

## A personal stamp

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Due: Sept 11 (A) or Sept 12 (B) Google Classroom code: qw25na

Do you have a personal logo? If the present is any indication, the future is likely to benefit those who can brand and market their ideas, skills, and products in a quick and recognizable way. Whether it is an avatar for social media or a watermark for photo and video content, a personal logo can be a fun way to add your stamp to your works.

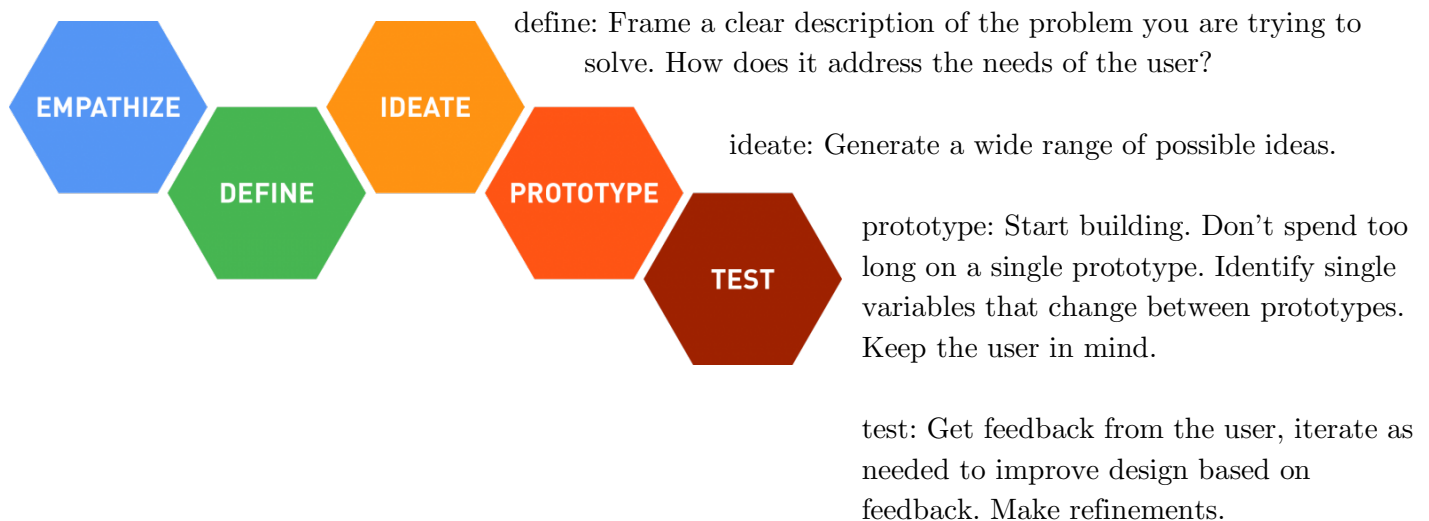
In this project, you will create a personal logo which will become a 3D-printed ink stamp. Your logo/brand must fit on a 40mm square (about 1.5") and include each of the following:

parallel lines\* perpendicular lines\* transversal

(\*the ones being calculated later cannot be vertical or horizontal, but your design may include v and h lines.)

To embark on this project, we will use for the first time the design thinking process:

empathize: Who is your user? What are their needs and wants?



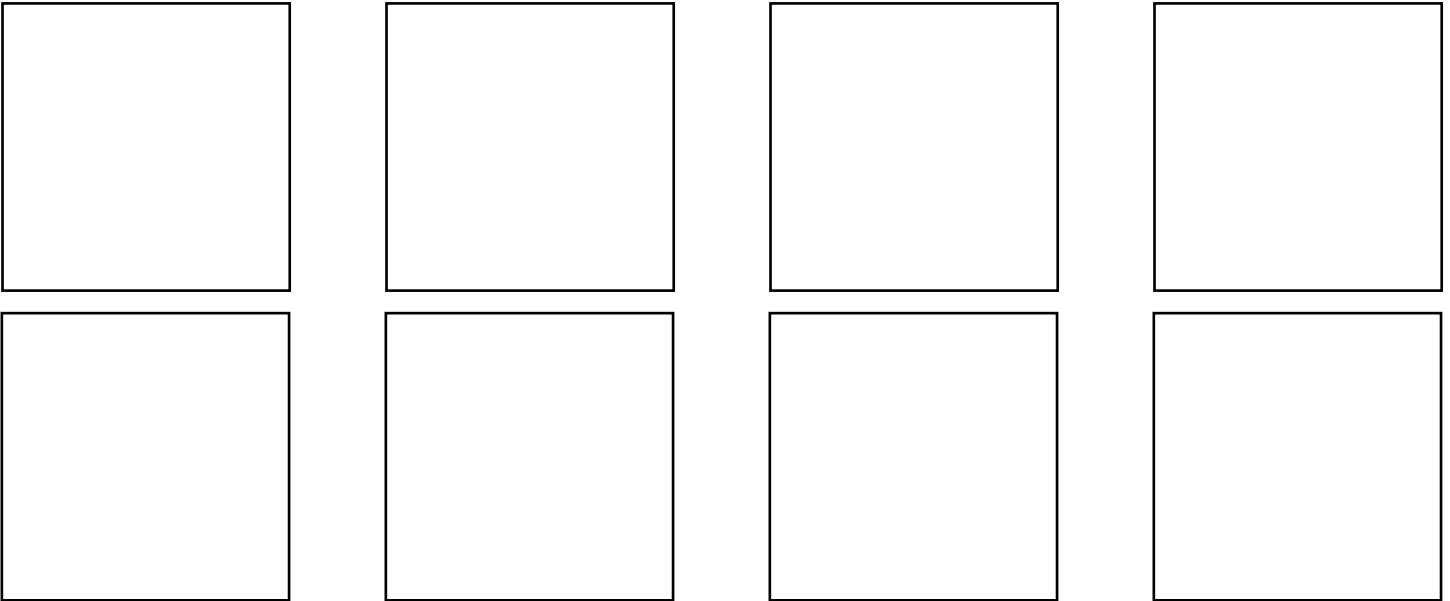
### **Empathize:**

What visual symbols are meaningful to you?

What image(s) do you want people to associate with you?

### **Define:**

What are the problems your stamp/logo can solve? How will it solve them? How will it meet your needs within the design constraints?

**Ideate:****Prototype:**

We will use Geogebra to vectorize our logo. Be sure to modify your prototypes as needed to include the required geometric criteria. Unselect the points so all that is shown are lines, then adjust the view so the design is mostly centered and large enough, then Export Image and Download (this creates a PNG). Then right click empty space and turn off the grid and axes, and download a second time. This second file will need to be vectorized from PNG to SVG here: <http://bit.ly/makesvg>

From here, we will move to Tinkercad (sign in with your HCDE Google Account) and import the new SVG. Make sure to have a flat, 40mm square base underneath your design. Your design should have a total thickness (height) of 10mm while the square base should be 4mm. *Reflect your file horizontally so it will stamp correctly.* Export as an STL file for 3D slicing.

**Test:**

You will upload your first PNG file (with the axes and grid) via Google Classroom and attach supporting calculations that demonstrate (1) why 1 pair of lines are parallel, (2) why another pair of lines are perpendicular, and (3) the slope of a transversal line that is not perpendicular to its crossing lines. These can be done on paper and then photographed and uploaded alongside your PNG.

**Grading**

Your Google Classroom upload will be assessed on a 4-3-2-1 scale. In this case a 4=100, not 96.

**4:** Parallel lines are clearly indicated and slopes are correctly calculated and interpreted. Perpendicular lines are clearly indicated and slopes are correctly calculated and interpreted. Transversal line is clearly indicated and its slope is correctly calculated and interpreted.

**3:** Parallel, perpendicular, and transversal are correctly shown in the logo, but one or two of the slope values is incorrectly calculated.

**2:** Three or more slopes are incorrectly calculated or the logo OR logo lacks 1 of the three requirements.

**1:** Logo lacks 2 or 3 of the 3 requirements OR no calculations submitted.