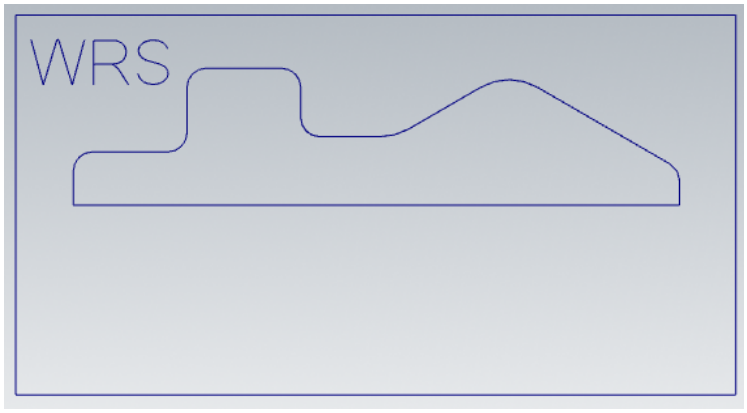
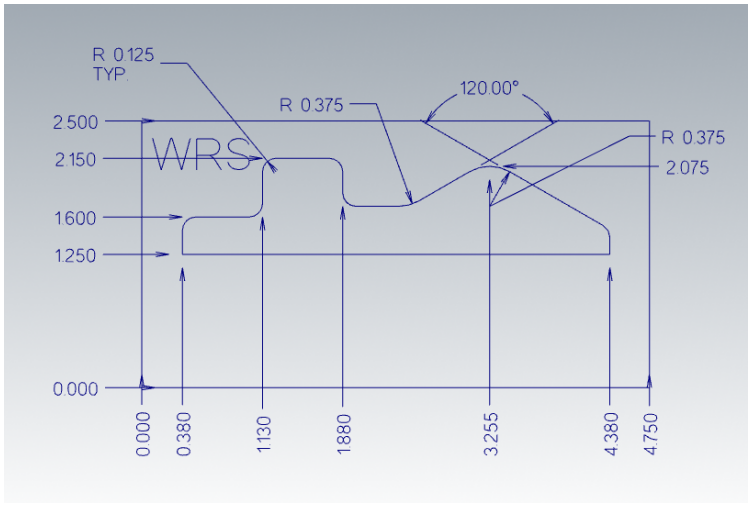
Report by Weston Shakespear
Spring 2023

CCET 3680
Mill Lesson 9 Second Exercise

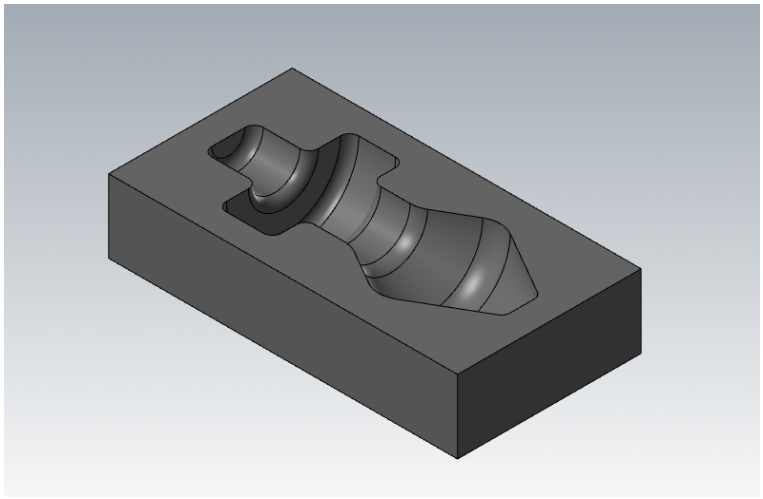
I. Wireframe:



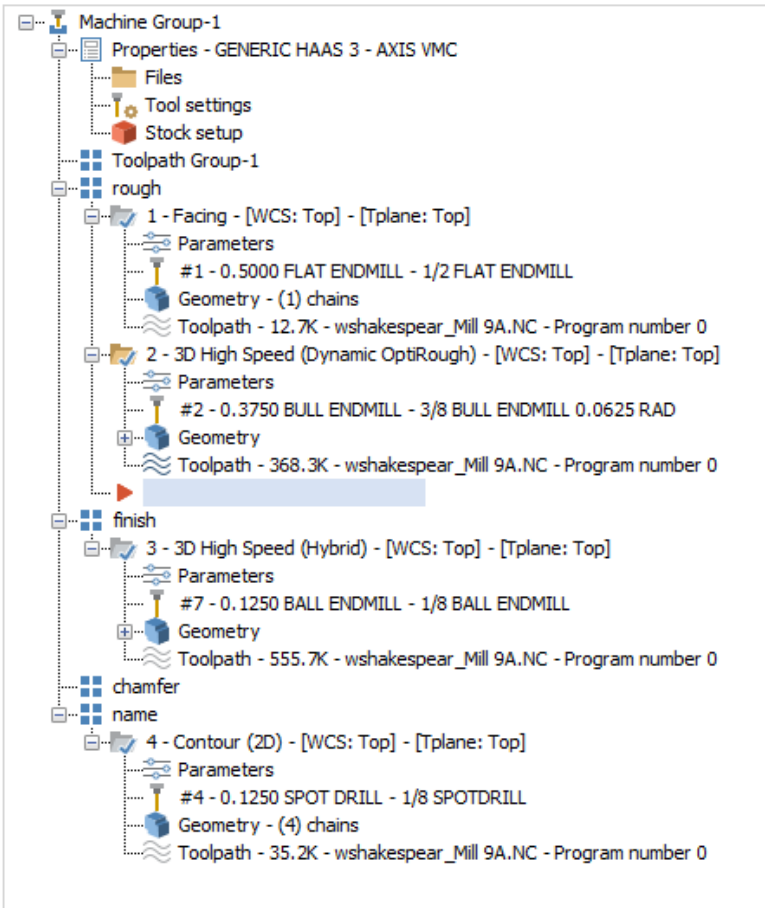
II. Dimensions:



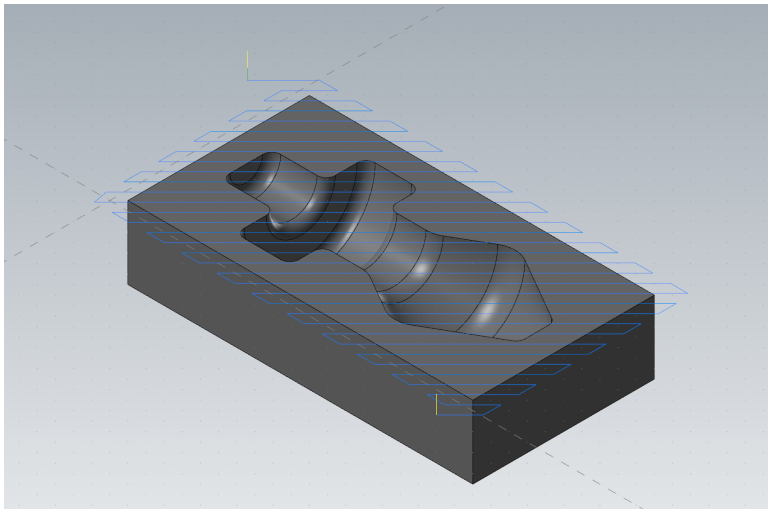
III. Solid:

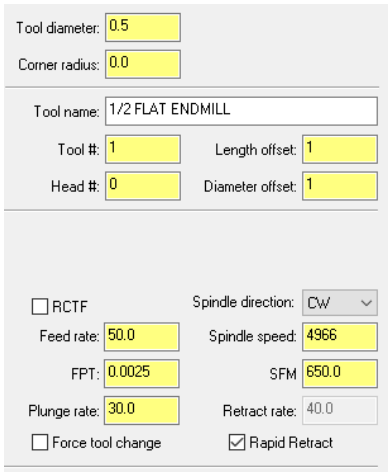


IV. Toolpaths:

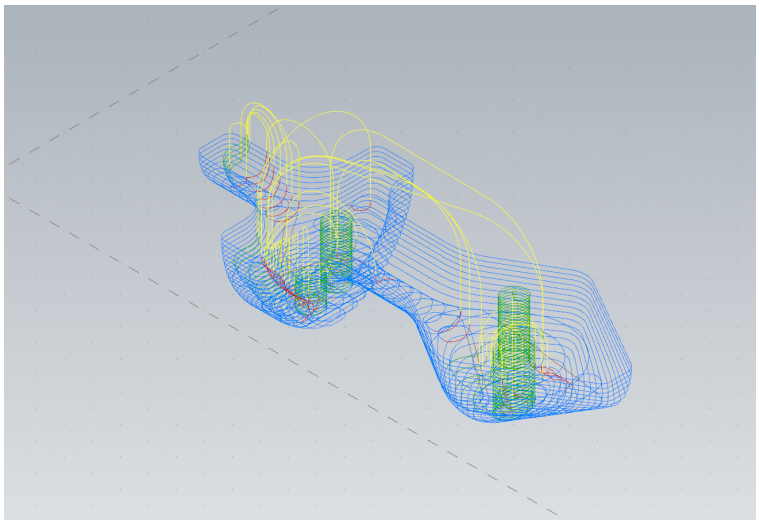


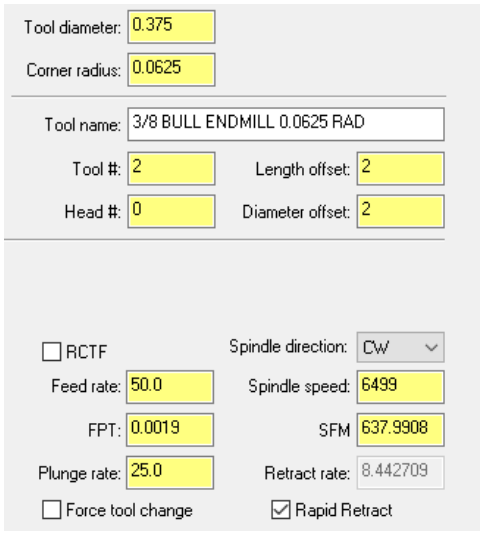
V. ½” Endmill:



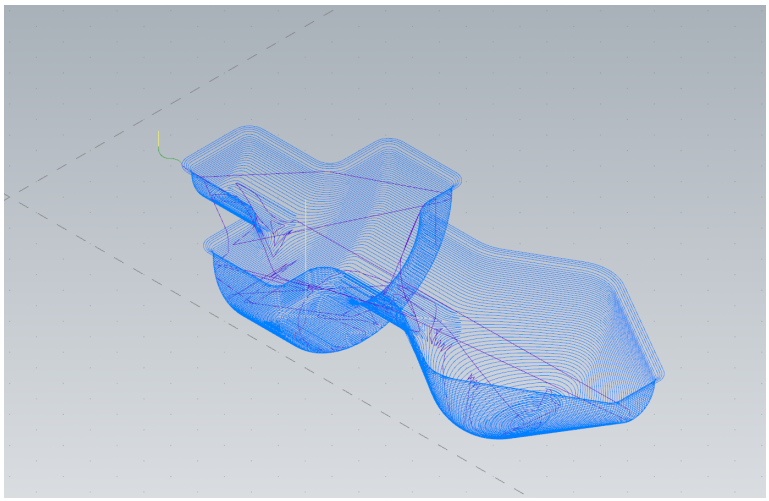


VI. ⅜” Bull Endmill (0.0625” corner):



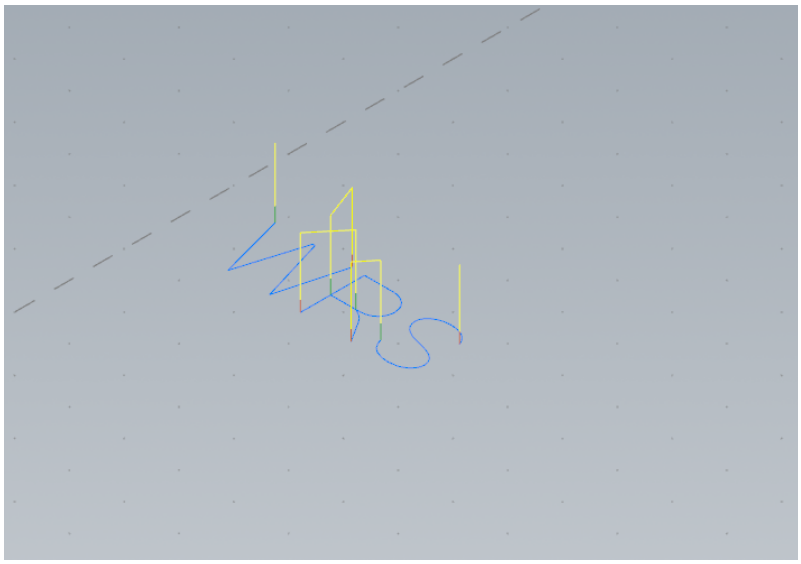


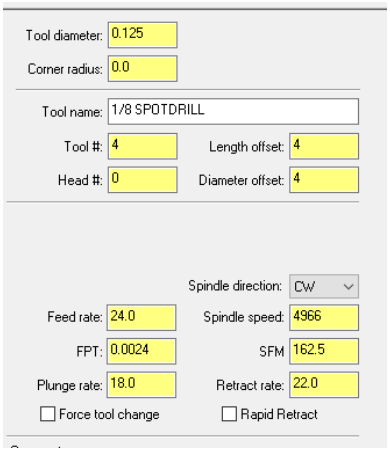
VII. ⅜” Ball Endmill:



Tool diameter:	0.375		
Corner radius:	0.1875		
Tool name:	3/8 BALL ENDMILL		
Tool #:	3	Length offset:	3
Head #:	0	Diameter offset:	3
		Spindle direction:	CW
Feed rate:	50.0	Spindle speed:	6621
FPT:	0.0019	SFM	650.0
Plunge rate:	25.0	Retract rate:	6.4176
☑ Force tool change		☑ Rapid Retract	

VIII. ⅛” Spot Drill:





X. Method:

I drew in the first circle on the origin point and built the rest offsetting lines and then trimmed everything to be a silhouette for the revolve tool. Then I drew the square and did a revolve cut to create the final body.

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