**HARDWARE**

Our team has come up with an innovation to fabricate a device which joins the dots between a hand writing machine and a kid suffering from autism. We have seen the use of printers since ages but no one had ever thought of implementing it as a cure of such neurological problems. So we are here with the solution of replacing the axis of the pen holder with a robotic slider for the kid to put his/her hand over it and learn to write alphabets and numbers. The flexible nib pen is mounted on a servo motor which rotates the tip onto the writing surface, taking care of the third axis.

**PEN STAND**

The pen stand works on the principle of linear motion provided by the motor and moves with the pen module attached with it. The pen stand is connected with the x axis plate which is operated in contact along the y axis plate of the machine. The pen stand consists of a stepper motor and supportive parts for the rotatory motion of the pen.

**X AND Y AXIS**

The X and y axis also works on the principle of linear motion and rotation.

To move both the axis, we have used a stepper motor which is more efficient than the servo motor to work on with the coupling and rotating the shafts with the gliders in it. The x and y axis commonly consist of stepper motors in it and small parts like ball bearing, coupling, nuts and shaft of both the screw and a plain type are assembled with blocks supporting the motors and providing a rotary motion over it . The x and y axis plays a major role in the movement of the main module that is the pen stand.