```
volatile int encoderPosition; //int the tracks the position of the encoder
#include <LiquidCrystal.h> //needed for LCD
LiquidCrystal LcdDriver(11, 9, 5, 6, 7, 8 ); // Must be in your code, exactly
like this
unsigned long timer; //timer to manage the refresh of the LCD


void MonitorA() { //Interrupt procedure for pin 2
    if (digitalRead(2) == digitalRead(3)) {
      encoderPosition++; //increments position of the pins read the same
value
    }
    else {
        encoderPosition--; //decrements otherwise
    }

}


void MonitorB() {
  if (digitalRead(2) == digitalRead(3)) {
    encoderPosition--; //decrements position if the read the same value
  }
  else {
    encoderPosition++; //increments otherwise
  }
}



void setup() {
  LcdDriver.begin(16,2); // begin
  LcdDriver.clear();// clear
  pinMode(2, INPUT_PULLUP); //sets pin two as an INPUT Pullup
  pinMode(3, INPUT_PULLUP);//sets pin three as an INPUT Pullup
  attachInterrupt(digitalPinToInterrupt(2), MonitorA, CHANGE); //attaches an
interrupt procedure (MOnitorA) to pin two and sets the mode to Change
  attachInterrupt(digitalPinToInterrupt(3), MonitorB, CHANGE); //attaches an
interrupt procedure (MOnitorB) to pin three and sets the mode to Change
  timer = millis(); //Sets the timer to the number of milliseconds since the
program began running

}

void loop() { //loops as long as the program is running
  if ((millis() - timer) >= 100) { //checks if 100 milliseconds has passed
    LcdDriver.clear(  ); //clears the screen
    LcdDriver.print(encoderPosition); //prints the new encoder position to
the LCD
    timer += 100; //increments the timer by 100 milliseconds
  }
  //80 per rotation
  //4/5 per click
}
```