

FOOTFALL COUNTER

Aim:

Is to count the number of people entering a room or attending a function etc.,

Things needed:

3/3 wooden board, arduino,pcb,ICs(2803, 7805),led strips,jumper wires,male header, fibre plates, adapter, header jack,4 pin jst connector, soldering gun, stripper, tape, aluminium foil, wires,multimeter.

Working :

Let us assume that 3/3 wooden board as 3*3 matrix. The code is programmed to show you the path. Initially (3,2) led strip is on it indicates that you need to step on it, as soon as you step on it, the led goes off. at the same time the other two led strips namely (2,1),(2,3) are on,Similarly it indicates that you need to step on them too in the same those two goes off as you step on them, then after (1,2) is on as you step on it that too goes off after completing all these 4 steps the count get incremented.

>>the working principle of the plates is same as that of the push button in which it gets short circuited as we push the button.

Troubleshooting:

The wires should be soldered properly on the aluminium foil so that it doesn't get torned. Ensure that the pins on pcb shouldn't get shortened with other it should be properly checked by multimeter.

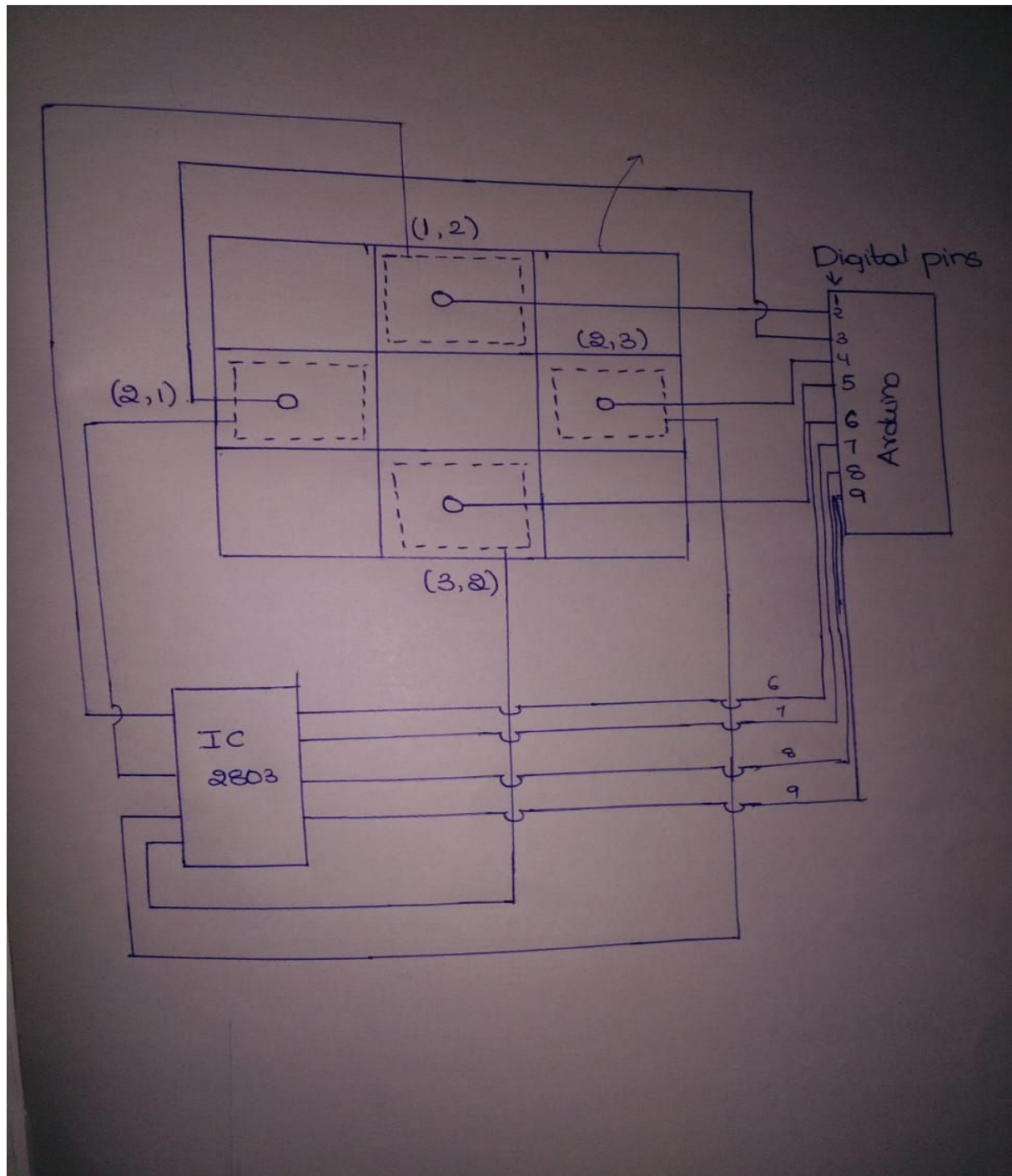
Problem faced :

For a person to get counted they should follow the above said pattern it may not be possible for all so the count gets wrong. So it's better to do with sensors instead of this.

Steps:

- 1.First of all, led strips are placed in 4 boxes as mentioned above.
- 2.anodes of the strips should be shortened.

3. cathodes are given to one side of IC 2803 whose other side 4 wires are connected to arduino(6,7,8,9)
4. 4 ends of the 4 push button 's are connected to arduino's digital pins(2,3,4,5)
5. All other ends of 4 push button 's are grounded.



pcb :-IC 2803 is used to amplify the output voltage of arduino to meet the voltage to light up the led strips. For the ic to work it needs power supply, it is supplied through barrel jack.IC 7805 steps down 12V to 5V and that 5 V is given as an power supply to IC 2803 and IC 7805 avoids fluctuations in the voltage. The o/p pins are connected to 4 pin jst connector from there to led s.

