

CS 6452: Prototyping Interactive Applications Fall 2015

Assignment: Creating your own name badge

Sep. 1, 2015

Due: Monday, September 28 in class and Friday, September 25 on T-Square

This assignment is intended to increase your comfort with automated forms of physical prototyping, specifically **3D printing and laser cutting**. You will create a personalized name badge for use in class, **both to sit on your desk to be seen by others in the class (to help us learn names) and to attach to the magnetic whiteboards in class to hold up exhibits**. You are asked to work individually to complete this assignment, but you are allowed to share your ideas with and take help from your peers, as well as the staff in various maker spaces on campus (GT Invention Studio, GVU Prototyping Lab, Zane Cochran's TSRB maker space)

In order to complete this assignment, you need to get training at the GT Invention Studio and the GVU Prototyping Lab. You have already been sent instructions for completing those prerequisite assignments.

The deliverables for this assignment include the actual name badge, which you will first bring to class on Monday, September 28 as well as the electronic files you used to submit jobs to both a 3D printer and a laser cutter. Details are provided in the “Deliverables” section below.

Task

Create a **customized nameplate and a stand** for the nameplate utilizing the tools available at the GT Invention Studio and GVU Prototyping Lab. You are required to use both a laser cutter and a 3-D Printer. Be as creative as you like as long as your nameplate meets the criteria below:

1. The nameplate can be any shape and size upto 6 by 6 inch maximum (e.g. a 6 by 4 inch rectangle or a 4 * 4 inch square or even a circle within a 6 inch radius), but must be big enough for us to be able to read your information clearly.
2. You must include your first name. Your last name is optional. The first name must be legible from ~15 feet away against a white background (the classroom whiteboards).
3. The nameplate must attach to the classroom whiteboard magnetically and support its own weight and be able to support at least one corner of a 2 foot by 3 foot sheet of craft paper. Strong magnets are available from the class TAs.
4. The nameplate must have a stand that can be used to place on a table in the classroom and still have your name be visible to someone standing ~15 feet away. **Keep in mind that the stand should not be just a block of material with a slit in which the nameplate can be held. This method does not portray creativity and also ends up using a lot of material.**
5. While there are a number of ways to complete this assignment, some methods are better than others. For example, acrylic plastic is inexpensive and easy to cut on a laser cutter, but if you use clear acrylic you need to think about how to make your name visible against the whiteboard and when placed in the table stand.
6. Remember to be creative! Your nameplate can be any shape (within the given size) and have other designs in addition to your name.

Deliverable

1. Bring your name badge and stand to class on Monday, September 28 (and all classes thereafter) and we will test the badge out on the whiteboard and in your stand.
2. Submit to T-Square the electronic documents you used to create the laser cut and 3D printed elements of your badge.
3. Also submit a **photo of your name badge attached to a magnetic whiteboard and one sitting in your stand.**

Grading Criteria

1. (15 points) Did you meet the size (not more than 6-inch by 6-inch) criteria when mounted on a magnetic whiteboard?
2. (15 points) Does your badge have enough magnetic strength to hold itself up as well as a corner of a 2-foot by 3-foot sheet of craft paper?
3. (10 points) Is your first name clearly visible when mounted on the magnetic whiteboard?
4. (10 points) Is your first name clearly visible when in its stand on a table?
5. (20 points) Creativity with regard to the **badge and the stand**. What did you do to make it look appealing and memorable?
6. (20 points) Are your electronic files submitted (laser cutting and 3D printing) in such a way as to be reusable?
7. (10 points) Do your submitted pictures portray your badge effectively

Examples of name badges and stands made by previous students (Some students had great designs but their names were not visible clearly, so keep that in mind while completing your assignments).





