PRACTICAL REPORT

For IoT Practical

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6.10 – Getting Inputs From Sensor

Measure and display the rotation of something to track its speed and/or Direction.

❖ Arduino Code:

```
const int encoderPinA = 4;
const int encoderPinB = 2;
const int encoderStepsPerRevolution = 16;
int angle = 0;
int val;
int encoderPos = 0;
boolean encoderALast = LOW; // remembers the previous pin state
void setup()
{
  pinMode(encoderPinA, INPUT);
  pinMode(encoderPinB, INPUT);
  digitalWrite(encoderPinA, HIGH);
  digitalWrite(encoderPinB, HIGH);
  Serial.begin(9600);
}
void loop()
{
  boolean encoderA = digitalRead(encoderPinA);
  if ((encoderALast == HIGH) && (encoderA == LOW))
  {
    if (digitalRead(encoderPinB) == LOW)
    {
      encoderPos--;
    }
    else
    {
      encoderPos++;
    }
    angle = (encoderPos % encoderStepsPerRevolution) * 360 / encoderStepsPerRevolution;
    Serial.print(encoderPos);
    Serial.print(" ");
    Serial.println(angle);
  }
```

```
    encoderALast = encoderA;
  }
```

❖ Output / Circuit Diagram: