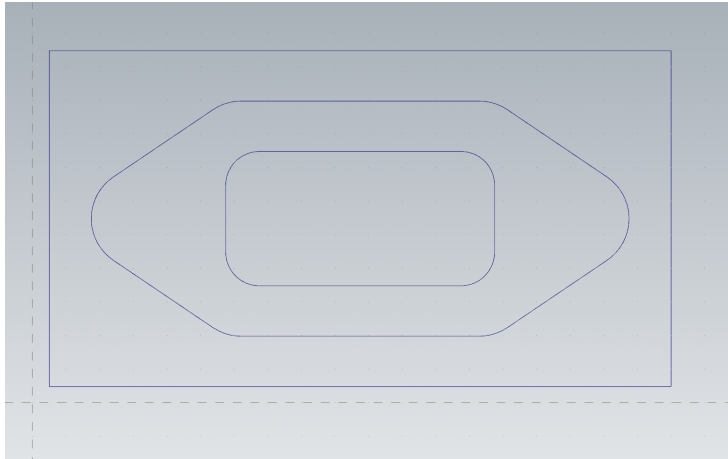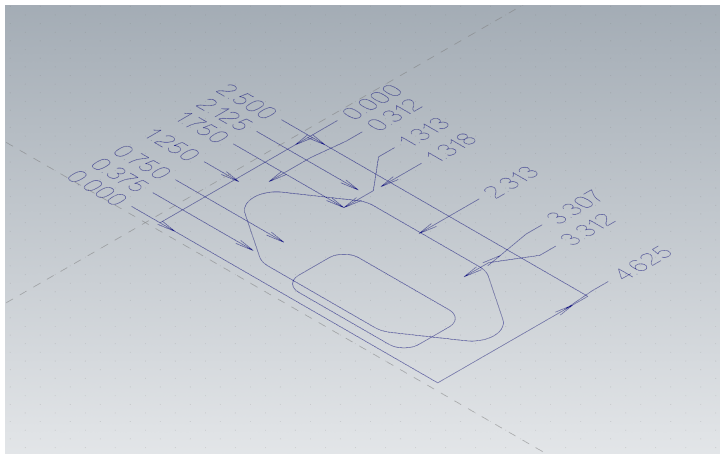Report by Weston Shakespear
Spring 2023

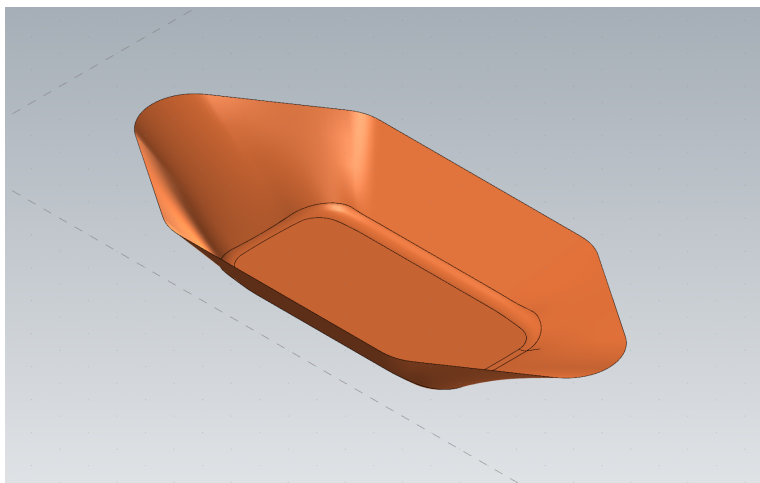## CCET 3680
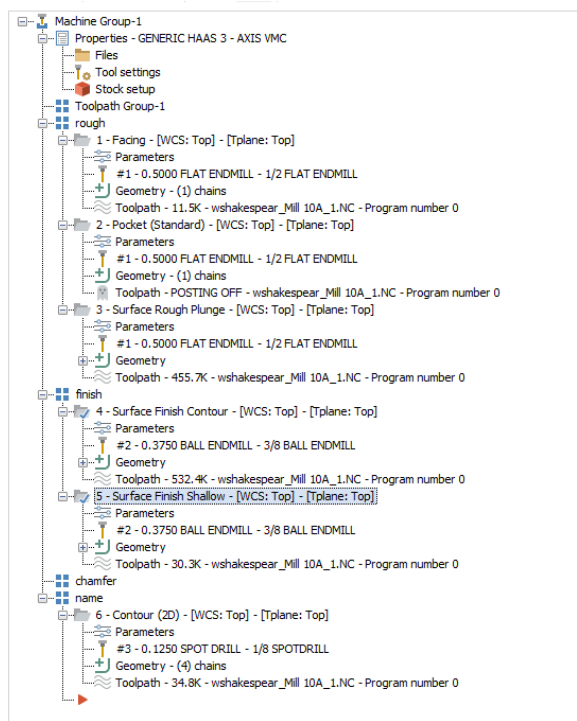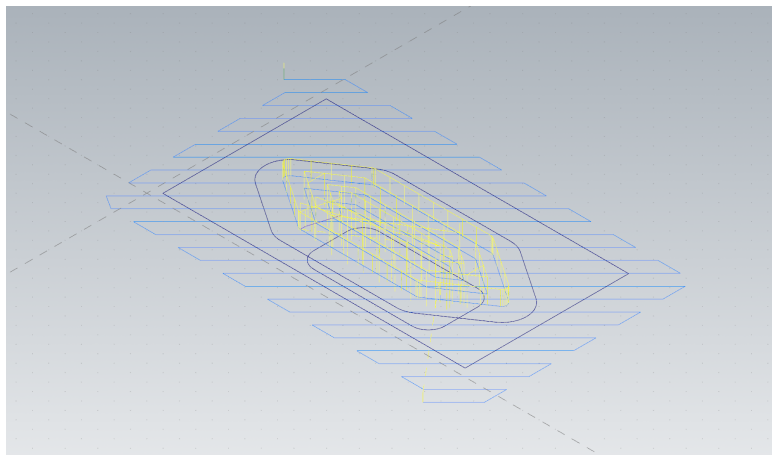## Mill Lesson 13 Second Exercise
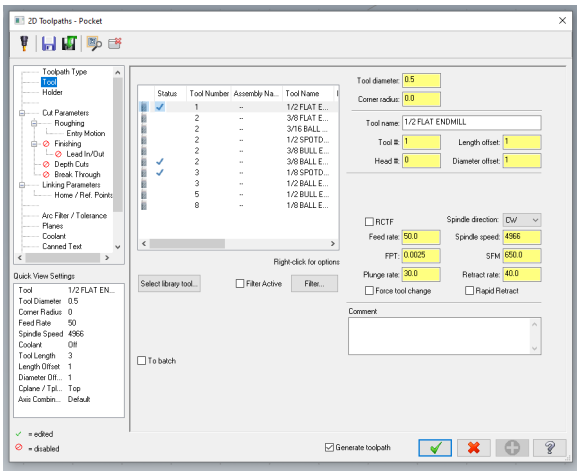
I. Wireframe:

II. Dimensions:

III. Solid:

IV. Toolpaths:


```
Machine Group-1
    Properties - GENERIC HAAS 3 - AXIS VMC
        Files
        Tool settings
        Stock setup
    Toolpath Group-1
    rough
        1 - Facing - [WCS: Top] - [Tplane: Top]
            Parameters
            #1 - 0.5000 FLAT ENDMILL - 1/2 FLAT ENDMILL
            Geometry - (1) chains
            Toolpath - 11.5K - wshakespear_Mill 10A_1.NC - Program number 0
        2 - Pocket (Standard) - [WCS: Top] - [Tplane: Top]
            Parameters
            #1 - 0.5000 FLAT ENDMILL - 1/2 FLAT ENDMILL
            Geometry - (1) chains
            Toolpath - POSTING OFF - wshakespear_Mill 10A_1.NC - Program number 0
        3 - Surface Rough Plunge - [WCS: Top] - [Tplane: Top]
            Parameters
            #1 - 0.5000 FLAT ENDMILL - 1/2 FLAT ENDMILL
            Geometry
            Toolpath - 455.7K - wshakespear_Mill 10A_1.NC - Program number 0
    finish
        4 - Surface Finish Contour - [WCS: Top] - [Tplane: Top]
            Parameters
            #2 - 0.3750 BALL ENDMILL - 3/8 BALL ENDMILL
            Geometry
            Toolpath - 532.4K - wshakespear_Mill 10A_1.NC - Program number 0
        5 - Surface Finish Shallow - [WCS: Top] - [Tplane: Top]
            Parameters
            #2 - 0.3750 BALL ENDMILL - 3/8 BALL ENDMILL
            Geometry
            Toolpath - 30.3K - wshakespear_Mill 10A_1.NC - Program number 0
    chamfer
    name
        6 - Contour (2D) - [WCS: Top] - [Tplane: Top]
            Parameters
            #3 - 0.1250 SPOT DRILL - 1/8 SPOTDRILL
            Geometry - (4) chains
            Toolpath - 34.8K - wshakespear_Mill 10A_1.NC - Program number 0
```
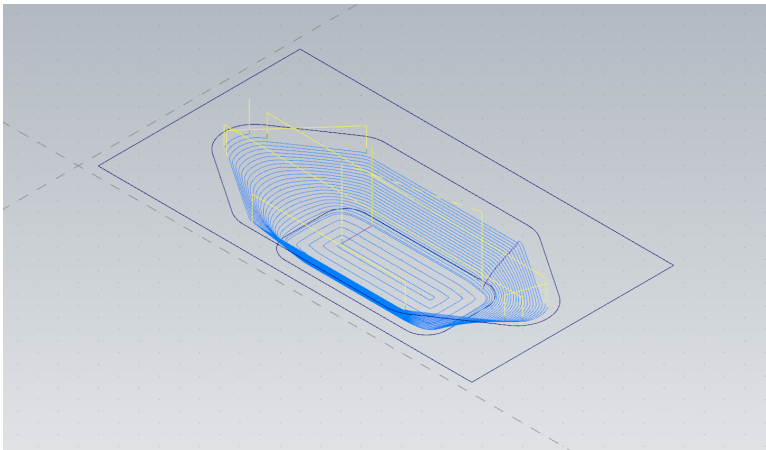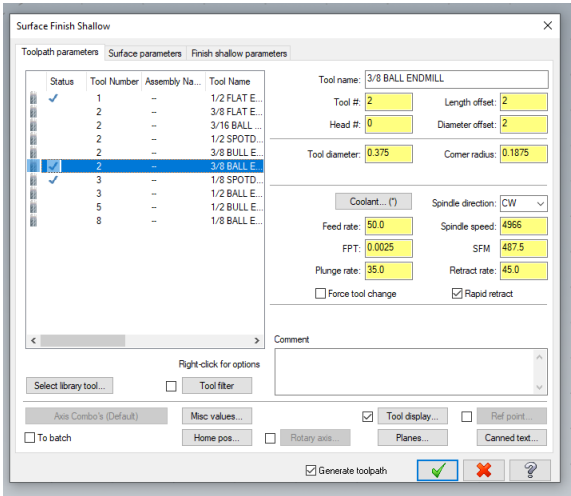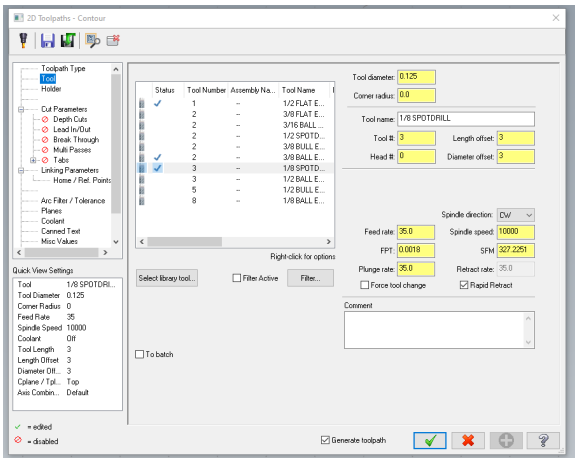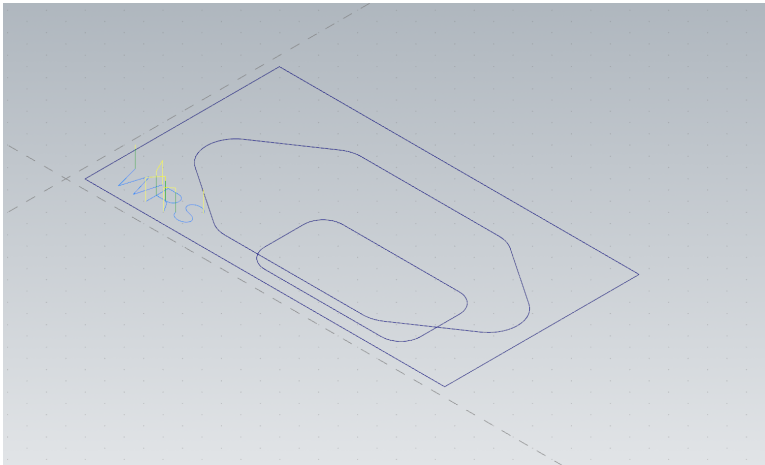
V. ½" Endmill:

VII. 3/8" Ball Endmill:

VIII. ⅛" Spot Drill:

X. Method:

I created a surface body instead of using the boolean operation like the tutorial suggested, other than that everything else was created following the tutorial.

XI. GCode Changes

To modify my gcode to be compatible with the machine I first made sure the HAAS 3 axis post processor was selected when exporting the gcode. Then I removed the long lines at the beginning and edited the last G28 home command to not zero the x axis.

XII. Finished Part