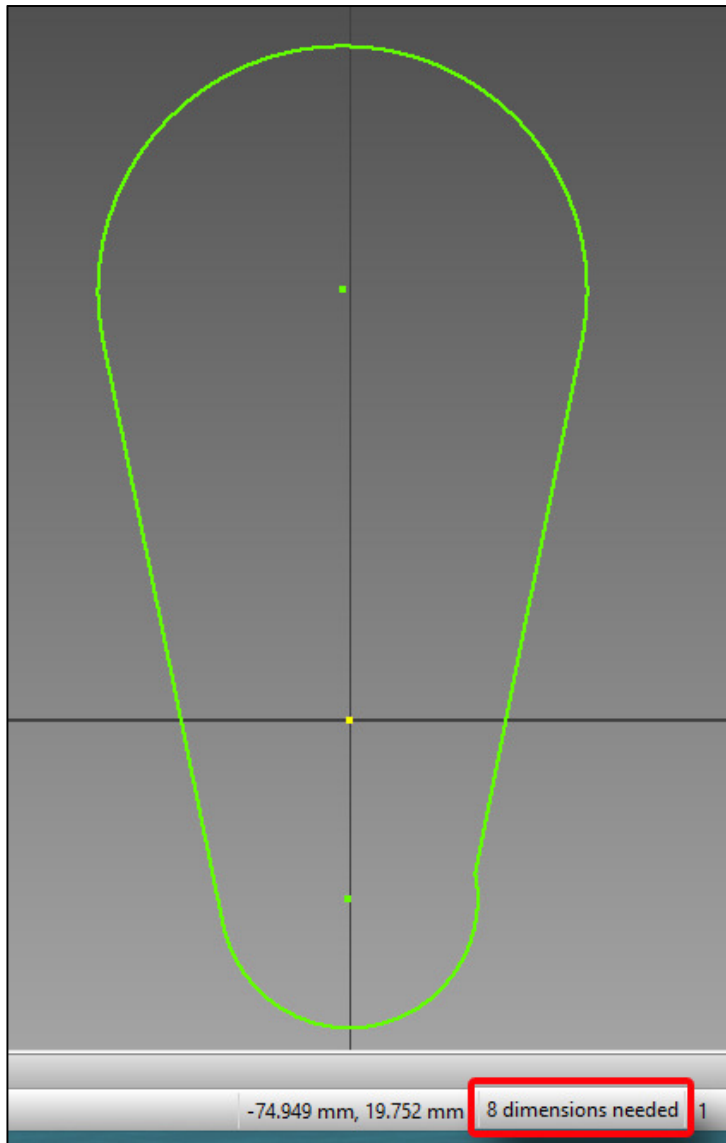
- after clicking the second point: click-and-hold the left button of the mouse on the endpoint > drag the line out in the same direction as the line and go off the line to create a tangent arc...



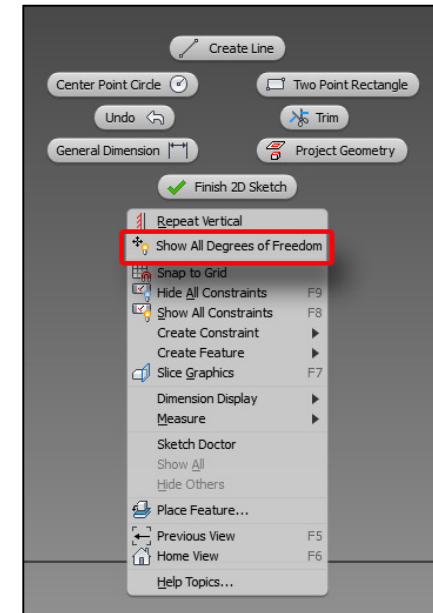
- ...inventor will automatically create a tangent constraint...



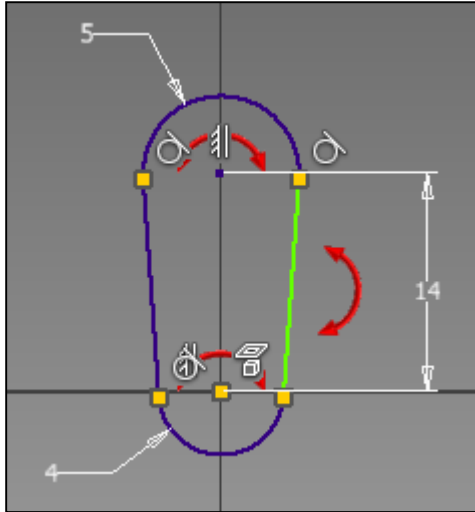
- ...also take note that in the right-hand bottom corner there will be info displayed showing how many constraints are still required to FULLY CONSTRAIN the sketch...



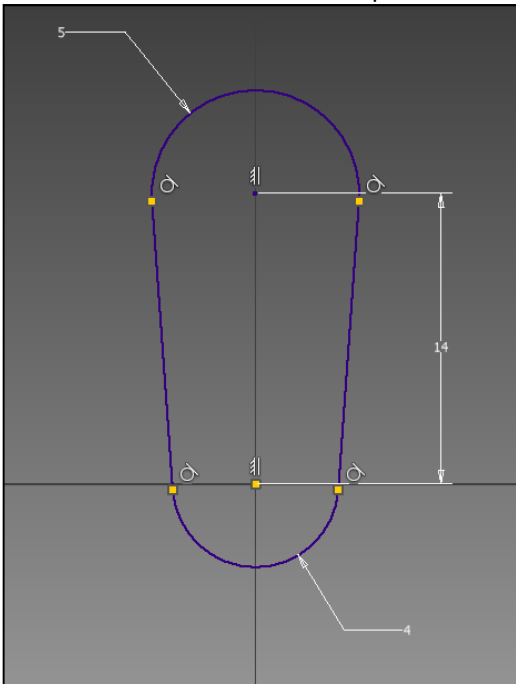
- Press <F8> to show the sketch constraints. this was created while sketching...
- <esc> <esc> to exit any commands
- now <right-click> in the open space to get the following pop-up:



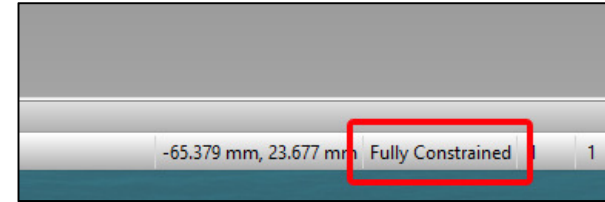
- <click> on *Show All Degrees of Freedom* to see what movement is still possible:



- add the constraints and dimensions to complete the sketch:

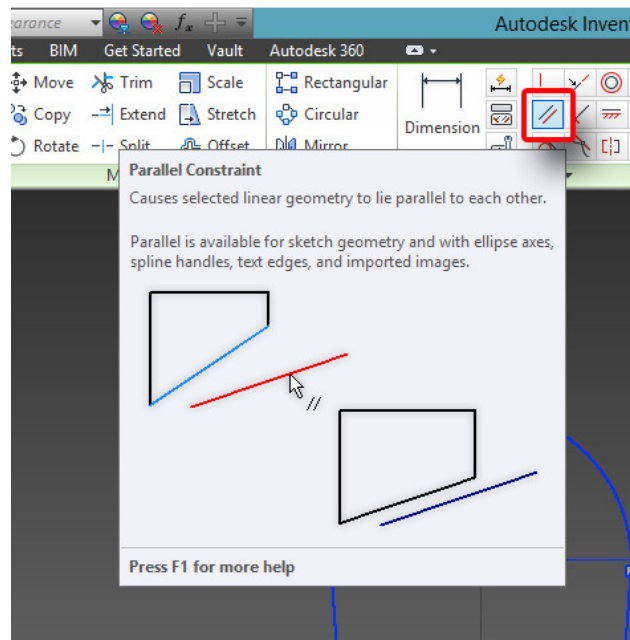


- the sketch MUST be fully constrained:



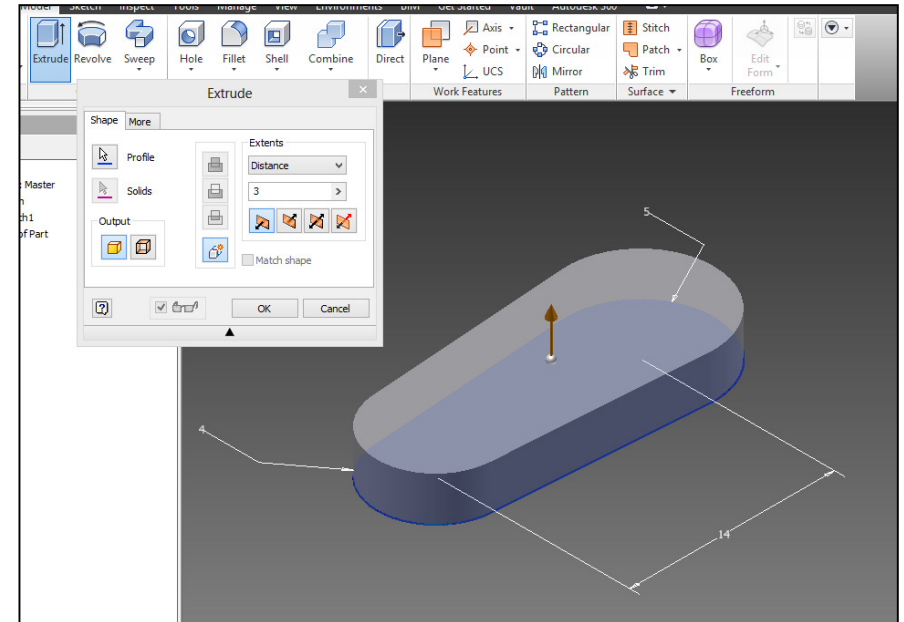
- Finish the sketch
- Remember to save the part! "<ctrl>+<s>"

Note that you can get help with ANY icon by simply moving the mouse pointer over the icon, and leaving it there... DO NOT <CLICK> THE ICON... there will be a pop-up like the one shown below:

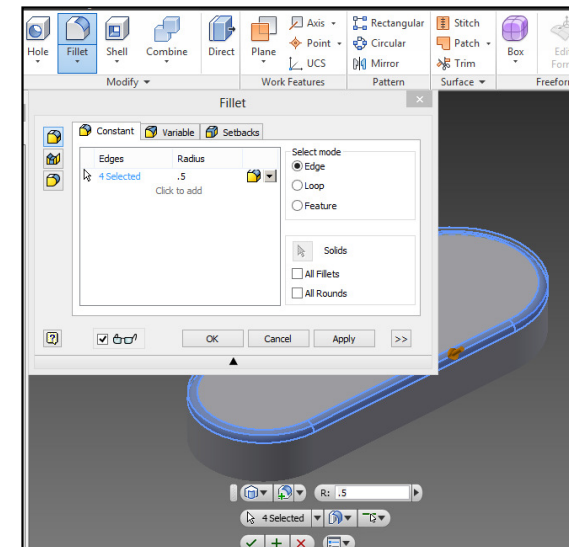


Take a look at the other 2-d sketch constraints by hovering the cursor over the icons.

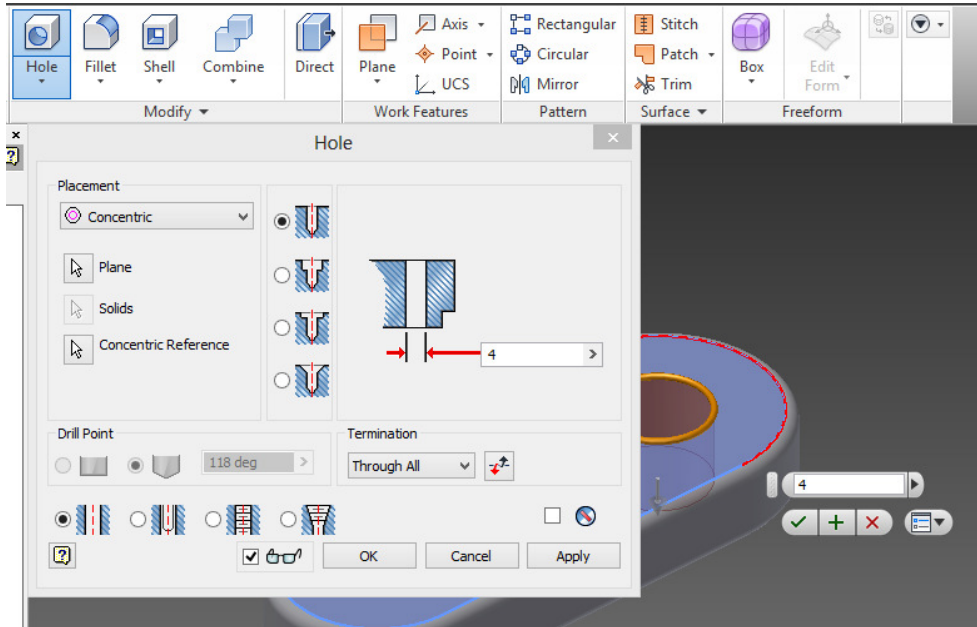
- Extrude command:



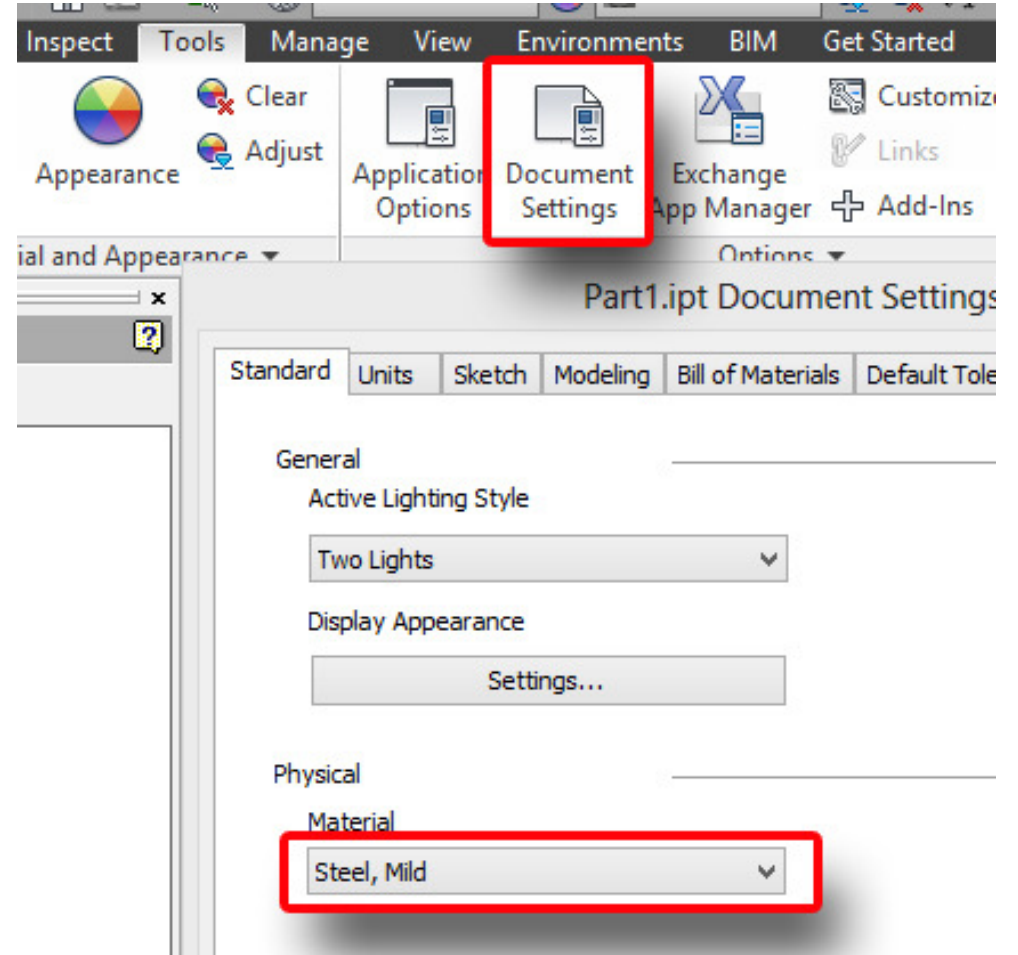
- Fillet:



- Holes: (Concentric > dia. 4 > Through All)

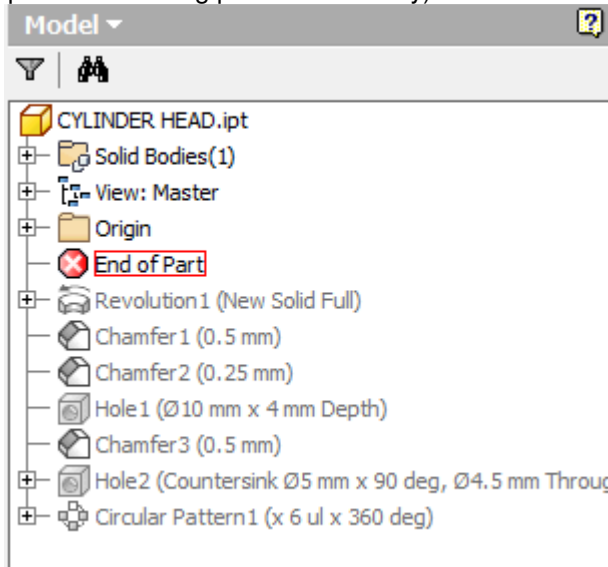


- Check that the material for this piece is "Steel, Mild":



Another fast way to learn modelling:

- open existing cad model
- drag *end of part* up to just below the origin: (if you save the drawing at this point, the filesize will be minimal compared with the finished model – this may help when e-mailing part to somebody)



- now move it down step-by-step
 - check the sketches:
 - Constraints
 - Dimensions
 - Patterns
 - Mirror
- In the example on the left, there is a description following the feature, e.g. Chamfer1 (0.5mm). To switch this on/off:

