Milestone 1 – Idea presentation
9/14 Wed

If you have formed your group, put your name on the ELMS->People->Group->Semester-long Project

Documentation Due 9/18 Sun
<table>
<thead>
<tr>
<th>Semester-long project</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4 students</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3 students</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4 students</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4 students</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4 students</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>4 students</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3 students</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1 student</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0 students</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0 students</td>
<td></td>
</tr>
</tbody>
</table>
5 min presentation + 3 min Q&A

2 Options:

a) Haven’t decided on the idea:
   Present 3 of your best ideas and explain to us with sketches

b) Know what to do:
   Present your final idea – what are the functions, challenges and potential solutions
5 min presentation + 3 min Q & A

Submit a google doc with:
   a) Problem Statement & Idea
   b) System Block Diagram
   c) Input/Sensing + Output/Actuation
   d) Challenges + Potential Solutions
   e) Bill of Materials (BOM)
Perkins SMART Brailler

$ 2K+
6 Dot Braille Label Maker

$ 775
Reizen Braille Labeler

$ 40+
But fully manual
Hard to use
The idea

**Low-cost, portable braille labeler that can be used by everyone**

- Can be used both indoor and outdoor
- We can create braille label for them
How

input platform
Either voice or type

custom build machine
6 pin controlled with Arduino
punch holes to tape
How

Tape feeder

Punch mechanism
Main challenge

1. Limited physical space, dots need to be close to each other – how to arrange motors to control each of the 6 pins

2. Need large force to create hole or embossing
Potential solutions
Plan for the next milestone

1. Figure out the motor to create embossing
2. Create one working prototype that can create 2 dots at a close distance
Questions?
Rest of today’s lecture -> Fusion 360 Assembly