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/*
   This program is to test Rotory Encoder interfacing with Arduino

   Developed by: Team UTD - Hubli
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   Connect VCC of Rotory Encoder sensor to +5V of Arduino board
   Connect GND of Rotory Encoder Sensor to GND of Arduino board
   Connect Clk of Rotory Encoder sensor to Digital pin 2 of Arduino
   Connect DT of Rotory Encoder sensor to Digital pin 3 of Arduino
   Connect Sw pin of  Rotory Encoder to Digital oin 4 of Arduino

   Upload the code and check in Serial Monitor.
*/


#define encoderOutA 2 // CLK pin of Rotary Enocoder
#define encoderOutB 3 // DT pin of Rotary Enocoder
#define pushButton 4    // Digital pin 4 used for Push button interface

int counter = 0;
int presentState;
int previousState;

void setup()
{
  pinMode(encoderOutA, INPUT);    //Declaring Digital Pin 2 and 3 as
Input
  pinMode(encoderOutB, INPUT);
  pinMode(pushButton, INPUT);     //Declaring Digital Pin 4 as input for
Switch

  Serial.begin (9600);           //Setting the Baudrate to 9600 to start
Serial Monitor
  previousState = digitalRead(encoderOutA);   // Get current state of the
encoderOutA and store it into variable previousState
}

void loop()
{
  bool buttonState = digitalRead(pushButton);      //Reading the status
of Digital Pin 6
  if (buttonState == LOW)                          //if d6 is high then
enter if loop
  {
    Serial.println("Button Pressed");    //if pin status is high then
button pressed will be printed

    delay(150);
  }

  presentState = digitalRead(encoderOutA);
  if (presentState != previousState)       //If presentState and
previousState are not equal then enter the loop
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  {
    if (digitalRead(encoderOutB) != presentState)   //If the value of
Digital pin 1 is not equal to presentState then counter increments
    {
      counter ++;
    }
    else {
      counter --;               //If not equal Counter Decrements
    }
    Serial.print("Position: ");
    Serial.println(counter);     //Printing the position of the object
  }
  previousState = presentState; // Replace previous state of the
encoderOutA with the current state

}
```