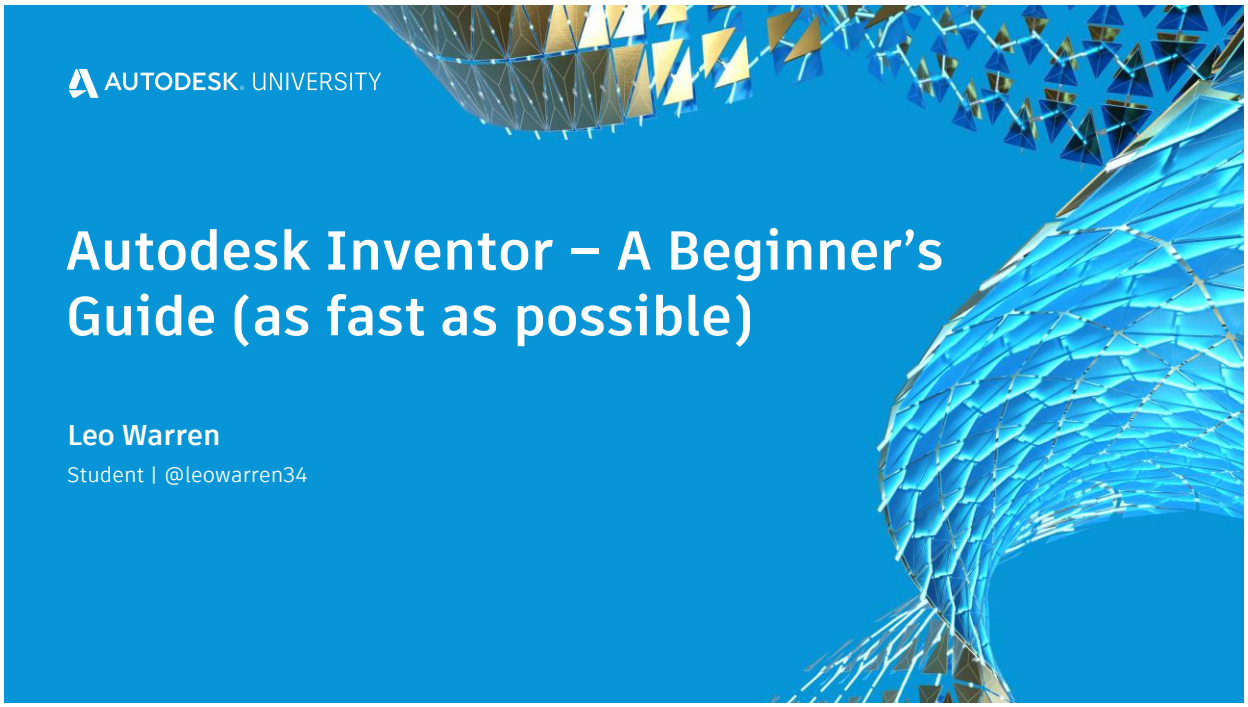

AUTODESK. UNIVERSITY
Autodesk Inventor – A Beginner's Guide (as fast as possible)
Leo Warren
Student | @leowarren34

1

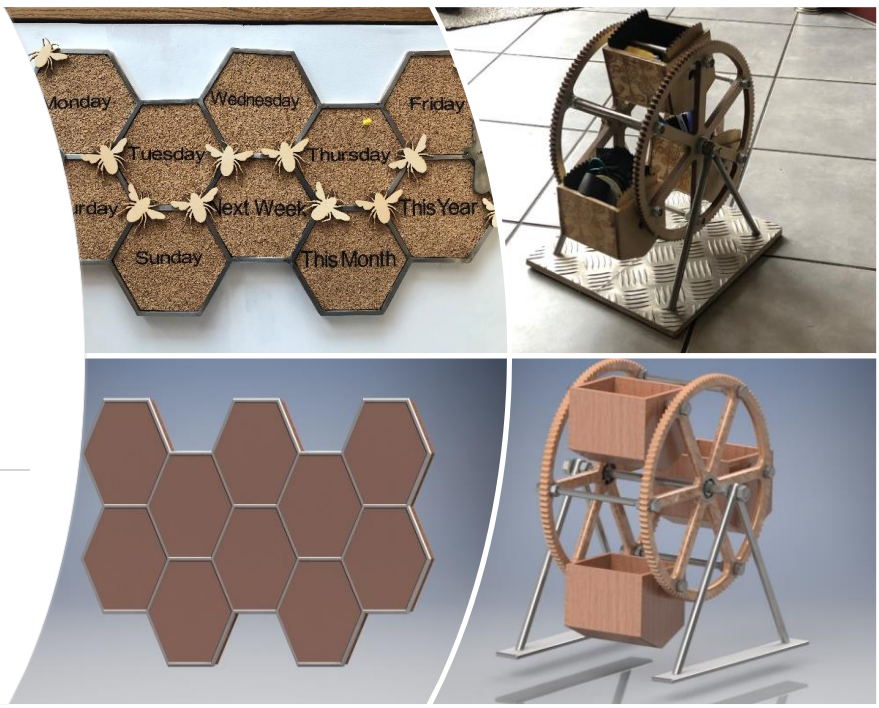
About the speaker

Leo Warren

- College Student
- Using Autodesk Inventor since 2017 release
- Autodesk Student Ambassador Diamond
- Student Collaborator
- DIY enthusiast and Maker – Design -> Make

2

The Design Course



3

Learning Objectives

1	2	3	4
Know how parts and assemblies work together.	Develop skills in sketching	Develop skills in creating and modifying features.	Understand how constraints work

4

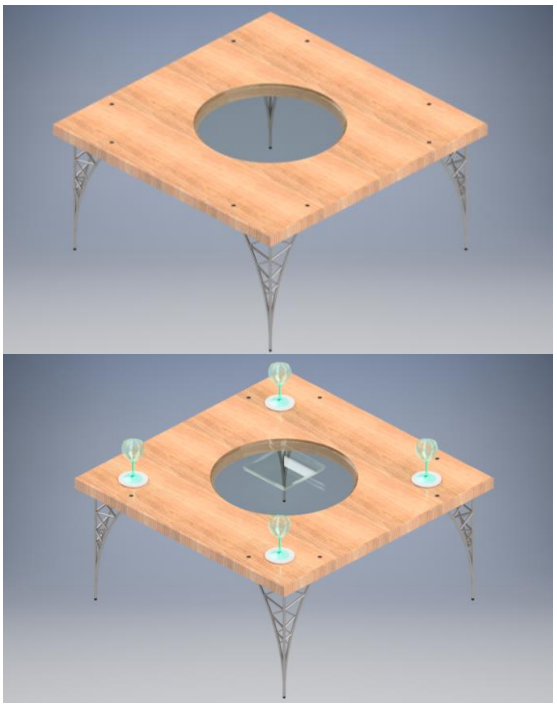
Dataset & Handout

On the Class Page you will find the dataset to download.

Download then extract to C:\\ Drive

You can also download the handout which will contain further details and images as well as extension tasks, links and more.

The relevant files and handout pages will be highlighted for each exercise.



5

Compliance

As said earlier – I am a student.

This means I use an Autodesk Educational License.

In respect of compliance and the license terms, the files provided in the dataset are only to be used for this class.

Non-Compliance is taken seriously, so delete the dataset once you are finished. Any files you created are fine to keep as long as they don't contain any files belonging to the dataset.

It is also for this reason that I am not following the standard extract location like you would see with other Autodesk University Classes.

Class Q&A

Due to most classes being pre-recorded questions can be asked either in the class page in the class Q&A at the time below

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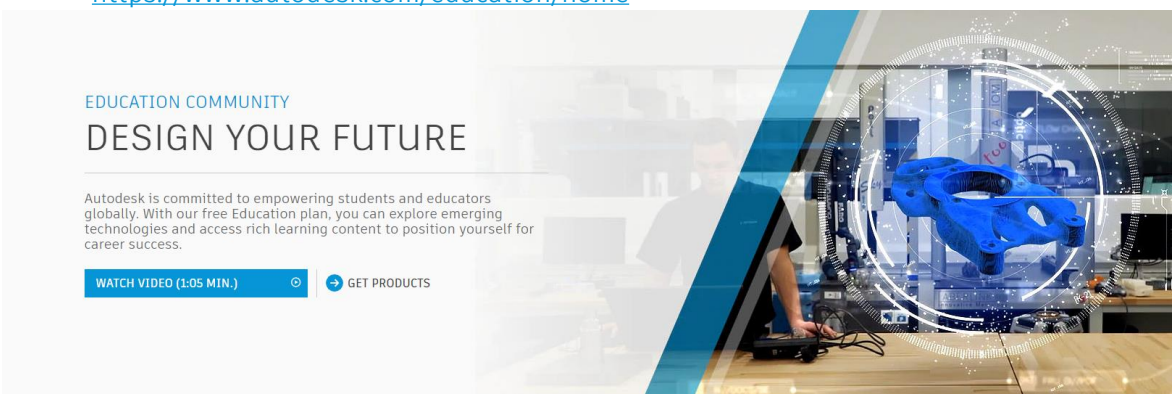
Education

Did you know that Autodesk offers free software for Students and Teachers?

https://www.autodesk.com/education/home



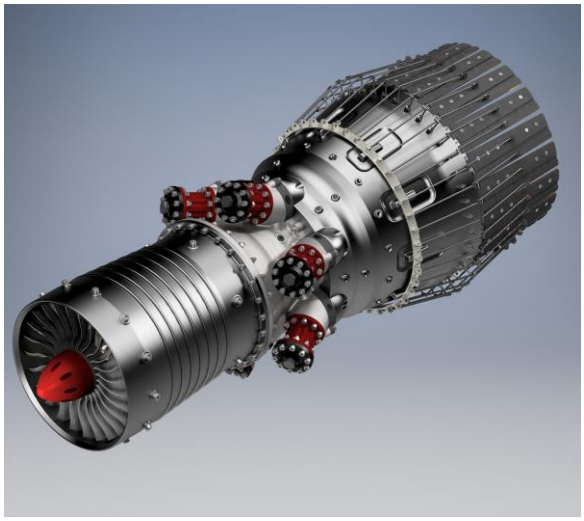
8

Welcome to Inventor

WHAT IS AUTODESK INVENTOR?

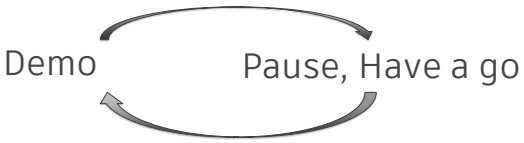
WHY DID I CREATE THIS CLASS?

WHAT TO EXPECT FROM THIS CLASS?



9

How this class will work



EXERCISE 1

WINEGLASS

- Getting used to Inventor
- Launching the Part Environment
- Parametric Sketching
- Revolve
- Fillets

EXERCISE 2

TABLETOP

- Parametric Sketching
- Parameters
- Extrude
- Hole
- Patterns

EXERCISE 2.2

TABLE ASSEMBLY

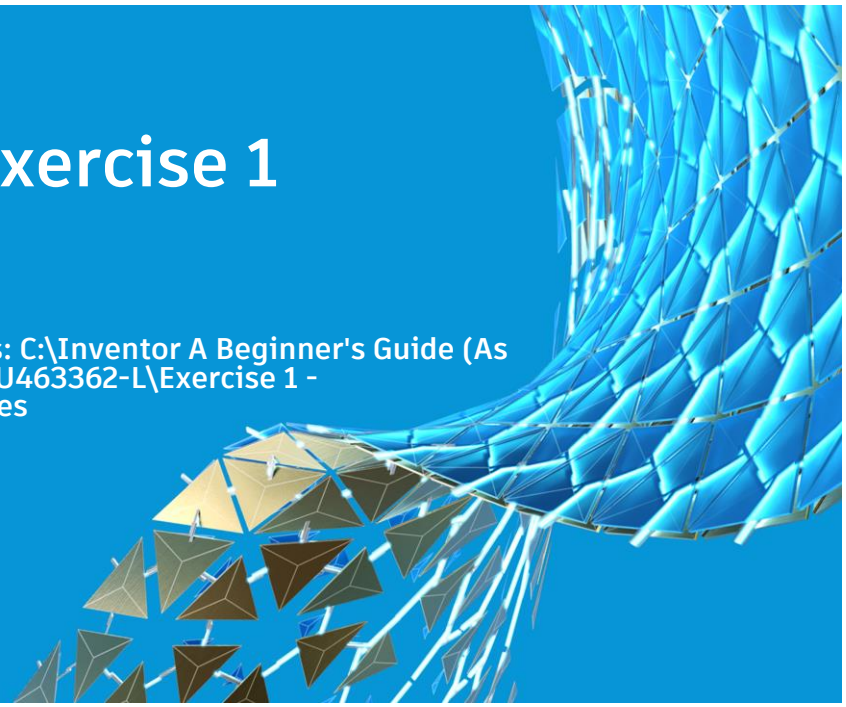
- Launching the Assembly Environment
- Using the Place Command
- Grounding Parts
- Joints
- Patterns
- Assembly Modifications
- Degrees of Freedom
- Content Centre
- Bolted Connections
- Modelling in the Context of an Assembly

EXTENSION

MORE JOINTS & BONUS CONTENT

- Parametric Sketching
- Sweeps
- Sharing Sketches
- Surfaces
- Split
- Solids
- Fillets

Setup & Exercise 1



Handout Pages: 7-33

Relevant Dataset Files: C:\Inventor A Beginner's Guide (As Fast As Possible) - EDU463362-L\Exercise 1 - Wineglass\Staging Files

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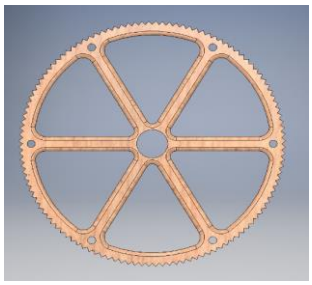
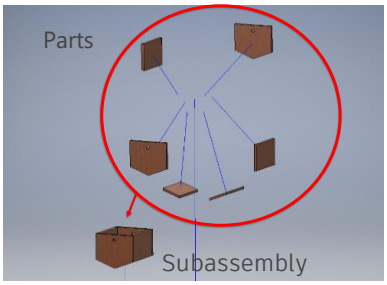
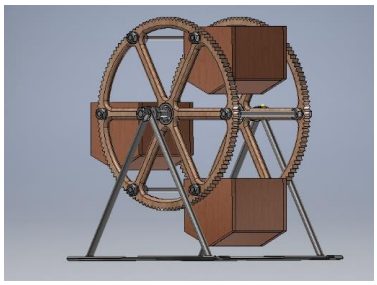
Parts and Assemblies

What are Parts and Assemblies? What is a Subassembly?

Parts → Subassembly → Top Level Assembly







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Exercise 1 – Modelling a Wineglass

Why model a Wineglass?

What will we cover in this exercise?

What should we have at the end?

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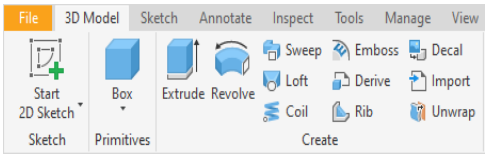
Setup & Exercise 1 Demo

Watch the demo then pause
the video and have a go

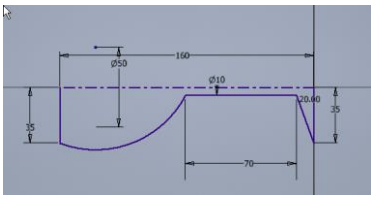
14

Exercise 1 – What did we learn?

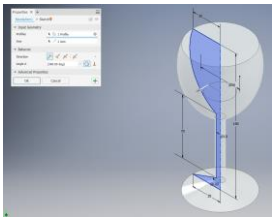
INVENTOR PART GUI



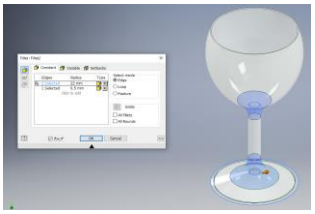
PARAMETRIC SKETCHING



REVOLVE



MODIFYING SOLIDS



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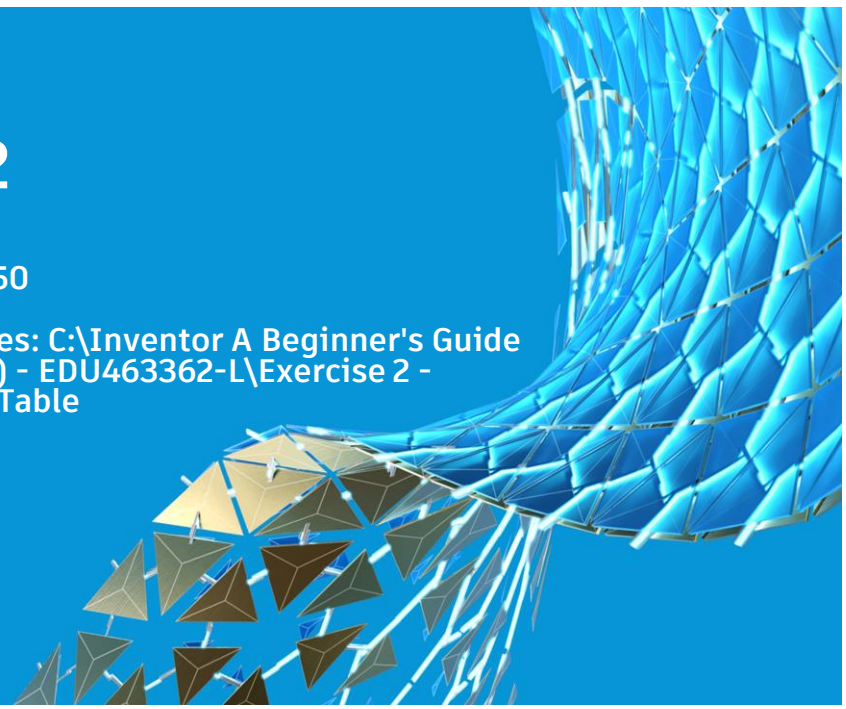
Exercise 2

Handout Pages: 34-50

Relevant Dataset Files: C:\Inventor A Beginner's Guide (As Fast As Possible) - EDU463362-L\Exercise 2 - Table\Staging Files\Table



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Exercise 2 – Modelling a Table

The Main Project

Spread over Exercise 2 & Exercise 2.2

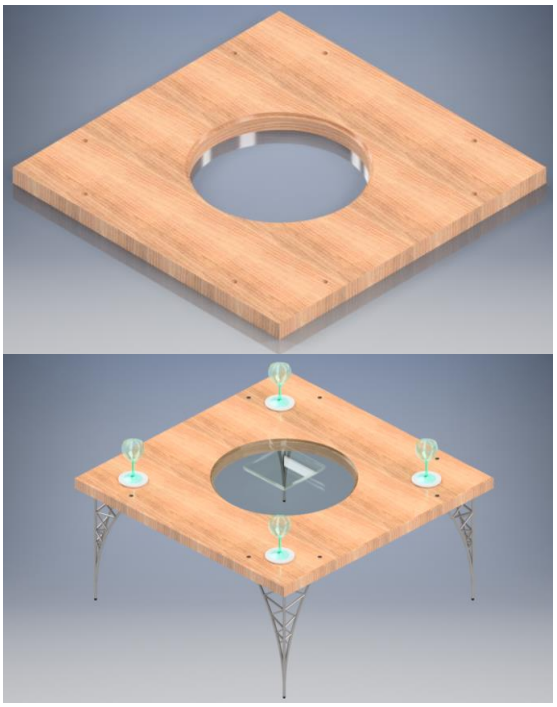
Exercise 2: Model the Table Top

Exercise 2.2: Building the Table with the files in the data set

Why model a Table?

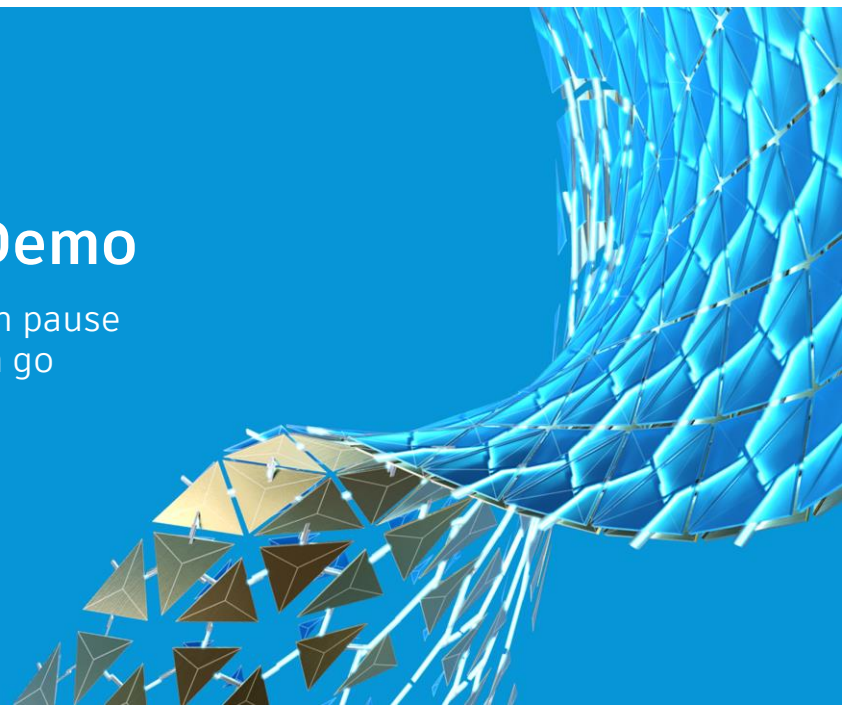
What will we cover in this exercise?

What should we have at the end?



Exercise 2 Demo

Watch the demo then pause the video and have a go



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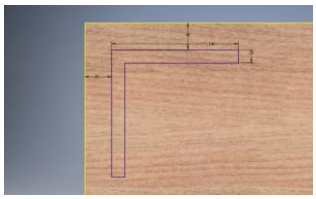
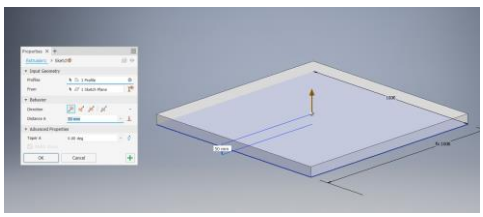
Exercise 2 – What did we learn?

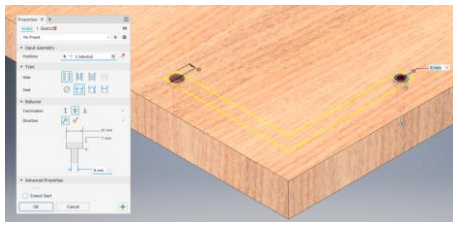
PARAMETRIC SKETCHING



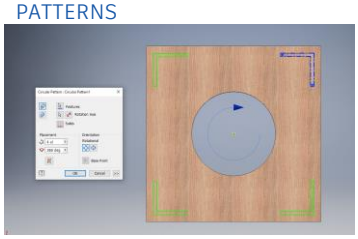
EXTRUDING



MODIFYING



PATTERNS



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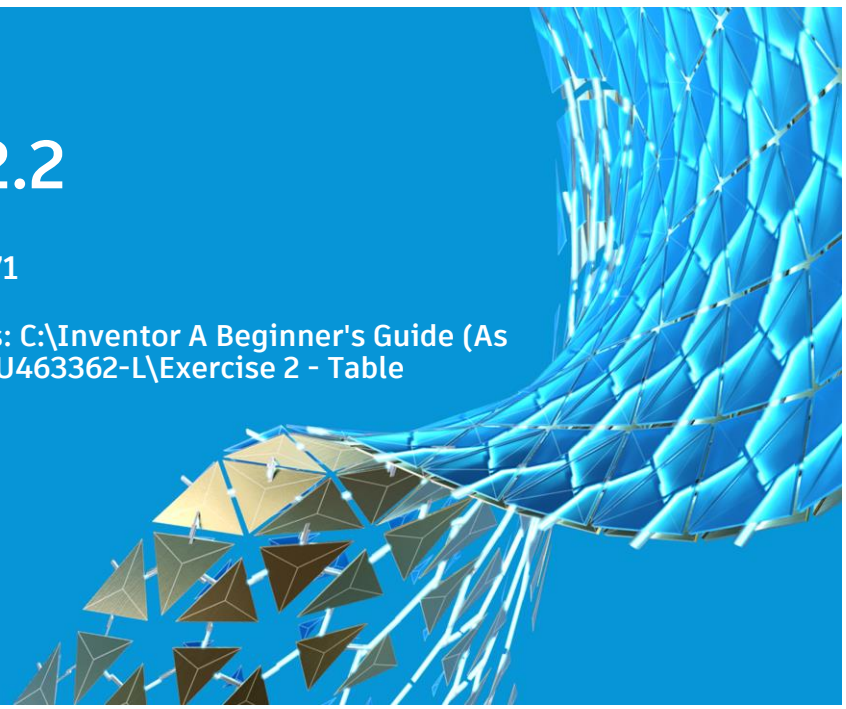
Exercise 2.2

Handout Pages: 51-71

Relevant Dataset Files: C:\Inventor A Beginner's Guide (As Fast As Possible) - EDU463362-L\Exercise 2 - Table



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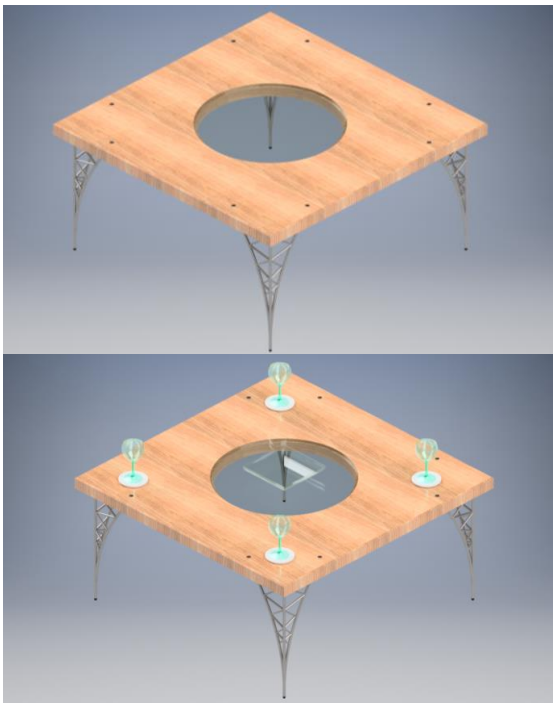
Exercise 2.2 – Assembling the Table

Last exercise we made the tabletop, in this exercise we're going to build on it using files from the dataset.

What are we going to cover in this exercise?

Why are we covering these skills?

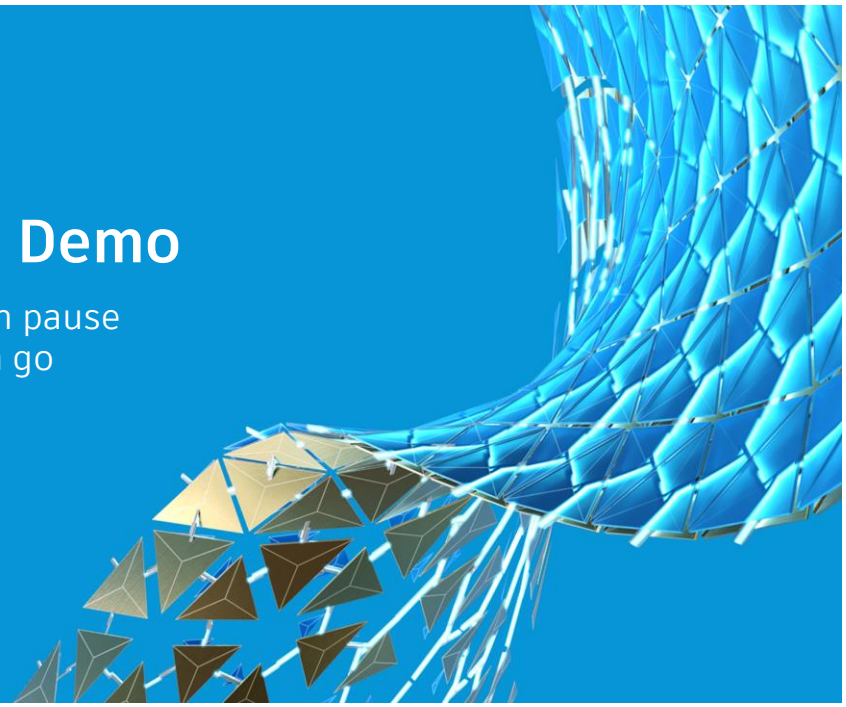
What should we have at the end?



21

Exercise 2.2 Demo

Watch the demo then pause the video and have a go



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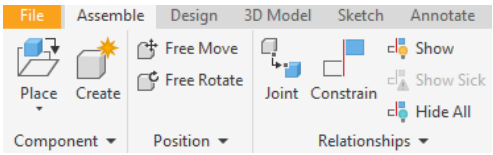
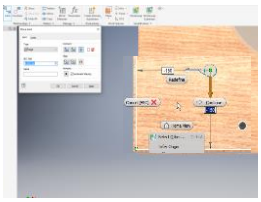
Exercise 2.2 – What did we learn?

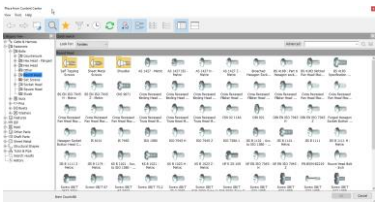
INVENTOR ASSEMBLY GUI



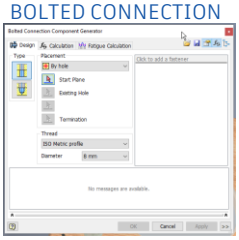
JOINTS



CONTENT CENTRE



BOLTED CONNECTION



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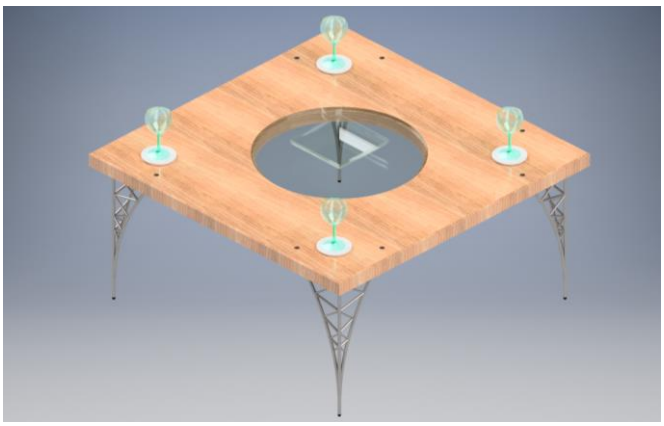
Conclusion

How do you feel about 3D CAD now?

Is 3D CAD for you?

Where next?



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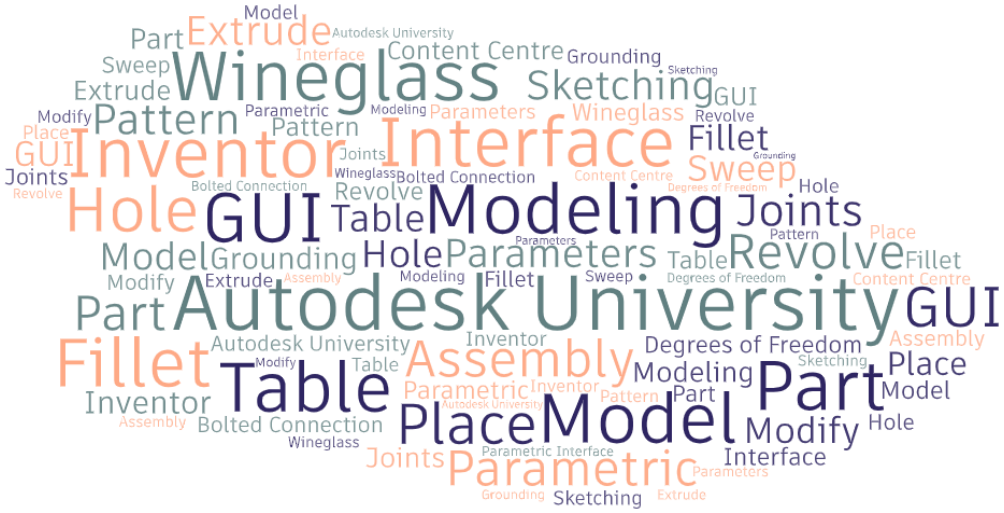
What Did We Achieve In This Class?



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Progression

Where to go next?

Handout and Dataset – Extension Activities as well as Bonus Content

Further Exploration in to Inventor – More Parts & Assemblies as well as Drawings and Presentations. Master the basics then move over to the Simulation, FEA, Weldments and Design Accelerators

Do another class on Inventor – There are many on the internet – they will cover similar things but with a different dataset.

Trial Expired? Try Fusion 360 – Free personal edition available with a similar environment to Inventor with everything you need for 3D Modelling.

Practice your modelling skills by modelling different things around you.

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Further Resources

In the handout:

Part 6 – Assembly Exercise 2 – Pages 74 – 86

Part 8 – Bonus Content – Pages 88 – 103

YouTube:

- **Inventor – TFI - https://www.youtube.com/c/TFICADTips/featured**
- **Fusion 360 – Lars Christensen - https://www.youtube.com/user/cadcamstuff**

Autodesk:

- **Autodesk Knowledge Network: https://knowledge.autodesk.com/**
- **Inventor Forums - https://forums.autodesk.com/t5/inventor/ct-p/70**
- **Fusion Forums - https://forums.autodesk.com/t5/fusion-360/ct-p/1234**
- **Autodesk Design Academy - http://academy.autodesk.com/**
- **Autodesk University: https://www.autodesk.com/autodesk-university/**

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Q&A Reminder & Feedback

There will be a Q&A – feel free to ask questions about the class and Inventor

If the Q&A has already passed then feel free to ask in the comments of the class page

Feel free to provide feedback in the class page

Click the recommend button if you enjoyed the class

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