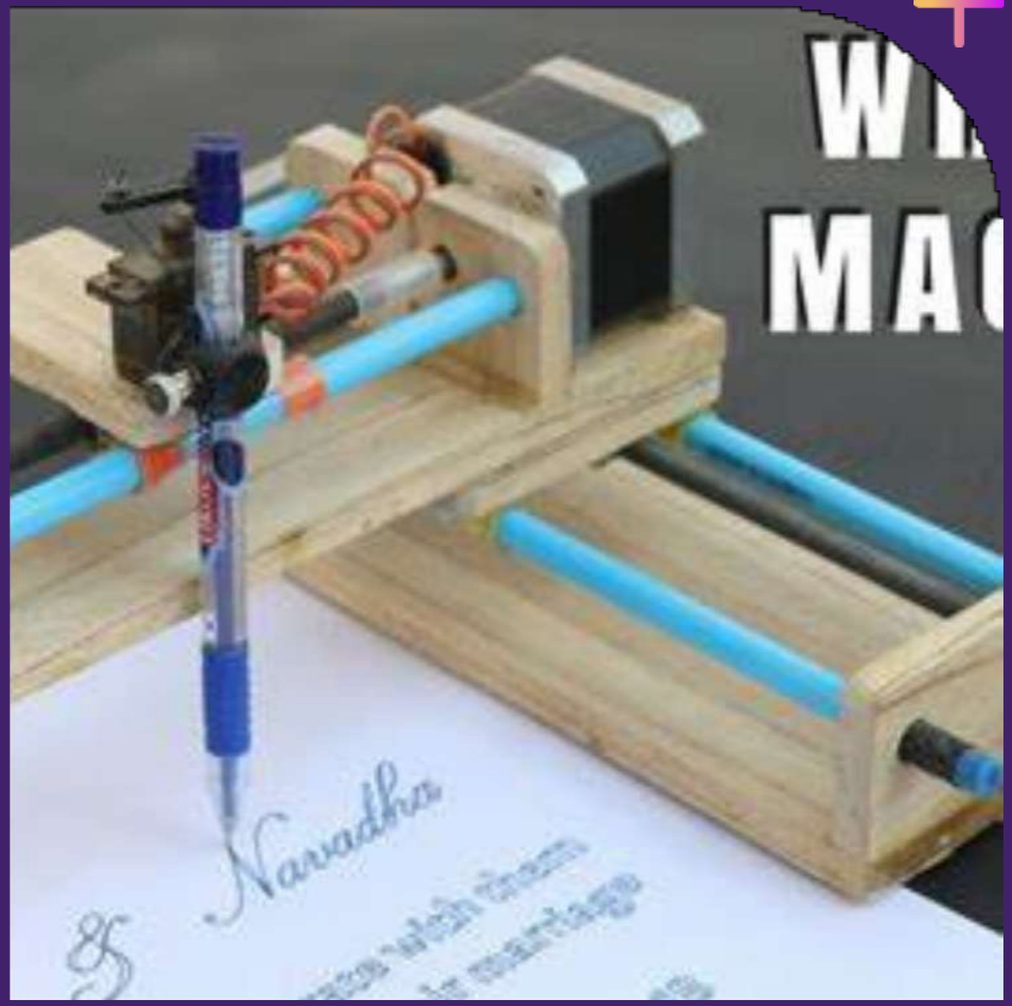
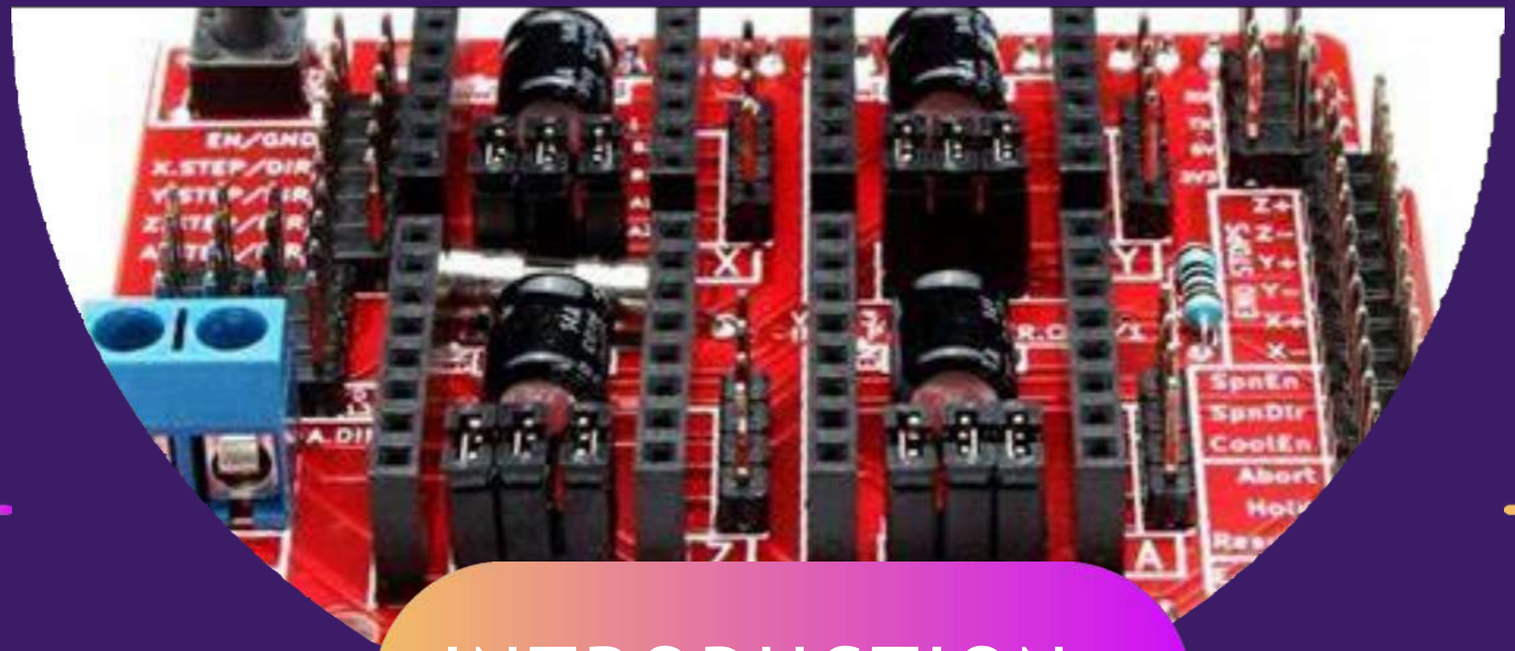
AUTO WRITING MACHINE USING AURDINO



CONTENT LIST



INTRODUCTION

We have the technologies like automatic speech writing machine, TTS, speech to text output, printers, scanners, etc. But the basic problem is it only writes only those fonts which the computer already has. That is Roman, Calibri, Arial, Impact, Georgia, etc. We want a machine which can write the full matter on a page by the ink of pen in our own personal hand writing. By using the concepts like CNC machines, wooden CNCs which make the design on wood by giving accurate feed to the driller. Similarly, we can use this Technology to make a machine for writing purpose also.

OBJECTIVE

The Goal of this project are:

This Automated writing and drawing device is used to save time.

There are a lot of automated drawing machines are there. But this is useful among all.

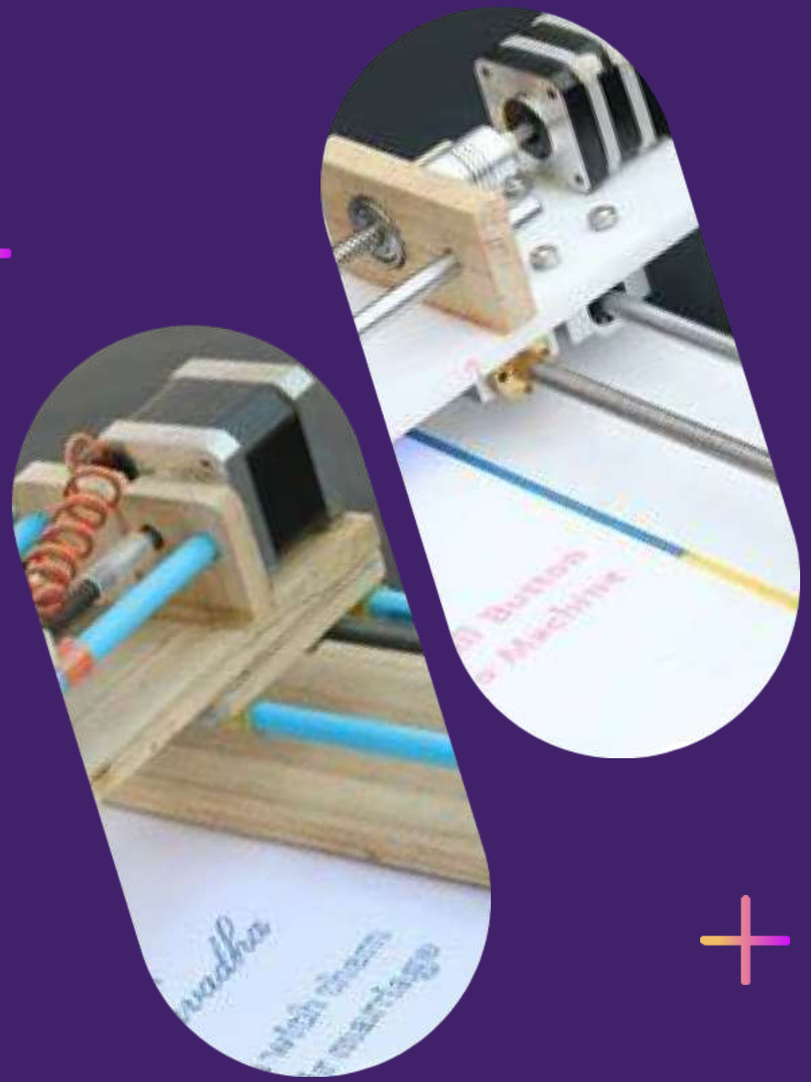
It will be more useful for Handicapped, those are armless.

By this we can make the notes in our own handwriting just by giving the input to the machine. We don't need to waste lots of time by sitting in front of the work.

This machine will be able to draw and write the assignments and other hand written notes in our own handwriting.

HARDWARE REQUIRED

1. Arduino UNO R3
2. CNC Shield Expansion Board
3. 2-Step Stepper Motor Driver
4. Bipolar Stepper Motor
5. Servo Controller
6. Jumper wires
7. Wood
8. Pencil, Nut & Bolt



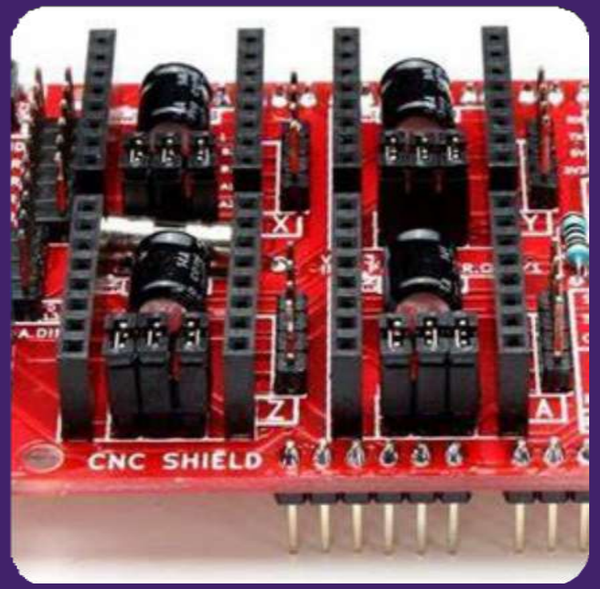
SOFTWARE REQUIRED

All the softwares and libraries used to implement this project is exhaustively discussed in this. The softwares and libraries used are: GBRL Controller, Universal G-Code Sender, Arduino IDE, Inksscape.

TOOLS

Screwdriver, Screw and nut, Micro Soldering iron, Solder, Drill, Cutting tool, Glue Gun, Multi-metre, Fevikwik

Working



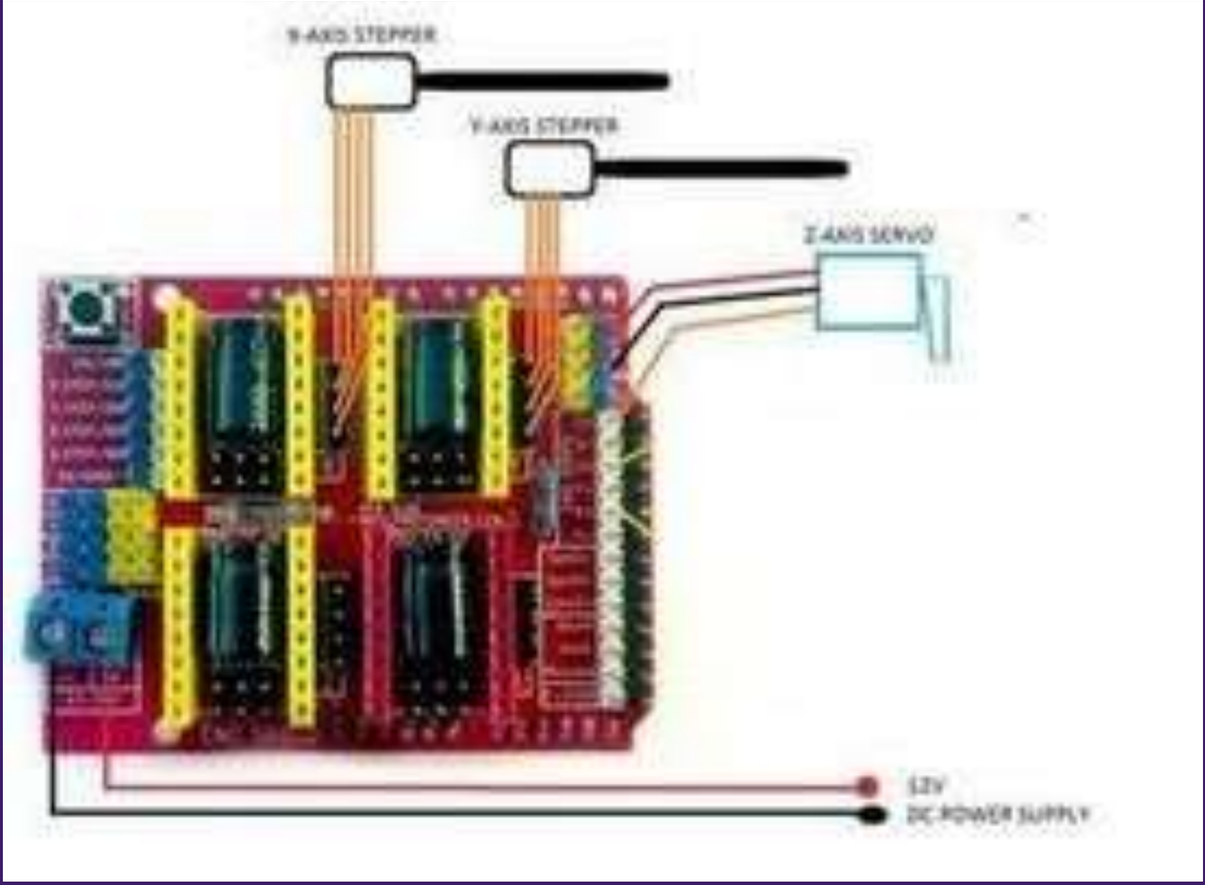
Controlled by G code.

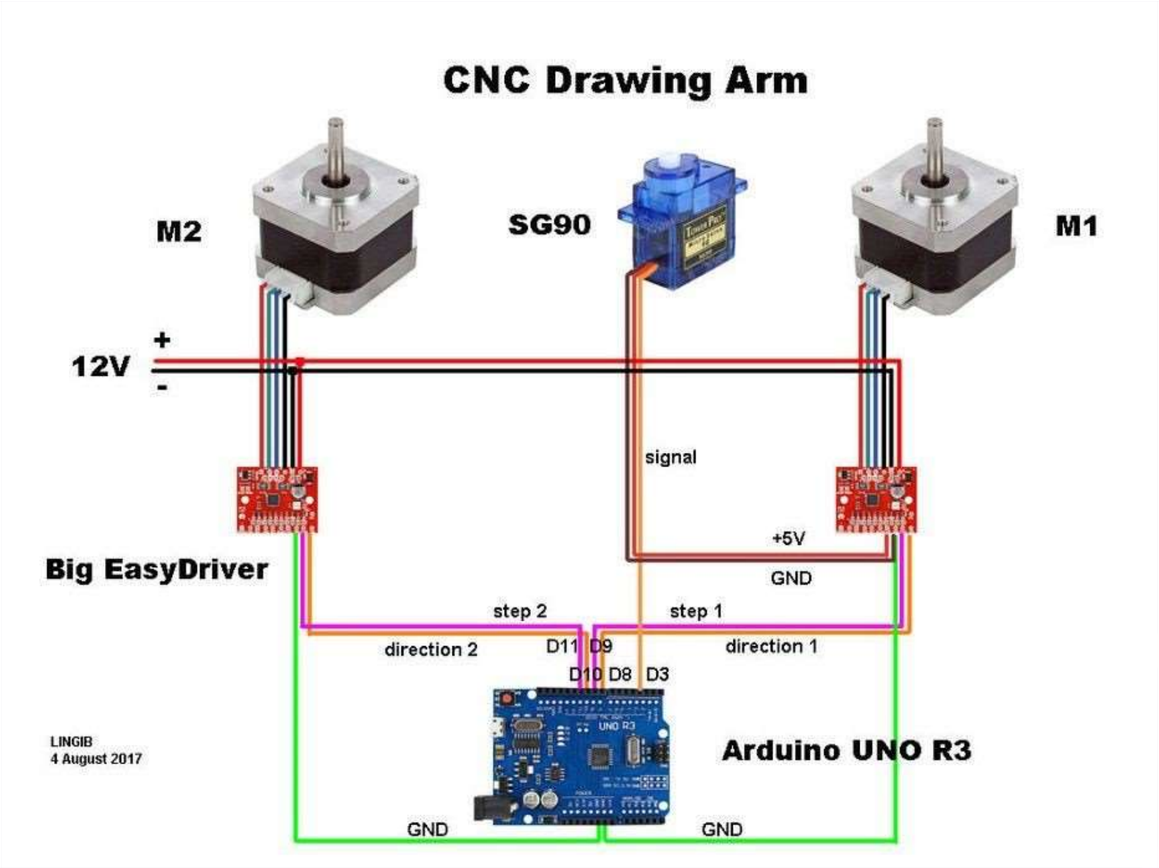
These are number values and co-ordinates. G code is generated by the computer software.

Then G code is uploaded on the Microcontroller of the CNC machine.

Then the controller outputs commands to motors and accessories that can repetitively and extremely accurately cut, design or draw.

CIRCUIT DIAGRAM





FEATURES

1.It's an open source program and thus a free one, it supports various kinds of hardware and configurations and it'svery easy to use.

2.The stepper motor never misses any step. Hence the whole operation is reliable.

3.Through "Inkscap" software we can very easily generate G-Code.

4.The whole project is cheaper and can be easily constructed through used parts of hardware form computers.

RESULT &CONCLUSION

RESULT

◆It can be used for the student of engineering and school student to make their science fair project.

Any Artist can draw an outline diagram for theirwork.

The principal can use as a sign the certificate.

Write anything in Smartphone case cover.

→ A student can draw their outline of a sketch. also, they fill up a colour in it.

CONCLUSION

It has been a great pleasure for me to work on this exciting and challenging project. As a Mechanical Engineer Student this project provides us knowledge about ,software, firmware, circuit & hardware for making such a creative writing machine which can be plot the desired text & images through which we can reduce the human effort in terms of drawing and writing etc.. It also provides knowledge about the latest technology used in the application technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

THANK YOU