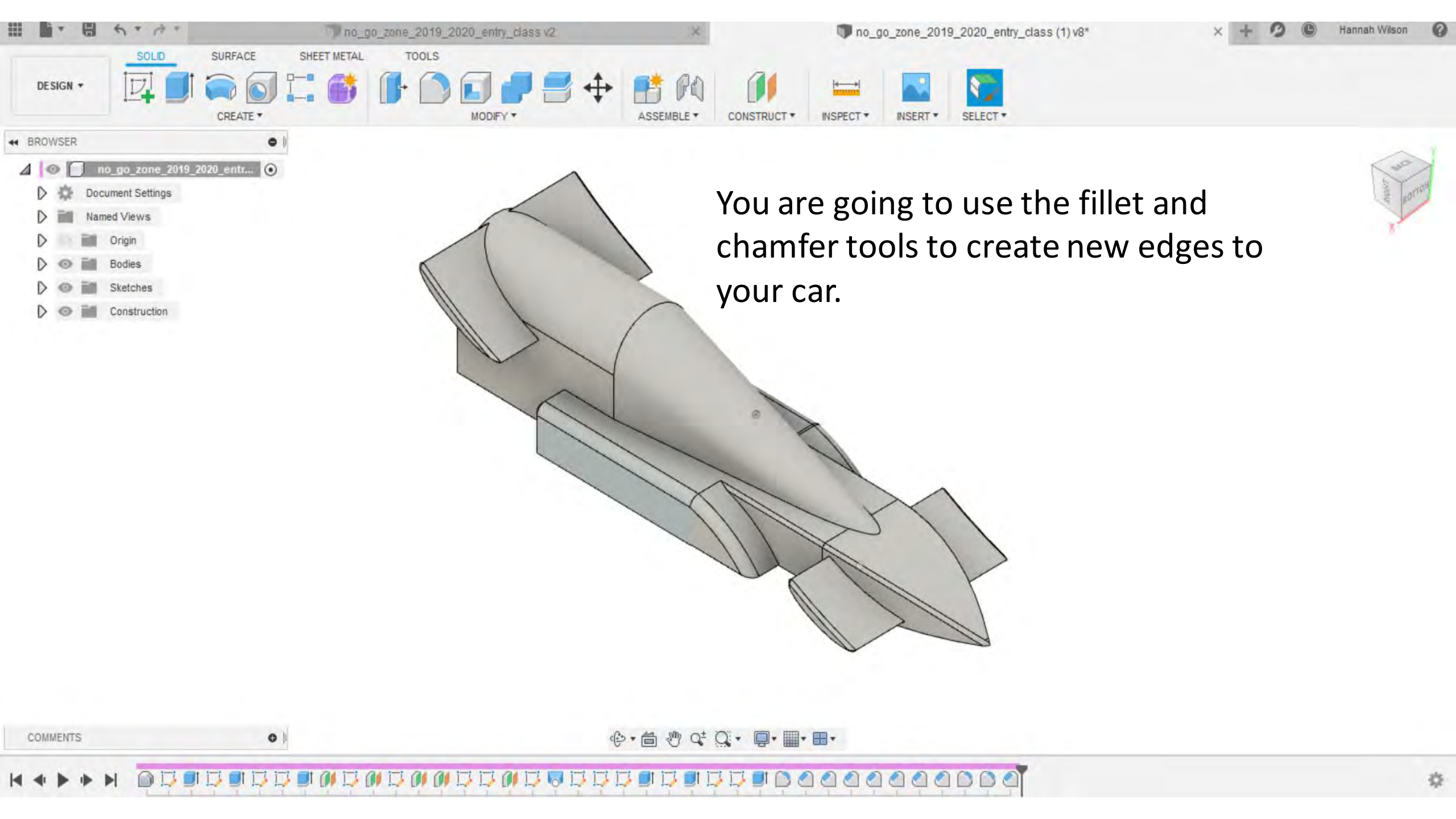


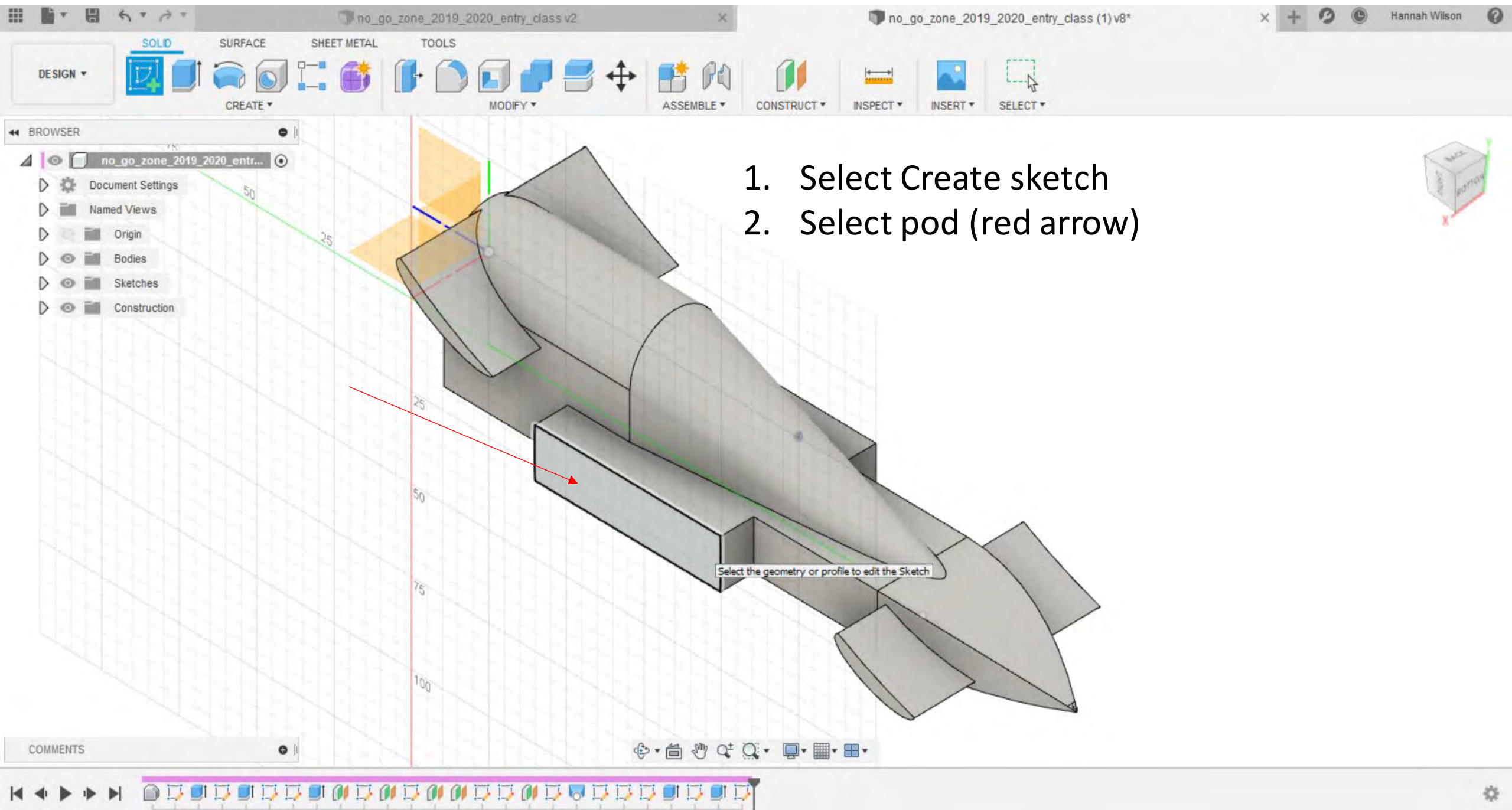
Activity 6

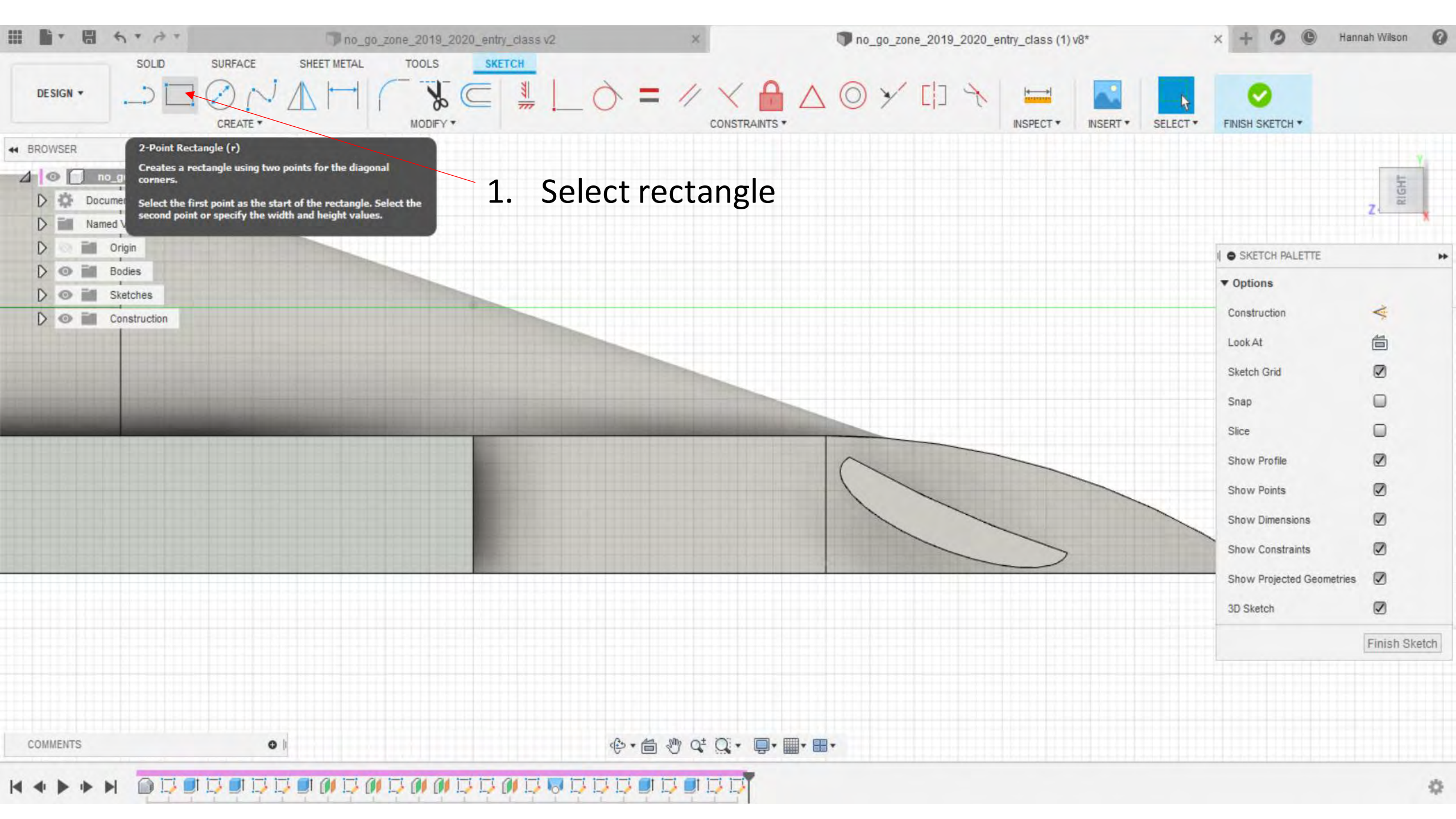
Fillet and chamfer

PDF Guide



You are going to use the fillet and chamfer tools to create new edges to your car.





DESIGN

SOLID SURFACE SHEET METAL TOOLS **SKETCH**

CREATE MODIFY CONSTRAINTS INSPECT INSERT SELECT FINISH SKETCH

2-Point Rectangle (r)
Creates a rectangle using two points for the diagonal corners.
Select the first point as the start of the rectangle. Select the second point or specify the width and height values.

1. Select rectangle

SKETCH PALETTE

Options

- Construction
- Look At
- Sketch Grid
- Snap
- Slice
- Show Profile
- Show Points
- Show Dimensions
- Show Constraints
- Show Projected Geometries
- 3D Sketch

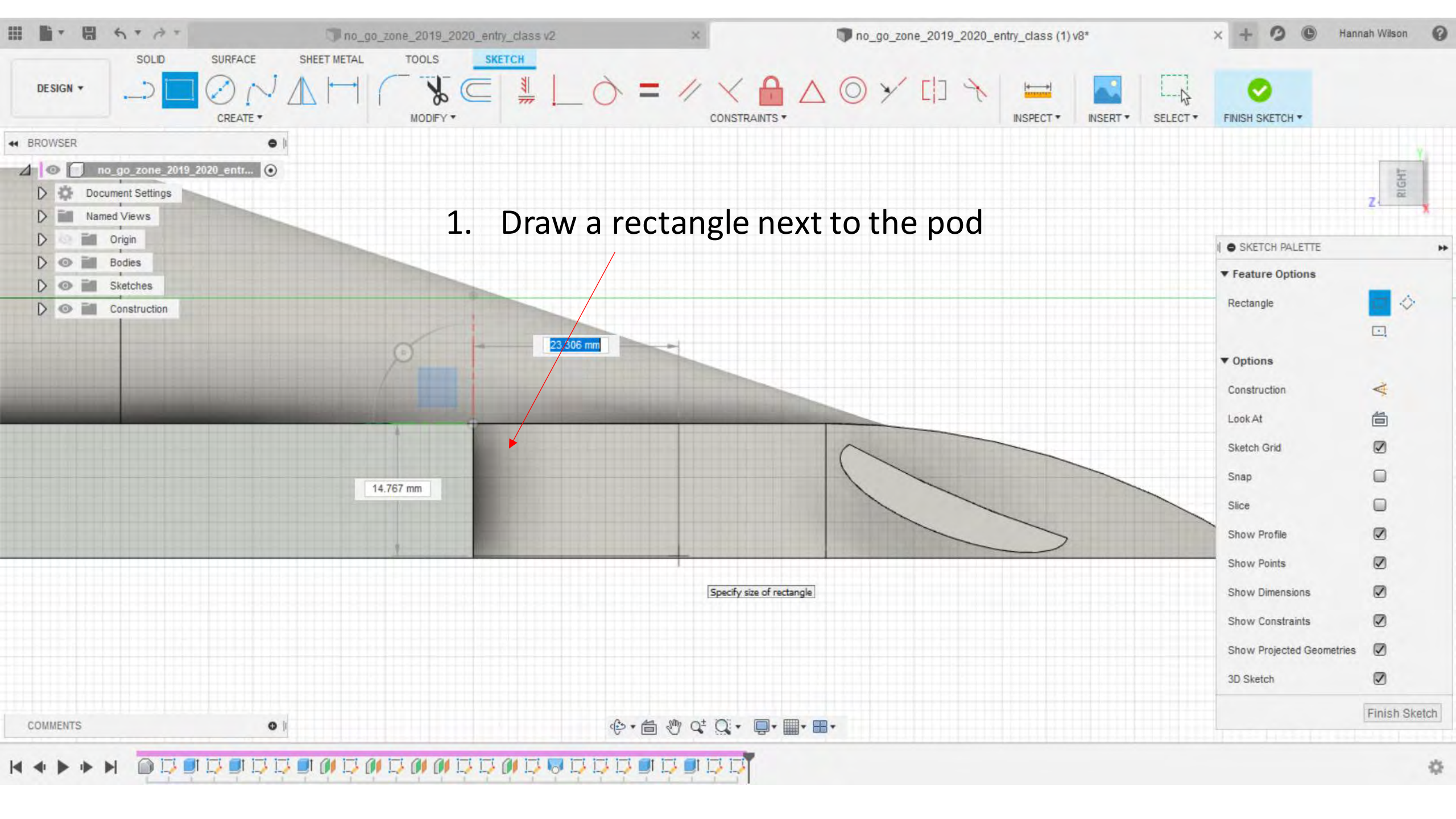
Finish Sketch

COMMENTS

Navigation icons: pan, rotate, zoom, etc.

Timeline and view control icons





1. Draw a rectangle next to the pod



23.306 mm

14.767 mm

Specify size of rectangle

SKETCH PALETTE

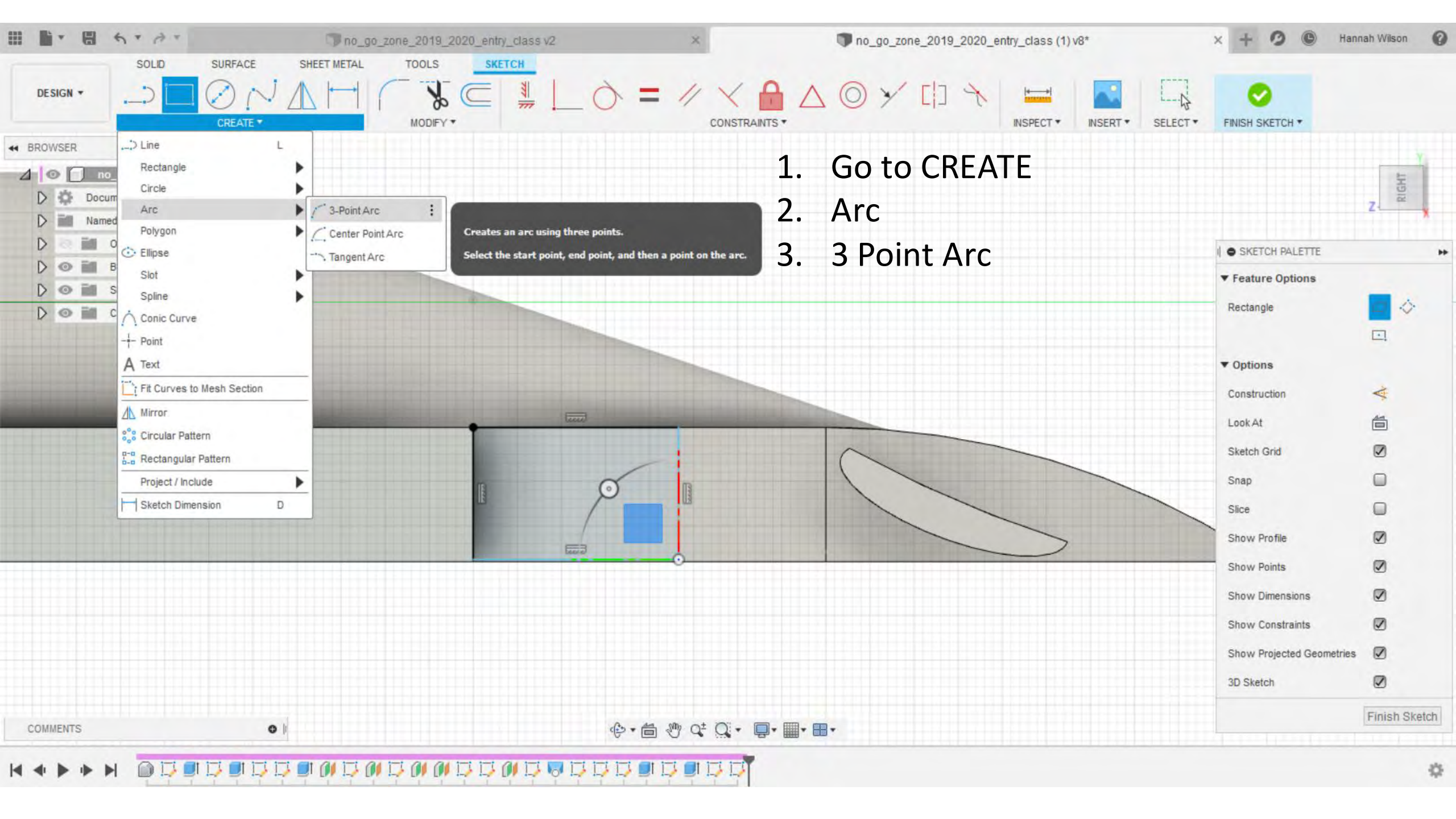
Feature Options

- Rectangle

Options

- Construction
- Look At
- Sketch Grid
- Snap
- Slice
- Show Profile
- Show Points
- Show Dimensions
- Show Constraints
- Show Projected Geometries
- 3D Sketch

Finish Sketch



1. Go to CREATE
2. Arc
3. 3 Point Arc

Creates an arc using three points.
Select the start point, end point, and then a point on the arc.

SKETCH PALETTE

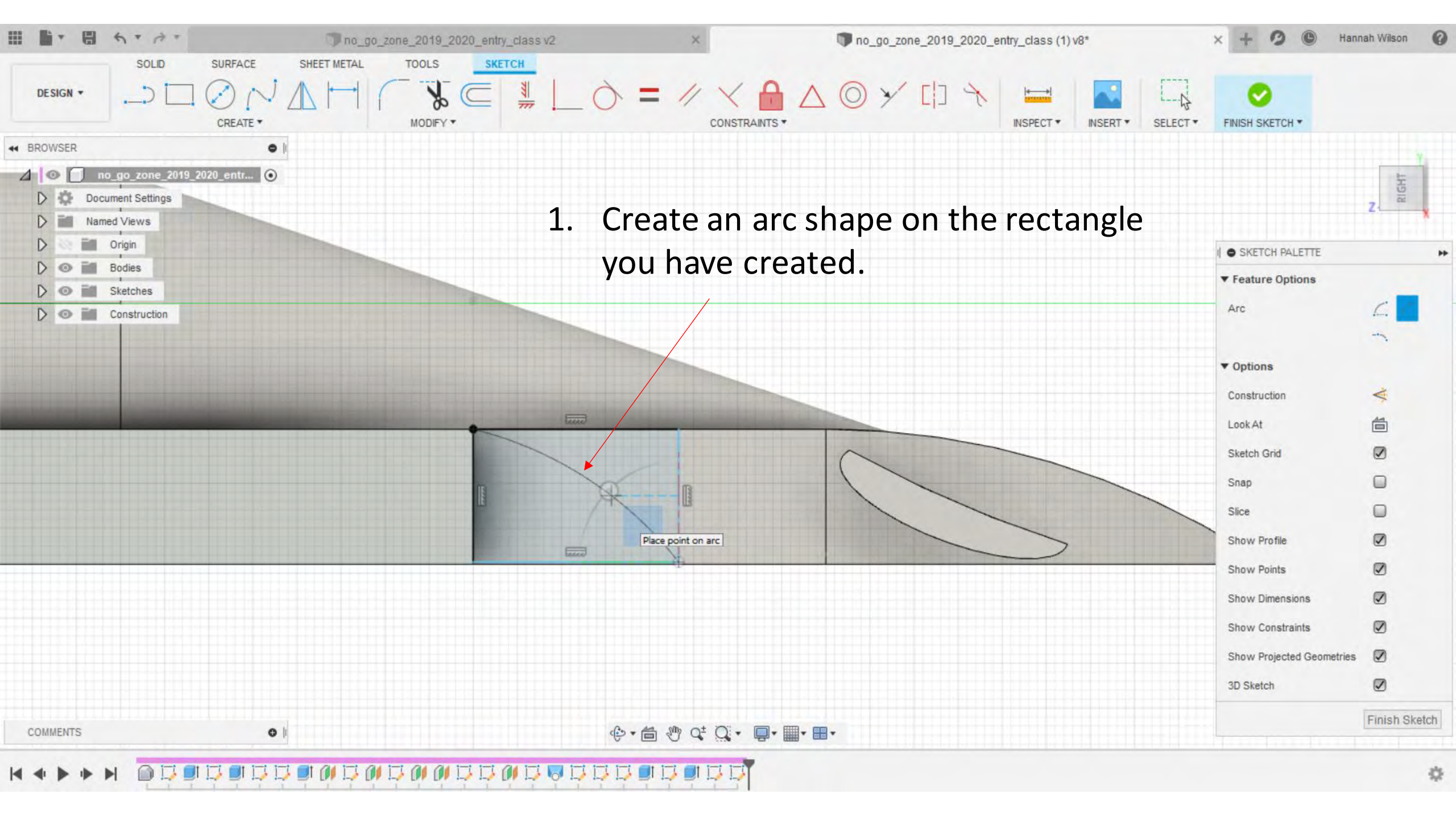
Feature Options

- Rectangle

Options

- Construction
- Look At
- Sketch Grid
- Snap
- Slice
- Show Profile
- Show Points
- Show Dimensions
- Show Constraints
- Show Projected Geometries
- 3D Sketch

Finish Sketch



1. Create an arc shape on the rectangle you have created.

SKETCH PALETTE

- Feature Options
 - Arc
- Options
 - Construction
 - Look At
 - Sketch Grid
 - Snap
 - Slice
 - Show Profile
 - Show Points
 - Show Dimensions
 - Show Constraints
 - Show Projected Geometries
 - 3D Sketch

Finish Sketch

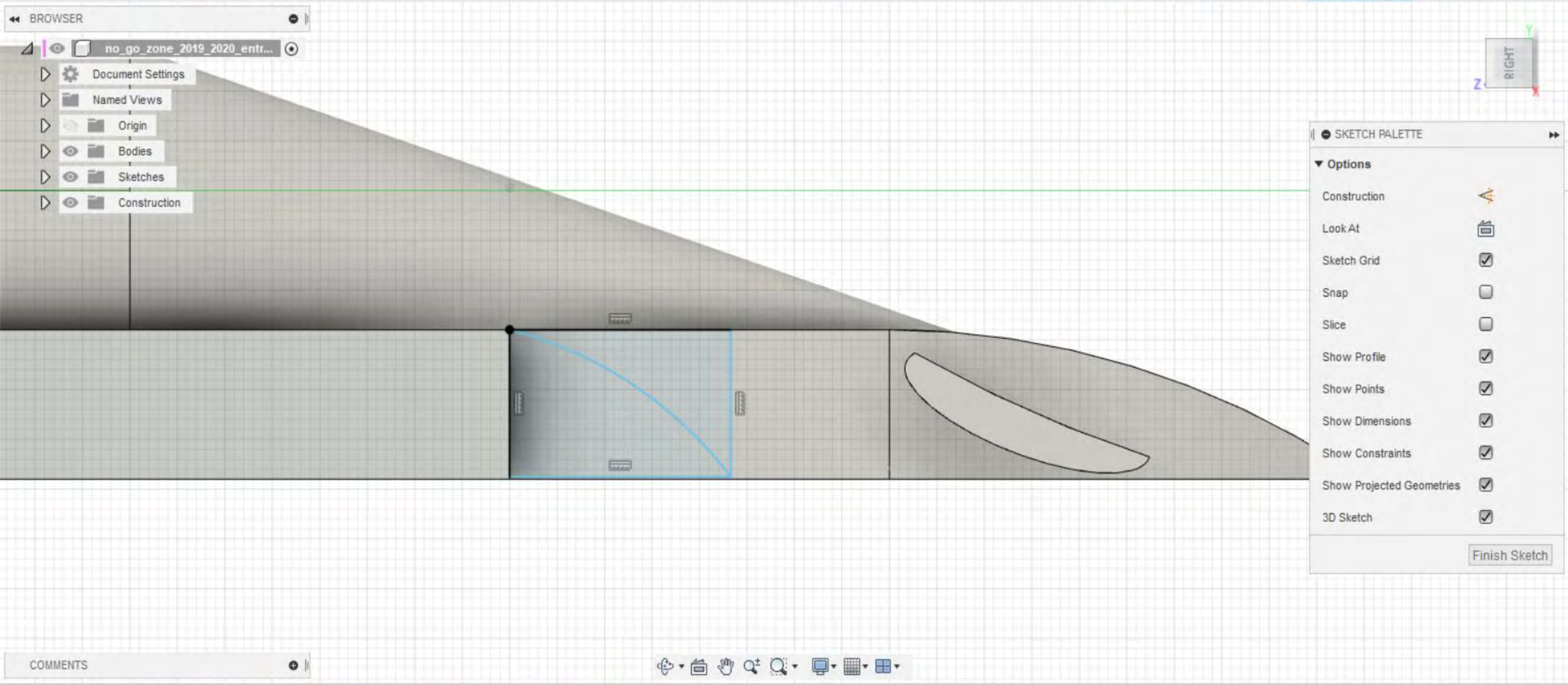
no_go_zone_2019_2020_entry_class v2 | no_go_zone_2019_2020_entry_class (1) v8* | Hannah Wilson

DESIGN | SOLID | SURFACE | SHEET METAL | TOOLS | SKETCH

CREATE | MODIFY | CONSTRAINTS | INSPECT | INSERT | SELECT | FINISH SKETCH

BROWSER

- no_go_zone_2019_2020_entr...
- Document Settings
- Named Views
- Origin
- Bodies
- Sketches
- Construction



SKETCH PALETTE

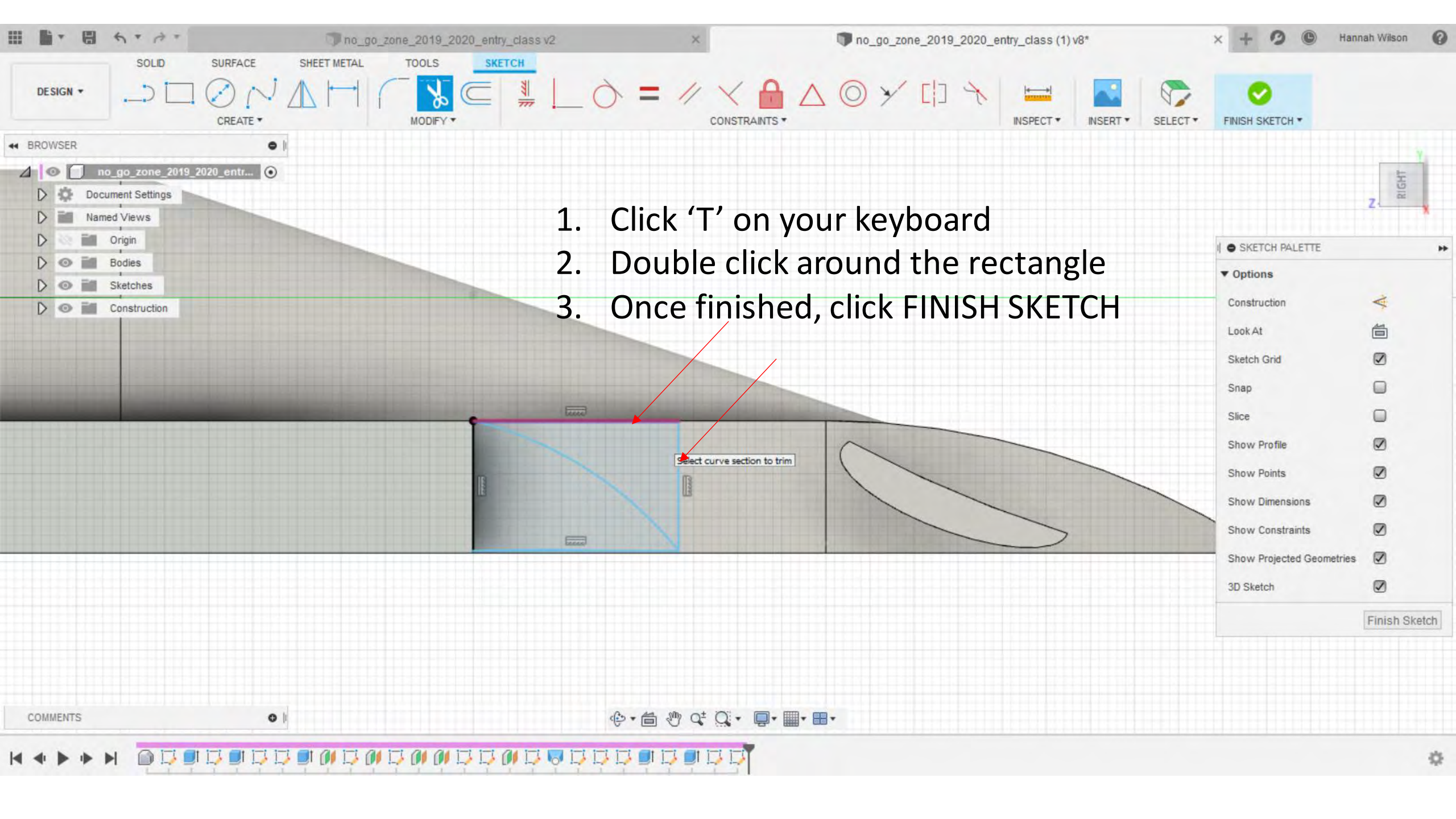
Options

- Construction
- Look At
- Sketch Grid
- Snap
- Slice
- Show Profile
- Show Points
- Show Dimensions
- Show Constraints
- Show Projected Geometries
- 3D Sketch

Finish Sketch

COMMENTS

Navigation and view controls



1. Click 'T' on your keyboard
2. Double click around the rectangle
3. Once finished, click FINISH SKETCH

SKETCH PALETTE

Options

- Construction
- Look At
- Sketch Grid
- Snap
- Slice
- Show Profile
- Show Points
- Show Dimensions
- Show Constraints
- Show Projected Geometries
- 3D Sketch

Finish Sketch

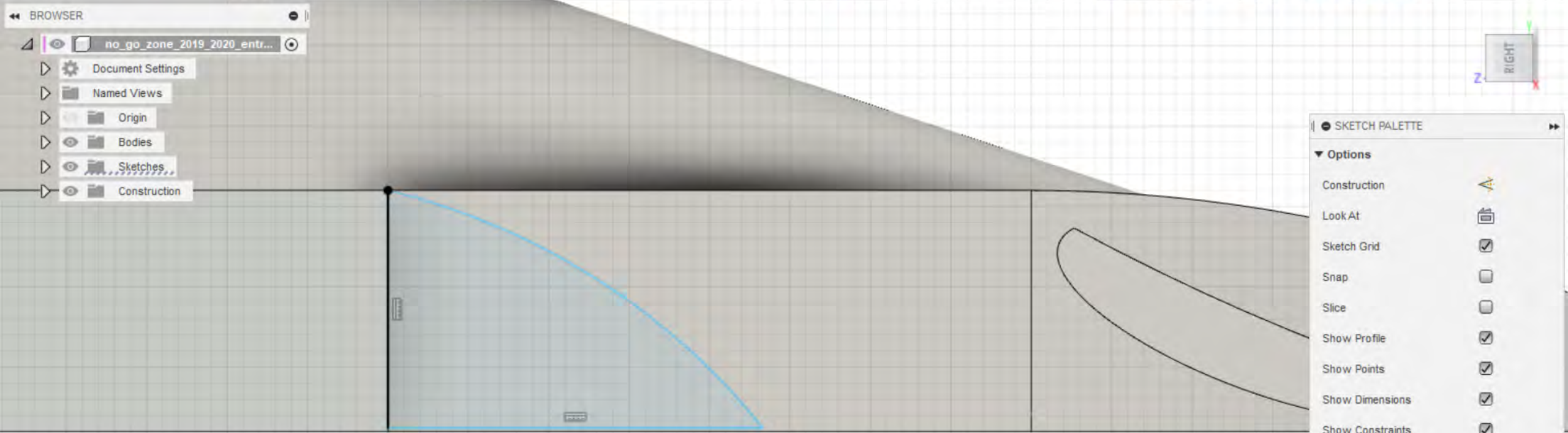
DESIGN ▾

SOLID SURFACE SHEET METAL TOOLS **SKETCH**

CREATE ▾ MODIFY ▾ CONSTRAINTS ▾ INSPECT ▾ INSERT ▾ SELECT ▾ FINISH SKETCH ▾

BROWSER

- no_go_zone_2019_2020_entr...
- Document Settings
- Named Views
- Origin
- Bodies
- Sketches
- Construction



SKETCH PALETTE

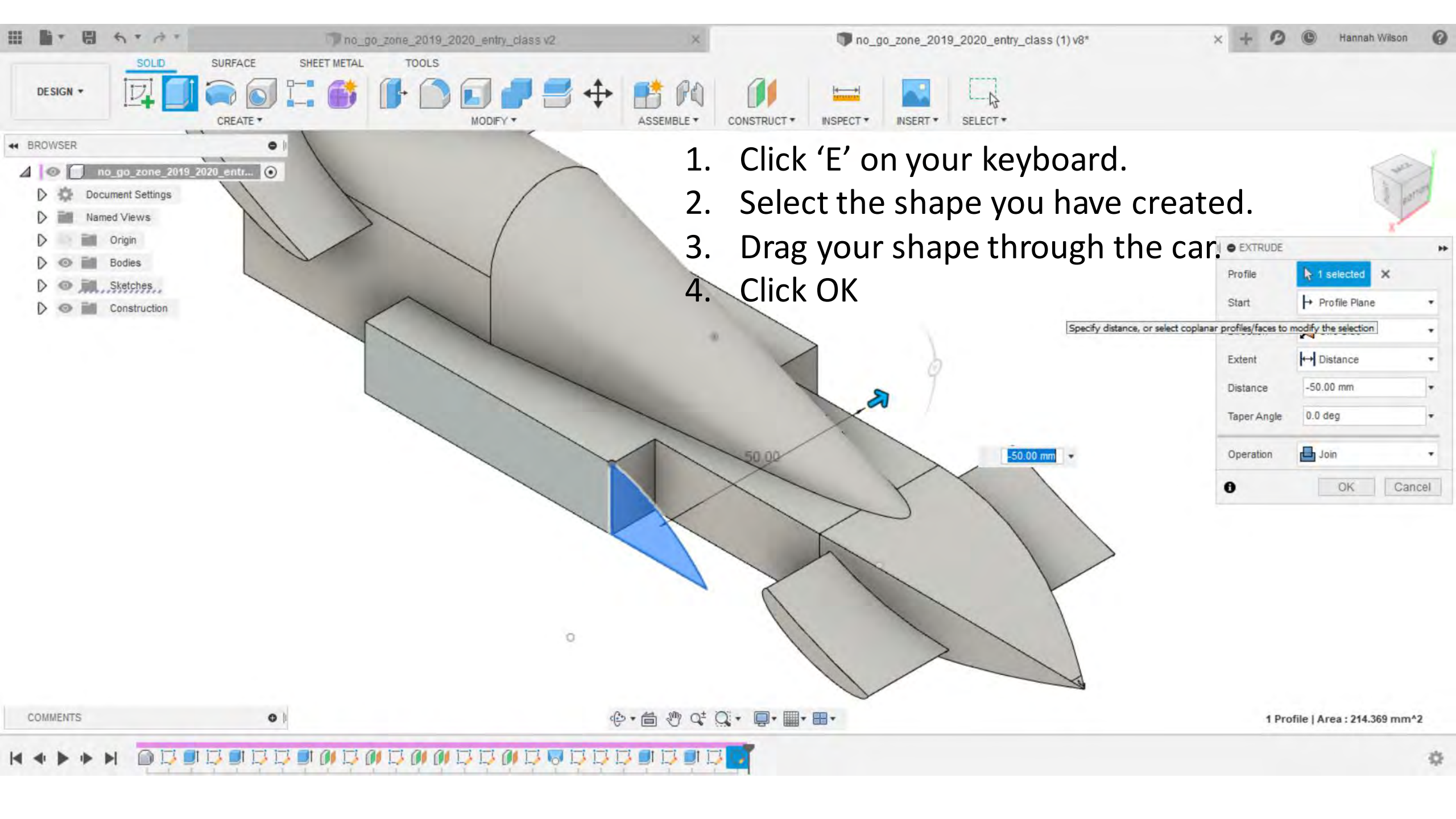
Options

- Construction
- Look At
- Sketch Grid
- Snap
- Slice
- Show Profile
- Show Points
- Show Dimensions
- Show Constraints
- Show Projected Geometries
- 3D Sketch

Finish Sketch

COMMENTS

Navigation icons: Home, Back, Forward, Refresh, Undo, Redo, Rotate, Pan, Zoom, Grid, Hide/Show, etc.



1. Click 'E' on your keyboard.
2. Select the shape you have created.
3. Drag your shape through the car.
4. Click OK

EXTRUDE

Profile: 1 selected

Start: Profile Plane

Specify distance, or select coplanar profiles/faces to modify the selection

Extent: Distance

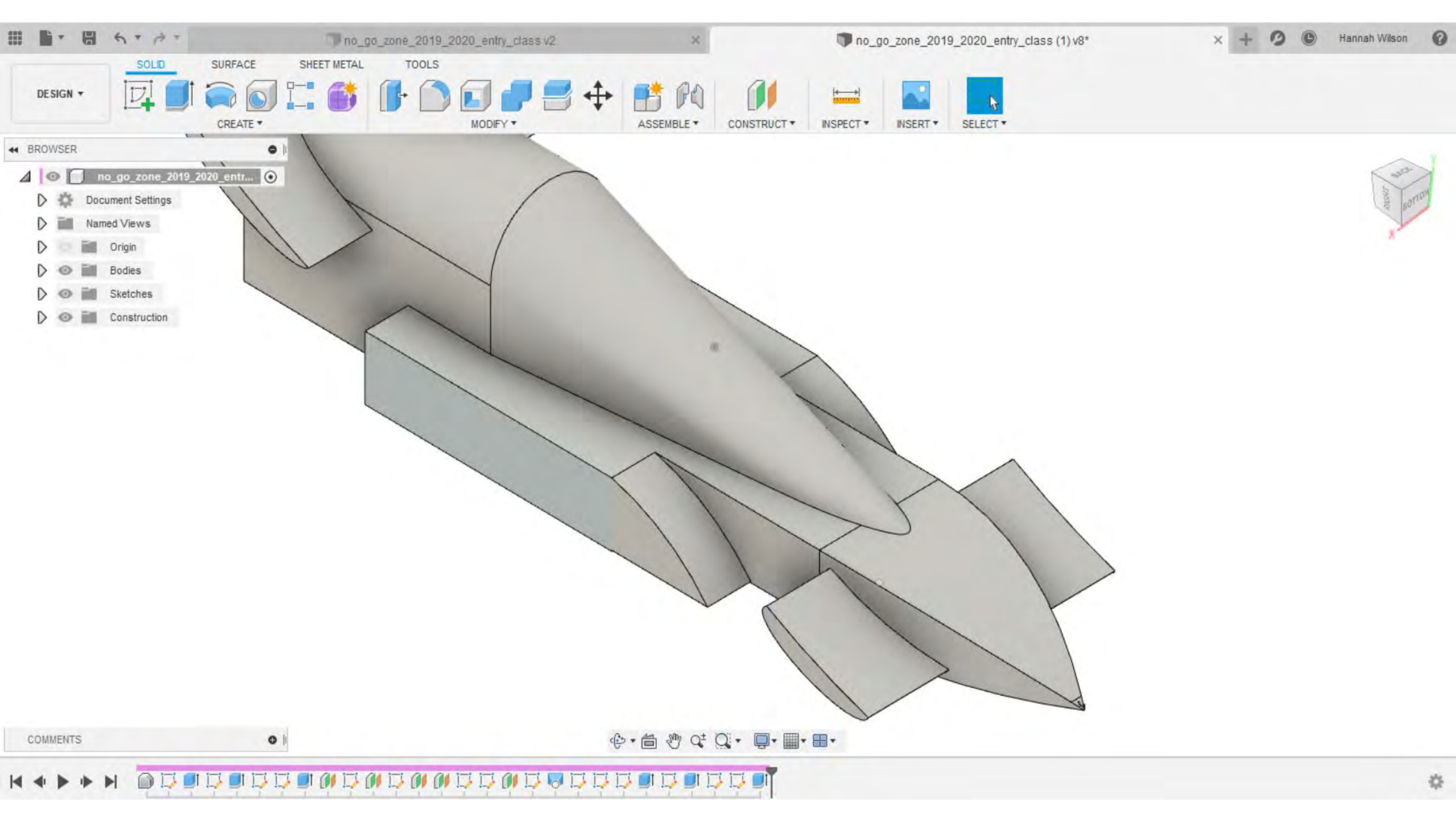
Distance: -50.00 mm

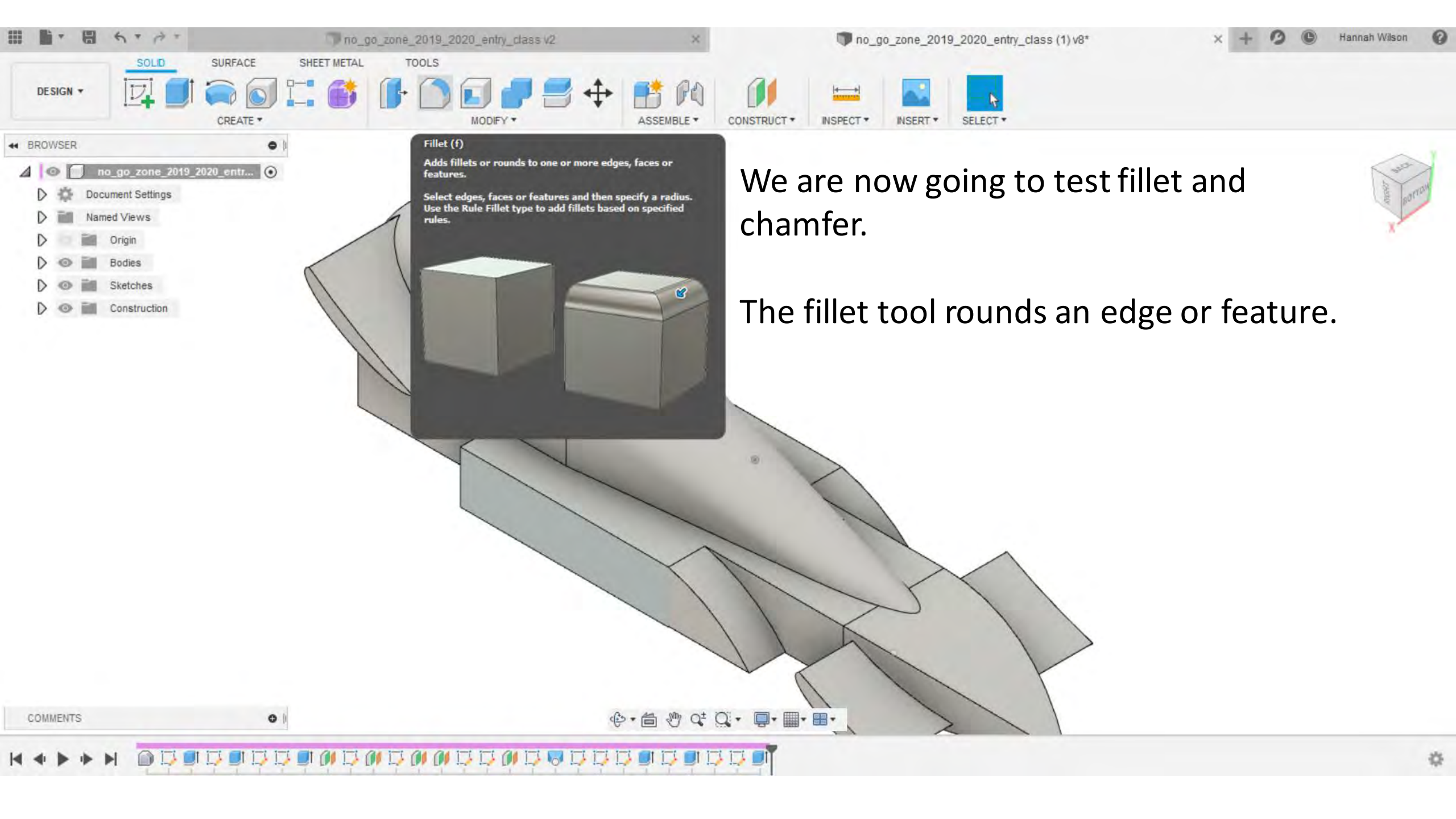
Taper Angle: 0.0 deg

Operation: Join

OK Cancel

1 Profile | Area : 214.369 mm^2

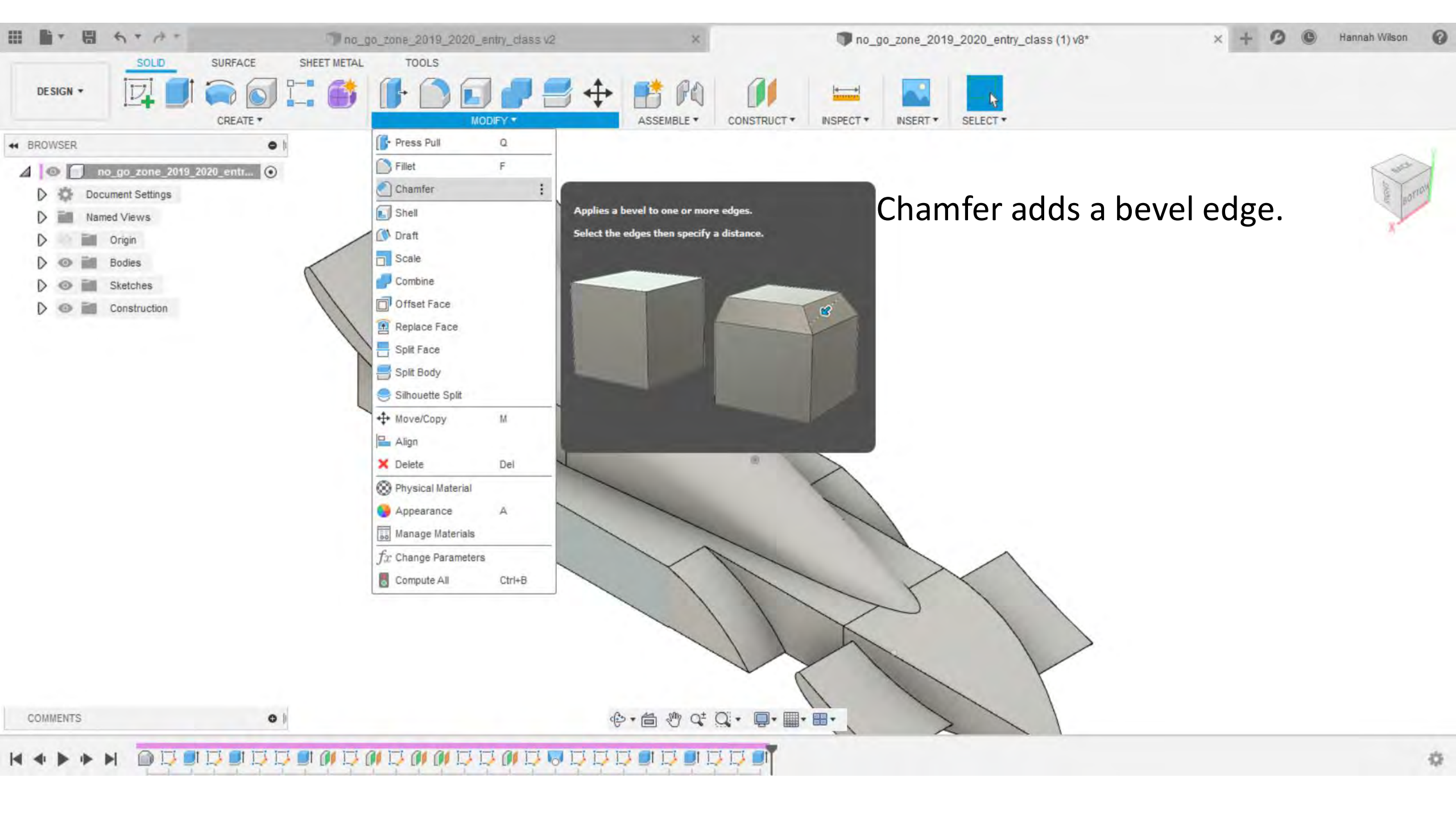




We are now going to test fillet and chamfer.

The fillet tool rounds an edge or feature.



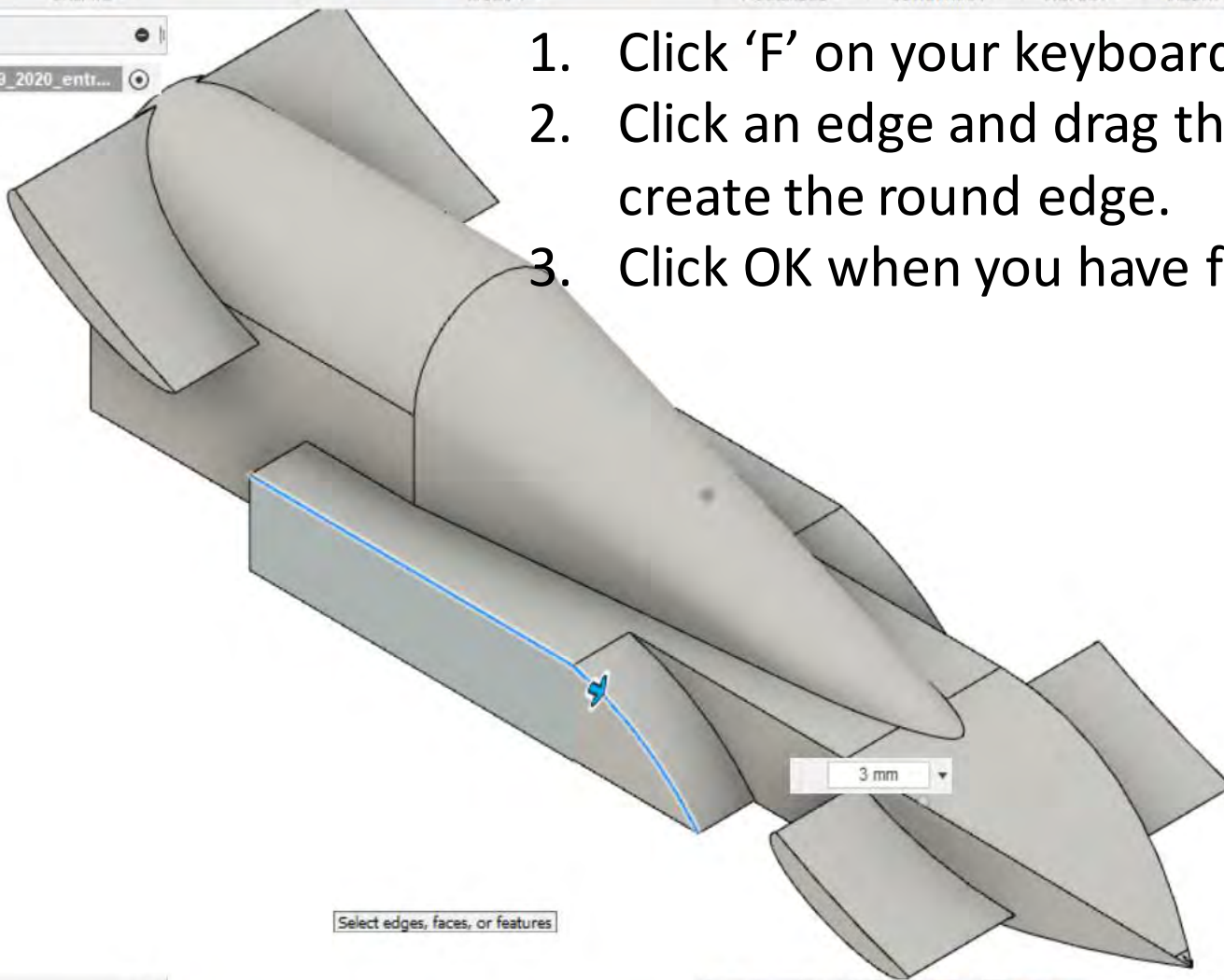
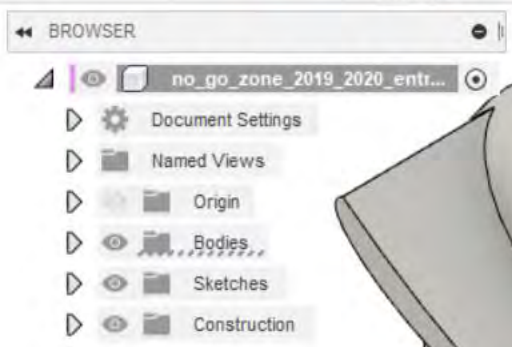
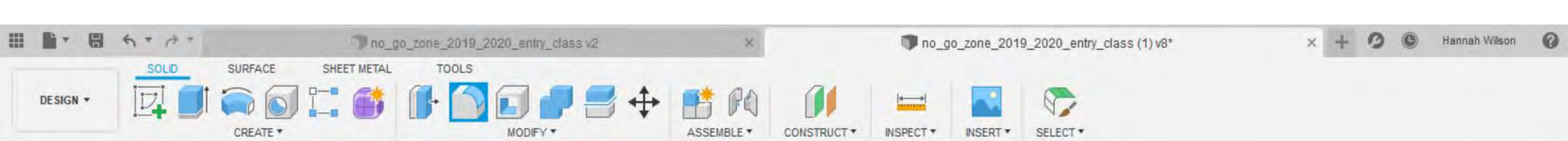


- Press Pull Q
- Fillet F
- Chamfer** ⋮
- Shell
- Draft
- Scale
- Combine
- Offset Face
- Replace Face
- Split Face
- Split Body
- Silhouette Split
- Move/Copy M
- Align
- Delete Del
- Physical Material
- Appearance A
- Manage Materials
- Change Parameters fx
- Compute All Ctrl+B

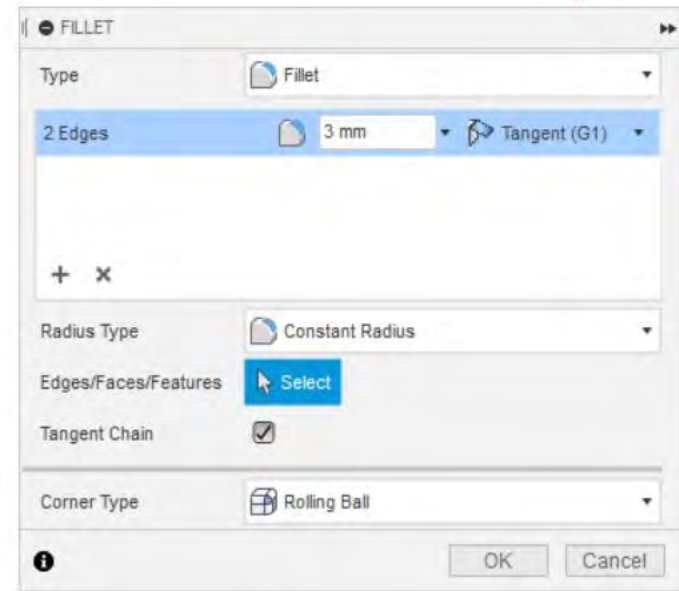
Applies a bevel to one or more edges.
Select the edges then specify a distance.

Chamfer adds a bevel edge.





1. Click 'F' on your keyboard
2. Click an edge and drag the arrow to create the round edge.
3. Click OK when you have finished.

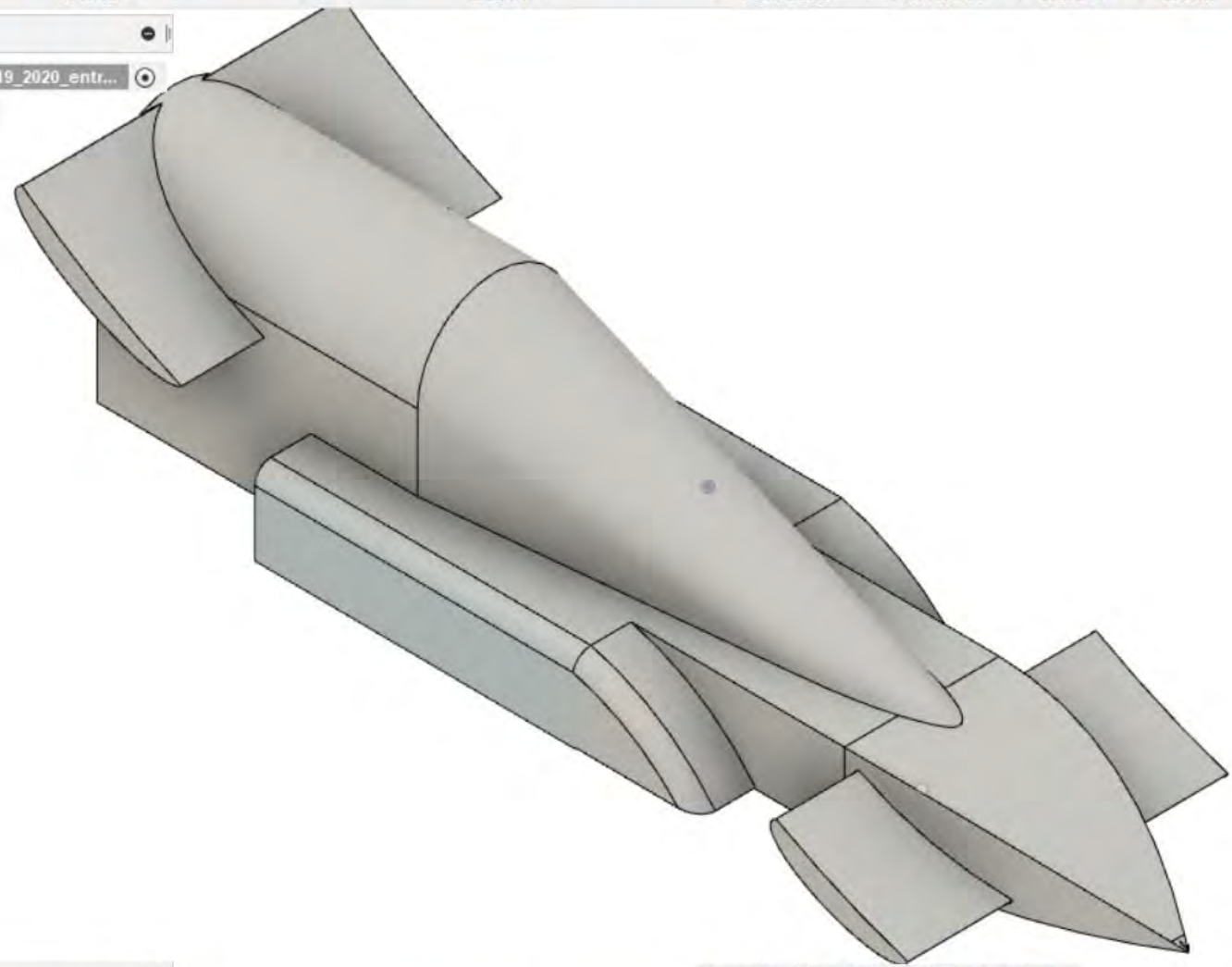


DESIGN | SOLID | SURFACE | SHEET METAL | TOOLS

CREATE | MODIFY | ASSEMBLE | CONSTRUCT | INSPECT | INSERT | SELECT

BROWSER

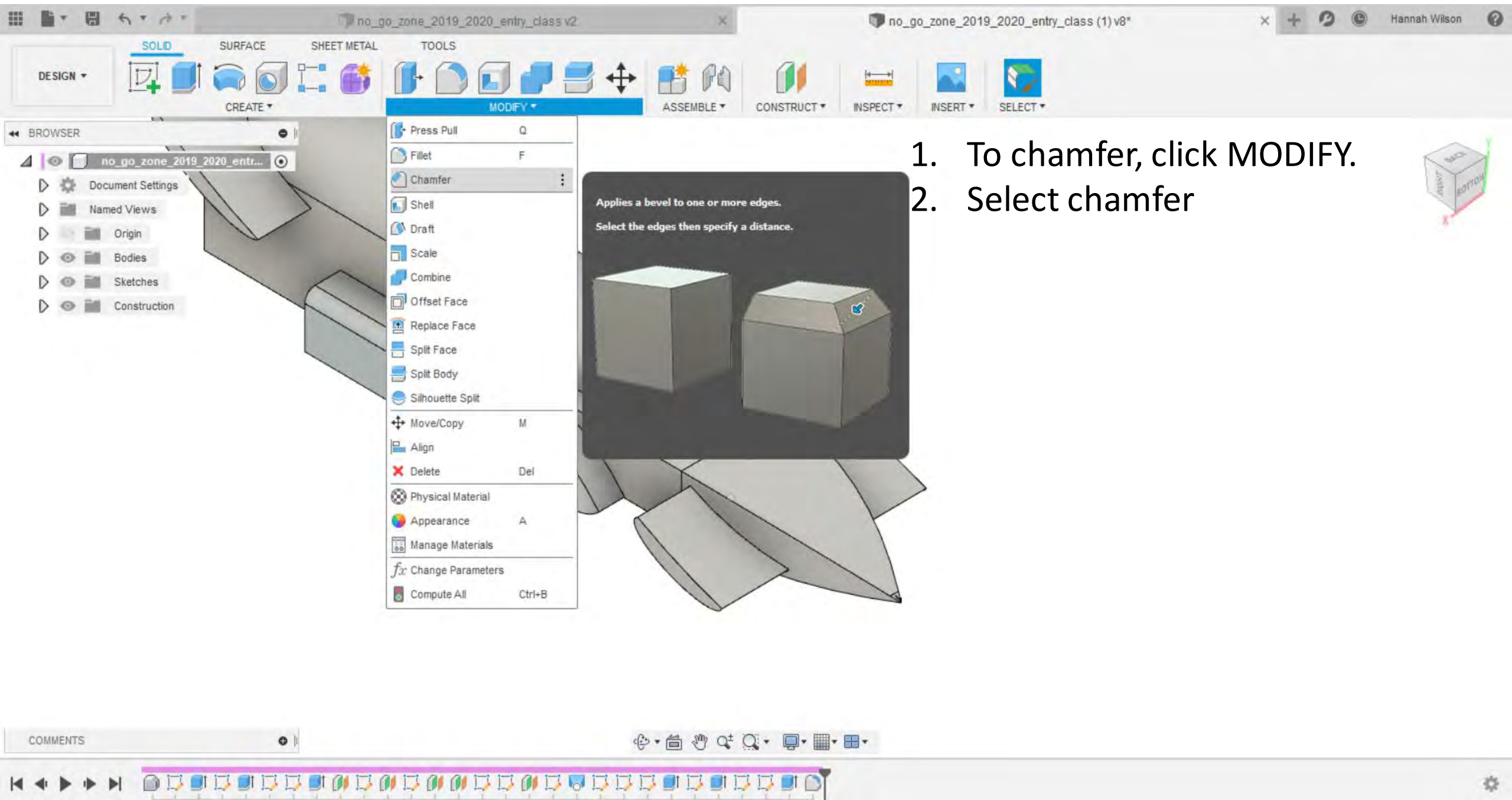
- no_go_zone_2019_2020_entr...
- Document Settings
- Named Views
- Origin
- Bodies
- Sketches
- Construction



COMMENTS

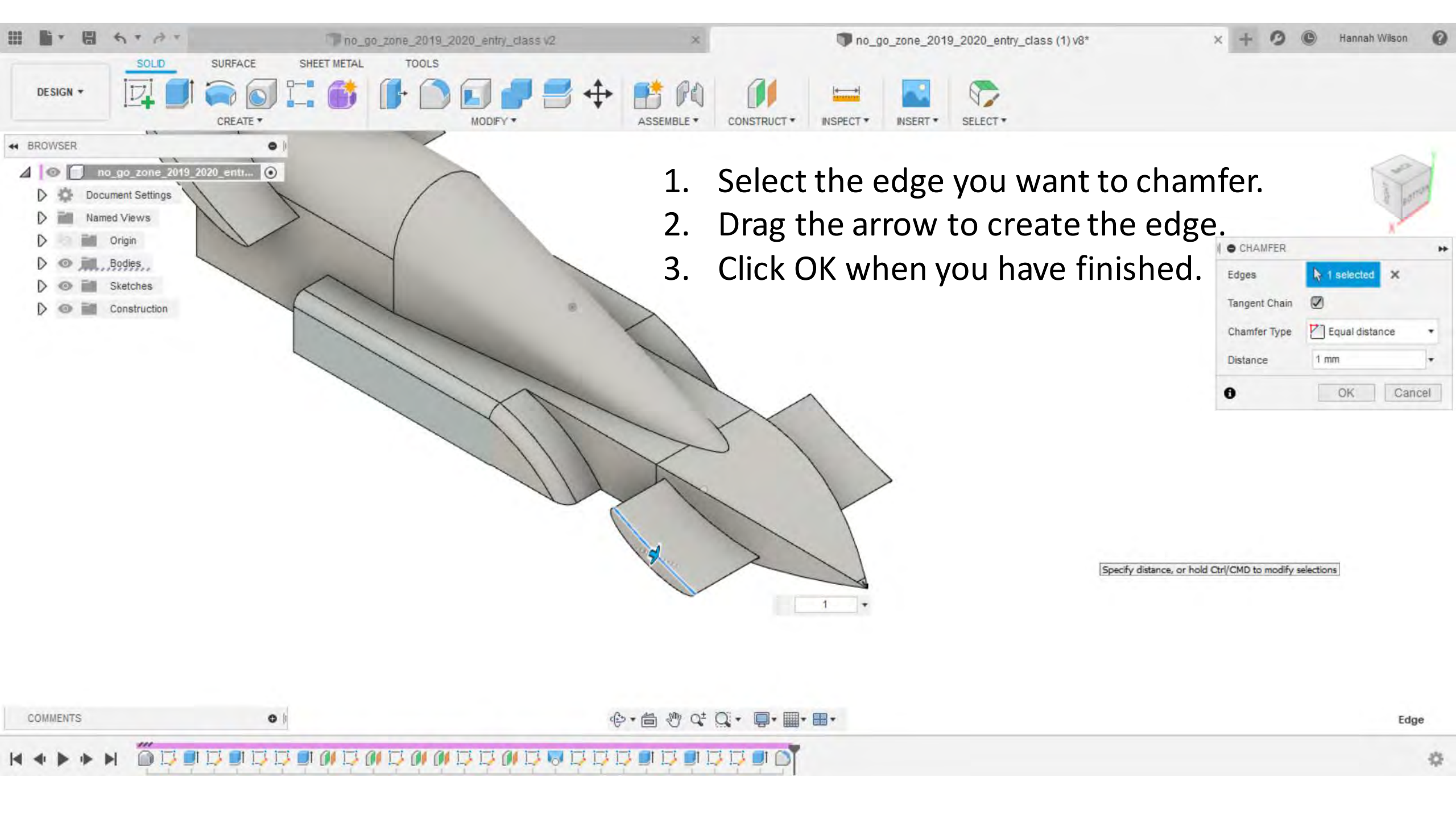
Navigation and interaction icons including pan, rotate, and zoom tools.

Timeline and status bar with various icons and a settings gear.



1. To chamfer, click MODIFY.
2. Select chamfer





1. Select the edge you want to chamfer.
2. Drag the arrow to create the edge.
3. Click OK when you have finished.

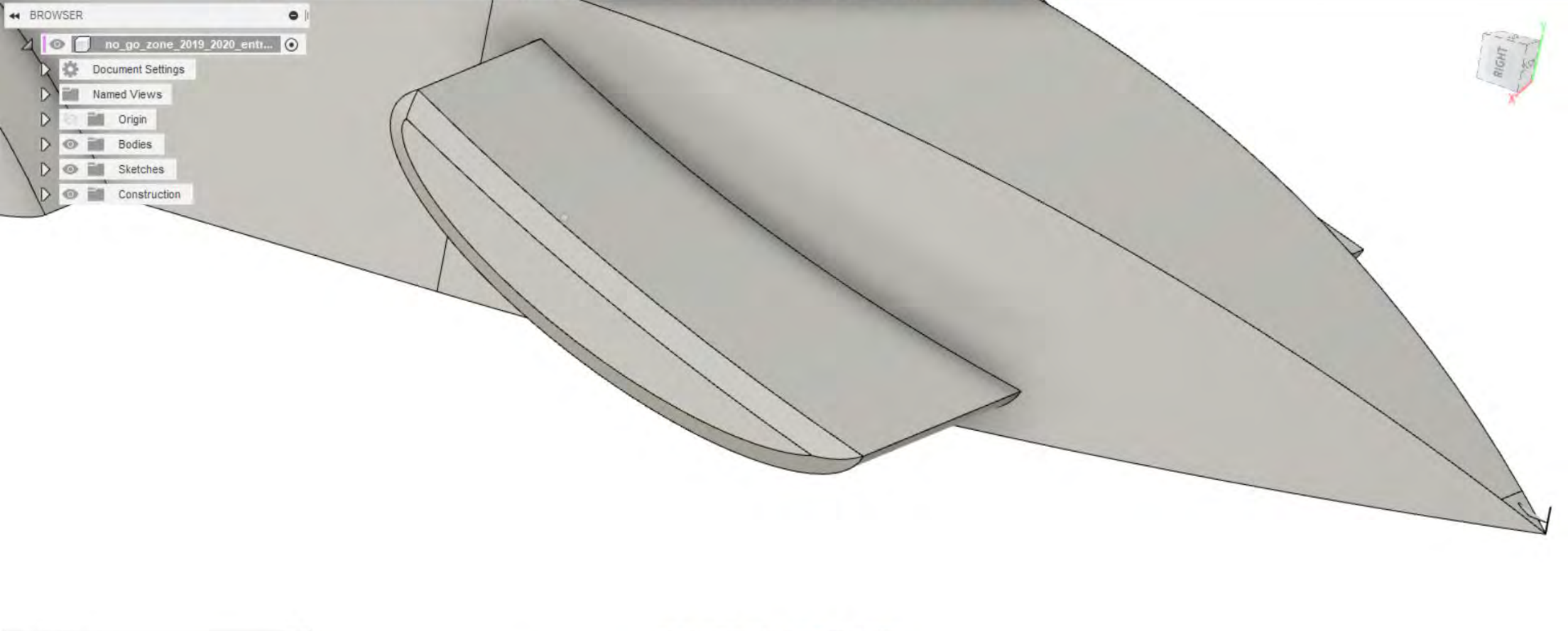
DESIGN ▾

SOLID | SURFACE | SHEET METAL | TOOLS

CREATE ▾ | MODIFY ▾ | ASSEMBLE ▾ | CONSTRUCT ▾ | INSPECT ▾ | INSERT ▾ | SELECT ▾

BROWSER

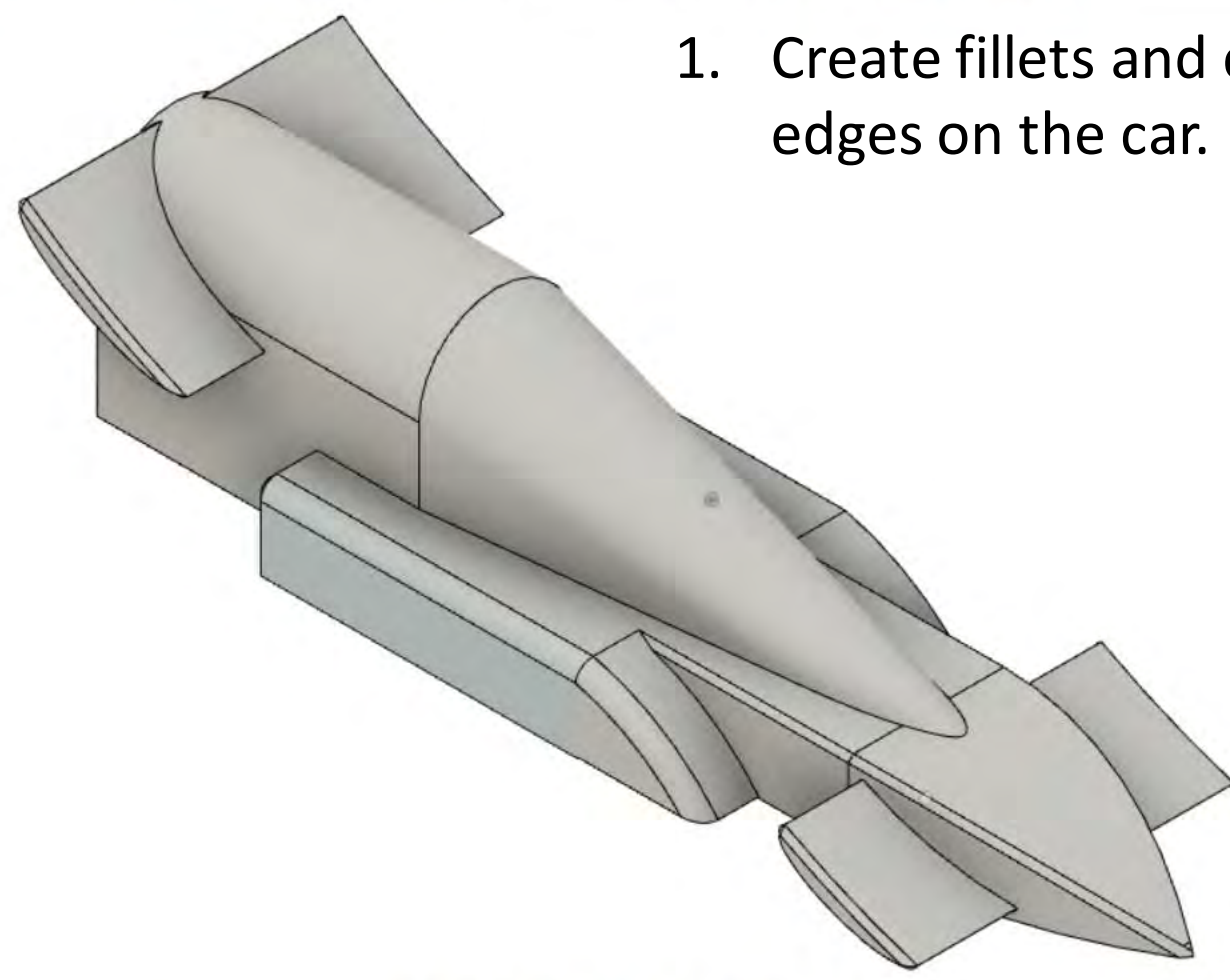
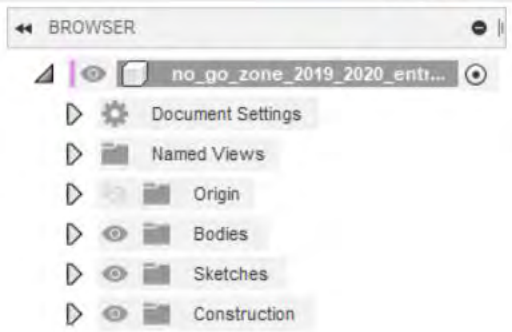
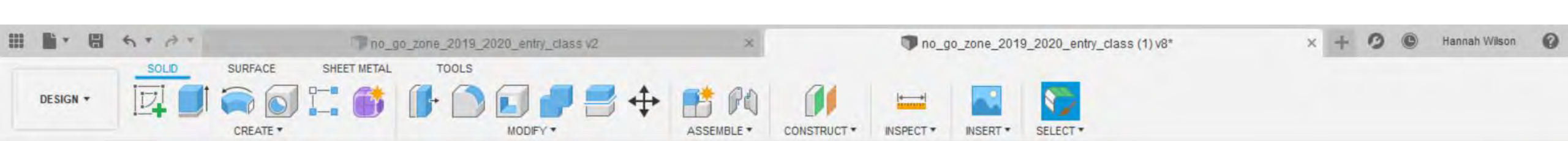
- no_go_zone_2019_2020_entr...
- Document Settings
- Named Views
- Origin
- Bodies
- Sketches
- Construction



COMMENTS

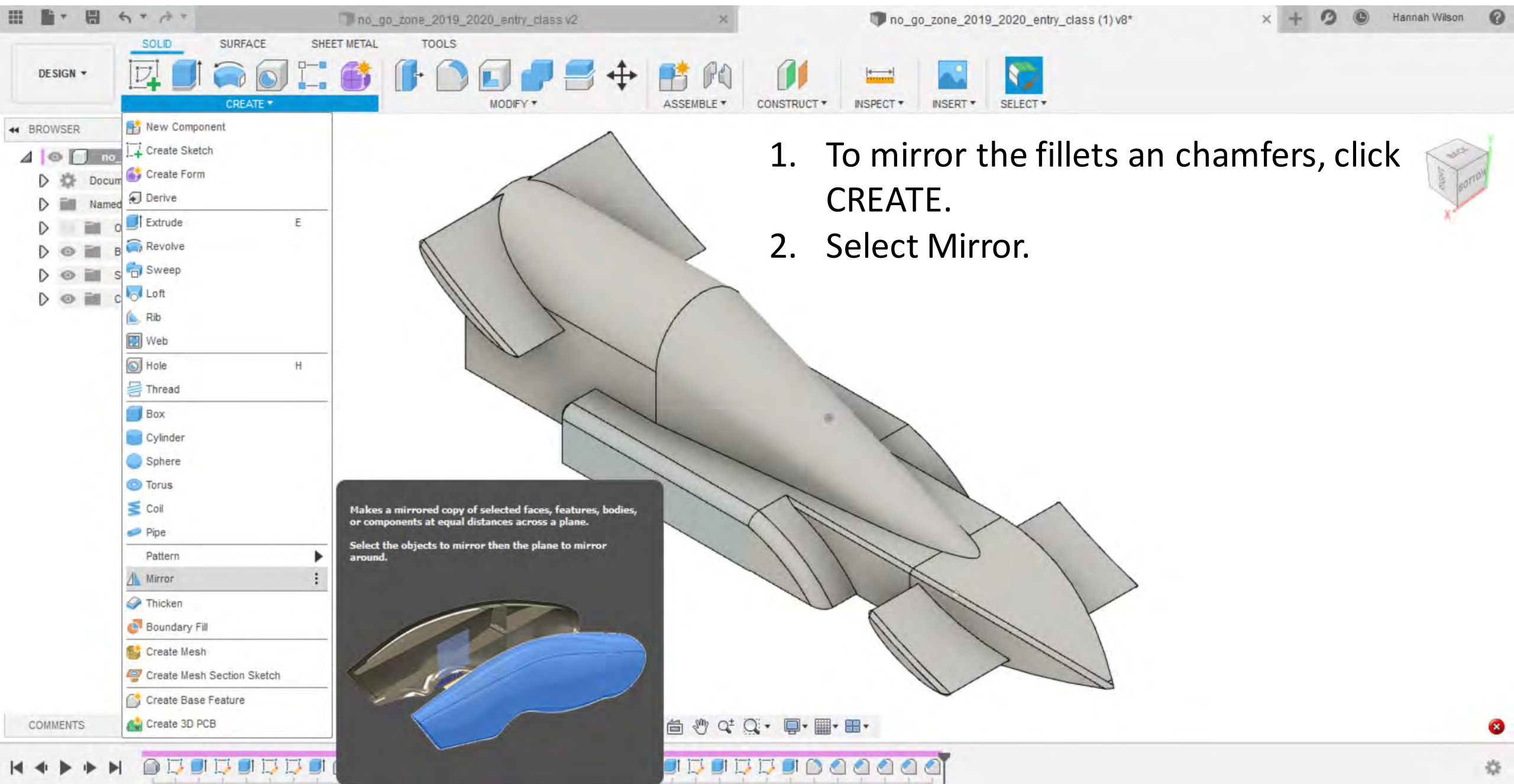
Navigation icons: Home, Hand, Zoom, Pan, Rotate, etc.

Timeline and feature tree icons: A series of small icons representing the history of the model's construction, including various sketching and modeling operations.



1. Create fillets and chamfer on the edges on the car.

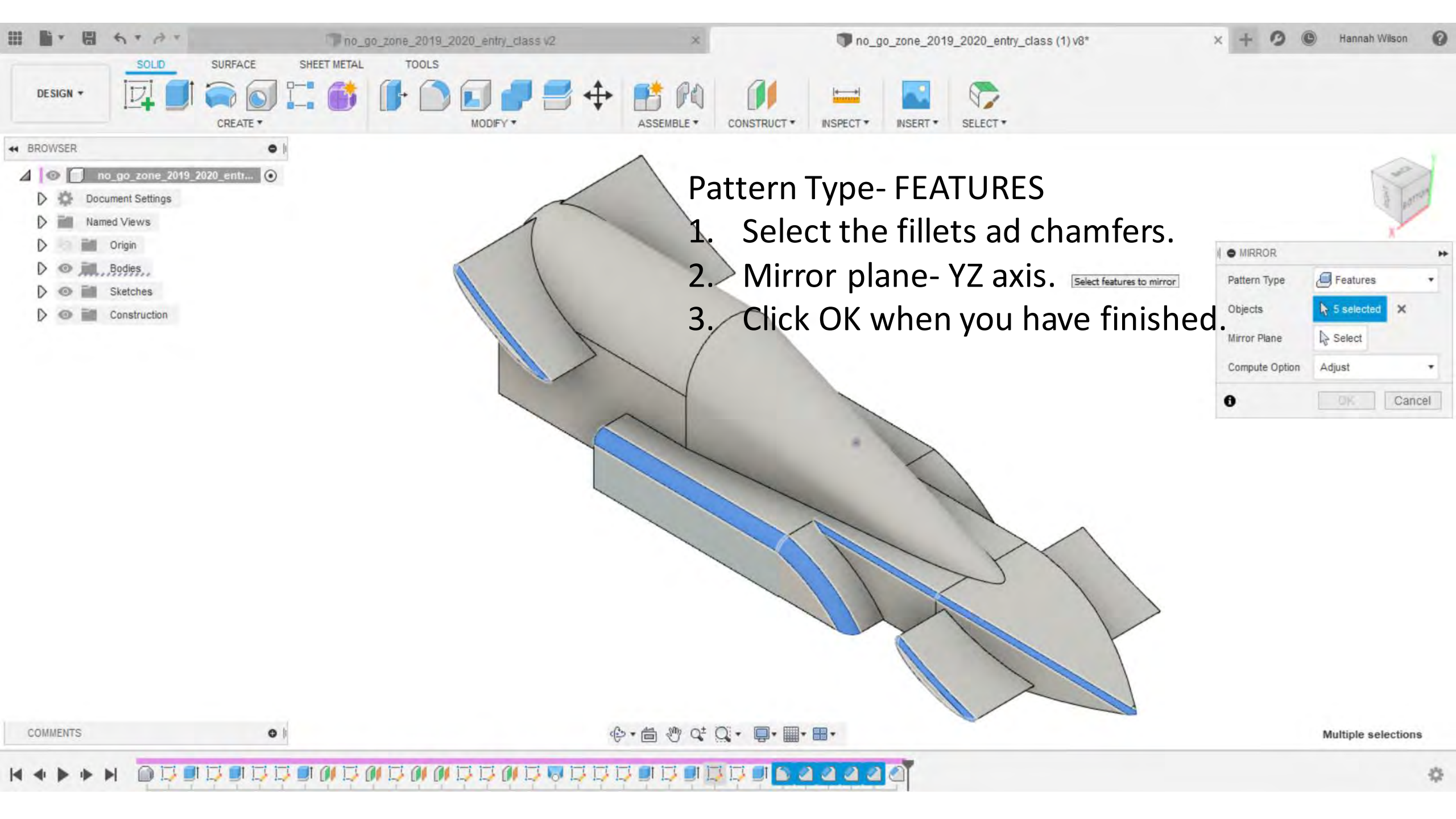




1. To mirror the fillets and chamfers, click CREATE.
2. Select Mirror.

Makes a mirrored copy of selected faces, features, bodies, or components at equal distances across a plane.

Select the objects to mirror then the plane to mirror around.



Pattern Type- FEATURES

1. Select the fillets and chamfers.
2. Mirror plane- YZ axis.
3. Click OK when you have finished.

MIRROR

Pattern Type: Features

Objects: 5 selected

Mirror Plane: Select

Compute Option: Adjust

OK Cancel

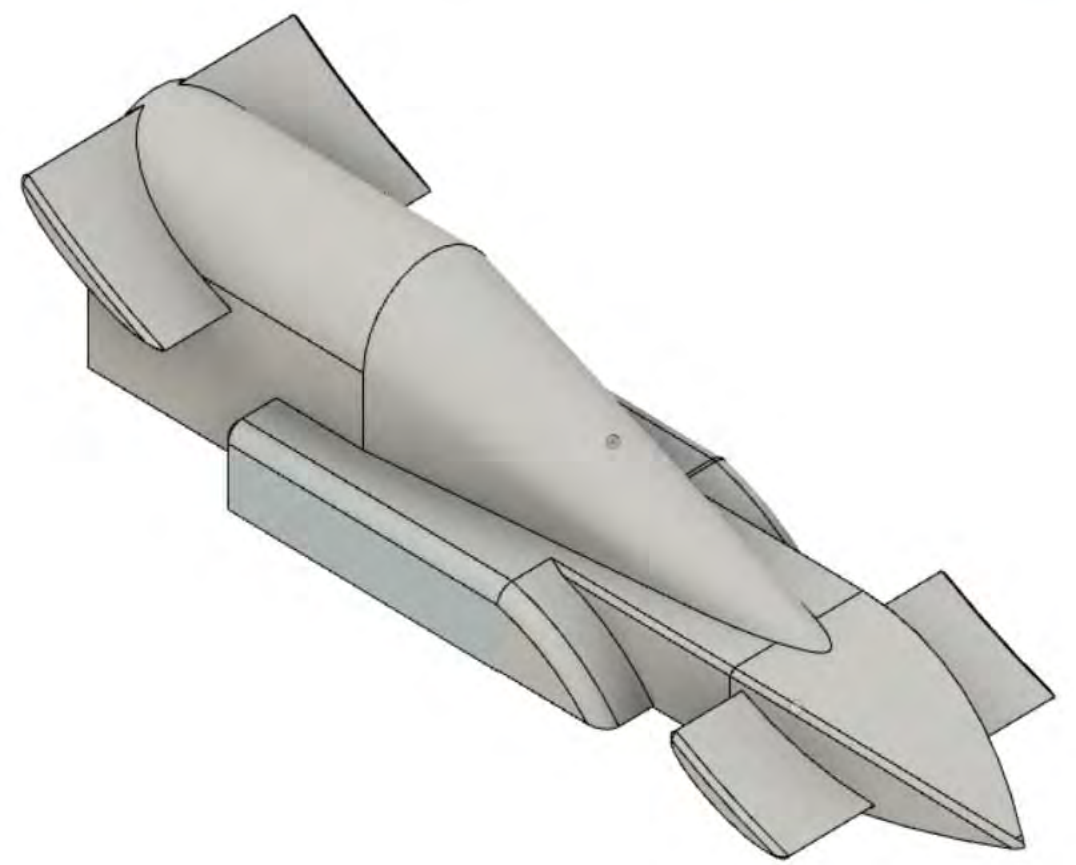
Multiple selections

DESIGN | SOLID | SURFACE | SHEET METAL | TOOLS

CREATE | MODIFY | ASSEMBLE | CONSTRUCT | INSPECT | INSERT | SELECT

BROWSER

- no_go_zone_2019_2020_entr...
- Document Settings
- Named Views
- Origin
- Bodies
- Sketches
- Construction



COMMENTS

Navigation icons: pan, rotate, zoom, and other view controls.

Timeline and status bar with various icons and a settings gear.