

The principle of CNC machine is worldwide-applied principle in different fields especially industry, but we saw that also graphical tools are growing fast, such as 3D printers and 2D drawing machines, so we tried to work on an idea related to this development. Since everyone these days tries to use anything easier, our project is a CNC machine that takes words by voice recognition module to write it on a paper, or a word to draw a shape on the paper. The main features of our project will be A4988 Driver, servomotor, Stepper motors, Arduino Uno, raspberry pi and voice recognition module. The projects works simply as following, the voice recognition module listens to the word that we say it nearly to the voice recognition

microphone, then it sends it to the first Arduino using serial with baud rate (9600),

then the Arduino sends it to the raspberry pi using serial with baud rate (115200), after that we have the word that has been said on the raspberry, there is files with Gcode extension that are saved on the raspberry so each word has an file for it, G code is nothing but a language in which people tell computerized machine tools 'How to make something'. The How is defined by instructions on where to move and how fast to move. then Gcode has a commands as a vectors and it sends

them to the second Arduino which has GRBL library and connected to the stepper motors so the GRBL send these vectors as a steps to the stepper motors which represents the movement of the project, so all you have to do is to speak.