# BRAILLE TEACHER

OUR TEAM:-

1) PRASHANT

2) SOHAM SHANBHAG

3) JENIL P. SHAH

4) ADITYA SINGHAL

PROBLEM ADDRESSED:-

First of all, it is difficult to teach braille to the new learner (both kids and adults). And there is nothing in the market to help them. They do it in the conventional method, which is both difficult and painful.

OUR SOLUTION:-

We are planning to make a braille cell (composed of 6 pins), and connect it to a system (initially a PC, then maybe a cell phone).

PHASE I : Any alphabet text input will be converted to braille and displayed on the braille cell, along with the voice output. The voice output will give alphabets.

PHASE II : Any letter spoken will be displayed on the braille display to be felt by the user.

Meanwhile, keeping it cost efficient.

OUR CHALLENGES:-

We were recommended to meet Shyam Shah, 4th yr ESE, who had been working in the same field for some time now. Meeting him was an enriching experience, who told us about many complexities we didn't think about.

First of them being, it is difficult to make a braille cell using electromagnets (our initial plan), because of proximity of solenoids causing interlinking of flux.

OUR WORK:-

1) We have to implement different design for the board, which is quite costly and we have try to make it economical.

2) Creating an user-friendly interface both physical and on the system.

TIMELINE :-

Week 1) : Basic designing and Procurement of items

Week 2) : Mechanical Assembly and coding for PHASE I (text to braille)

Week 3) : Electronics and coding for PHASE I (voice output)

Week 4) : Speech Recognition coding (PHASE II)

Week 5) : Debugging and Testing

CURRENT STATUS :-

We have not been able to decide upon the mechanism for movement of pins because of problems due to size and cost. Hence a cost analysis cannot be exactly provided.

LEARNING OBJECTIVES :-

1) Learning AVR coding by using microcontrollers
2) Making cost efficient devices by proper planning
3) Using professional manufacturing tools like CNC cutter, 3D printing machine
4) Using softwares like AutoCAD, SolidWorks, Atmel.