DIGITAL MEASURING TAPE

This project presents a digital measuring tape built using an Arduino Nano, rotary encoder, and 16x2 LCD display. The system measures linear distance by detecting wheel rotation and converting it into digital output. As the wheel moves, the rotary encoder generates pulses that are counted by the Arduino Nano. These pulses are used to calculate the distance based on the wheel's radius and encoder resolution. The measured distance is displayed in real-time on the LCD screen, and a potentiometer is used to adjust screen contrast. The circuit is compact, easy to build, and ideal for learning microcontroller programming and sensor interfacing. The project demonstrates a practical application of embedded systems in measurement and automation.

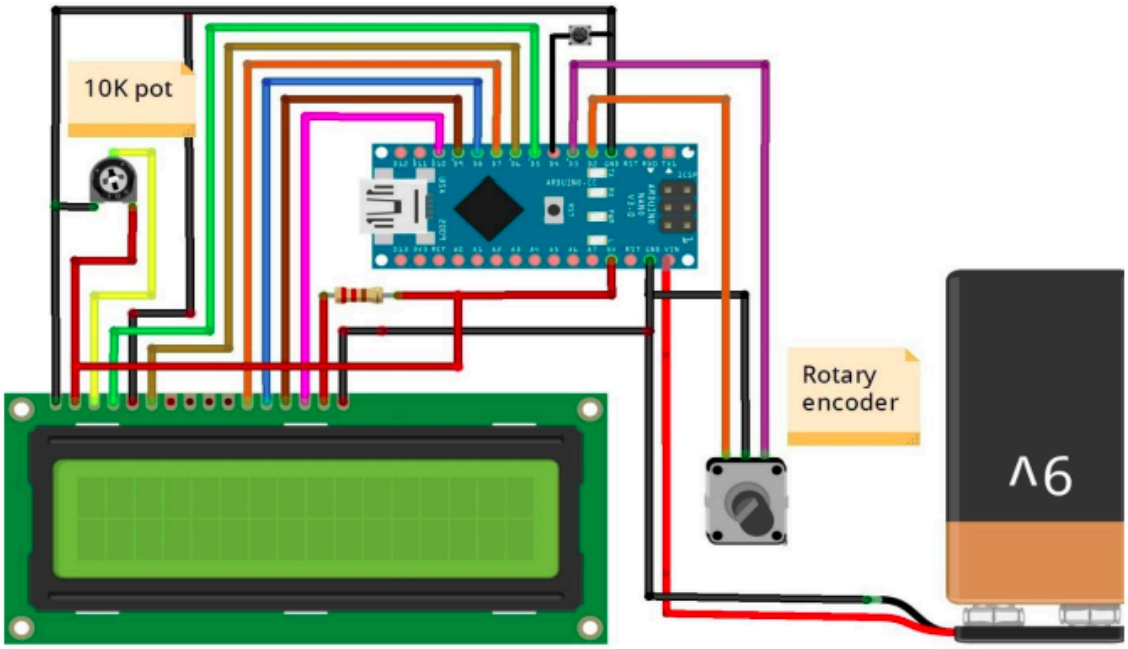

Fig:4.1