PRACTICAL REPORT

For IoT Practical

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6.11 – Getting Inputs From Sensor

Two or more rotary encoders and you want to measure and display rotation.

❖ Arduino Code:

```
const int ENCODERS = 2;
const int encoderPinA[ENCODERS] = {2, 4};
const int encoderPinB[ENCODERS] = {3, 5};
int encoderPos[ENCODERS] = {0, 0};
boolean encoderALast[ENCODERS] = {LOW, LOW};

void setup()
{
    for (int i = 2; i < 6; i++)
    {
        pinMode(i, HIGH);
        digitalWrite(i, HIGH);
        Serial.begin(9600);
    }
}

int updatePosition(int encoderIndex)
{
    boolean encoderA = digitalRead(encoderPinA[encoderIndex]);

    if ((encoderALast[encoderIndex] == HIGH) && (encoderA == LOW))
    {
        if (digitalRead(encoderPinB[encoderIndex]) == LOW)
        {
            encoderPos[encoderIndex]--;
        }
        else
        {
            encoderPos[encoderIndex]++;
        }
        Serial.print("Encoder ");
        Serial.print(encoderIndex, DEC);
        Serial.print("=");
        Serial.print(encoderPos[encoderIndex]);
        Serial.println("/");
    }
    encoderALast[encoderIndex] = encoderA;
}
void loop()
{
    for (int i = 0; i < ENCODERS; i++)
    {
        updatePosition(i);
    }
}
```

❖ Output / Circuit Diagram: