One of the biggest design choices I've had this semester is finding a means to turn my southern facade, which currently all glass, into something that is more thermally insulating, but remains visually appealing (i.e. not punching holes in the wall for windows). One of the suggestions that I have received was to use brick and create a pattern with how it is laid. This is a conceptual approach on how I might do that.

I began this process by creating a singular unit, and arraying it upwards. I then arrayed that shape outward to form a wall. In order to get the wave pattern I was seeking, I created a polyline, and used the centroids on the bricks as a point from which I could offset them from the line.

Below, I have two versions of the wall. The smaller of the two consists of wall components; Each brick is editable. I took a list of all the brep faces I had so that I could pick one from the index to orient the wall to. The issue I had with this was the bottlenecking that occurred when my computer tried to process every single wall I had created. To avoid this, I created another version out of breps, which allowed me to create many more instances.

I'm not sure how I would incorporate this into a wall just yet, as the system the brick is attached to is another ordeal, not to mention the current method would bog my computer down severely. Maybe I pick larger modules so that there is less geometry present, or I translate the curve into something simpler like a louver pattern.

Workflow diagram