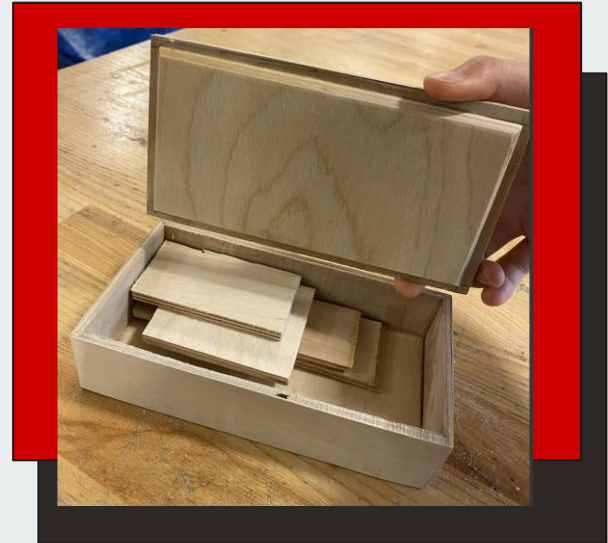# Task Machine Competition Wooden Box Workshop

Brought to you by the SILab Advisors!

Example Common Woodworking Tools

Heavy Machinery

- Band Saw
- Drill Press
- Scroll Saw
- Miter Saw
- Belt and Disc Sander
- 6" Jointer
- Surface Planer

Hand-Held Machinery

- Orbital Sander
- Power Drill
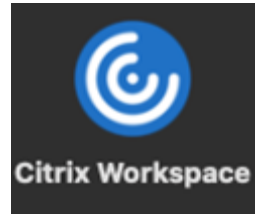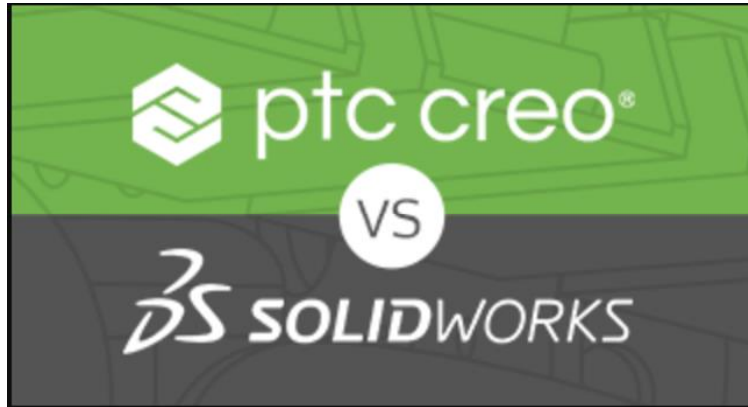
Hand Tools

- Clamps
- Square
- jig

Bonus Skills

- NC Mill
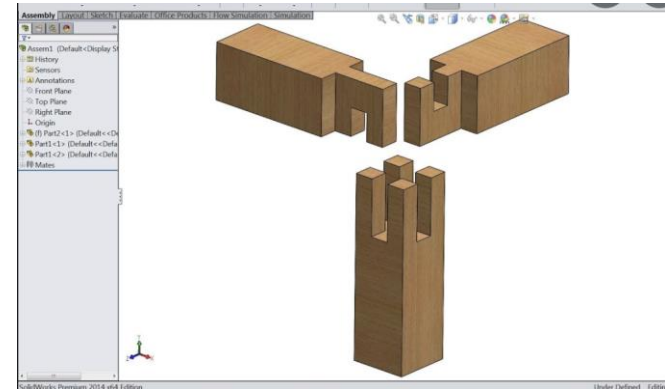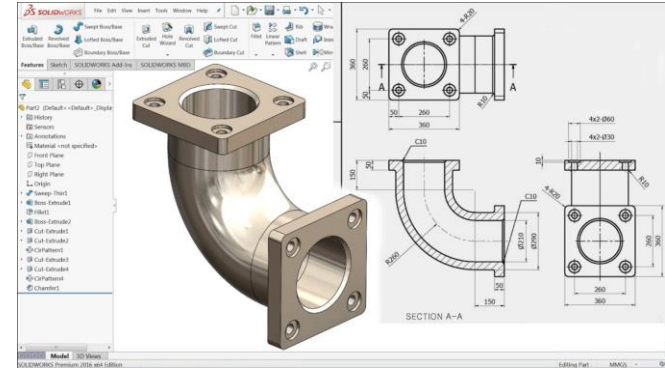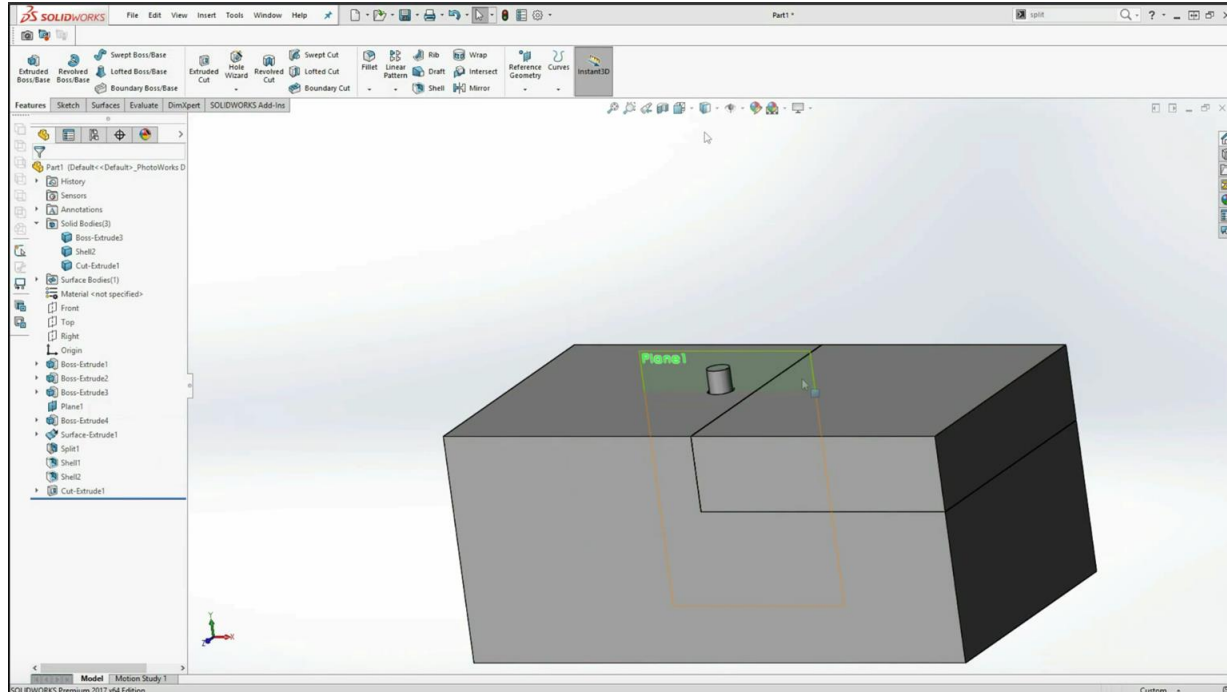
Resources for Modelling Your Container

Free From BU!

Follow BU links for download instructions...

- SolidWorks
- CREO

Or be like Patra and cry at the IT help center to do it for me the day before the project was due

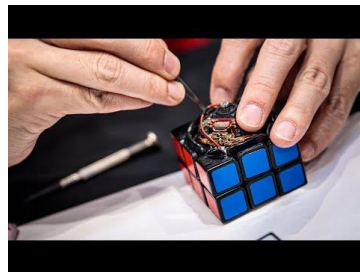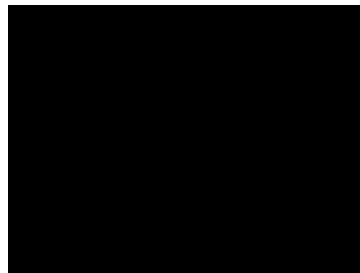# Solidworks Model

The 2021 Fall Competition Is… A Task Machine!

- Whaaa? What exactly is a Task Machine?
  - Machine that undoes whatever action it performs.
- Goal:
  - Creativity and Entertainment
  - Simple or complex as you want!
  - Fun challenge
- Example:
  - We made a box with Rhett popping out of it!
- Really cool example

Requirements and Goals - Box* (container)

- 5 categories the "box" will be scored on:
  - **Build Quality (10%)**
    - Box has been made well, presentable, no jerry rigging
  - **Design (20%)**
    - Elegantly crafted shell to hold your mechanism
  - **Creativity (20%)**
    - Just don't make it bland! (This is mostly for the mechanism part tho)
  - **Functionality (20%)**
    - The container has a purpose! - To hold the mechanism/ part of the design idea
    - This is just mainly for the mechanism part tho
  - **Personality (30%)**
    - This is just judged based on the mechanism

*Up on the website

CHALLENGE SUBMISSION SCORE

# Points	0-3	4-7	8-10	Score
Build Quality (10%)	Box is Jerry rigged together, held together by tape, etc	Box holds together fine, but the mechanism has problems, needs help or adjustment	Box and mechanism both work well and have been made well. Obviously a quality piece of work	
Design (20%)	Machine is a basic or rudimentary take on a task machine	The machine's design incorporates either an elegant box/shell **or** a innovative mechanism for undoing an action	The machine's design incorporates either an elegant box/shell **and** a innovative mechanism for undoing an action	
Creativity (20%)	Copies an existing design	Takes an existing design or idea one step further with some improvement (mechanical, quality, or personality)	Wholly unique idea that demonstrates the whole spirit of a task machine (the machine is something that entertains and creates a bit of a sense of wonder)	
Functionality (20%)	Machine usually completes its action, but sometimes faults	Machine always completes its action but it is very basic	Machine always completes its complex action	
Personality (30%)	Machine simply does the same thing each time	Machine has a few (2-3) types of action	Machine has a lot of types of action, and seems to have a personality to it	

Total Score	

Competition Reminders

- Reminder that competition comes with Prize Money!
- 1st - $300
- 2nd - $200
- 3rd - $100
- Each team will be reimbursed up to $50 for outside competition supplies!
  - Includes items that can be returned to the lab for future use
  - Arduino Nano ~ $10
  - Servo Motors ~ $12 each/$24 total
  - Wires ~ $7
- Work in Teams!
  - If you don't have one and want one we can find a team for you!

QUESTIONS/COMMENTS?

Brought to you by the SILab Advisors!