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//for use with Techspace Learning Shift Register module.

//Displays 0 - 99 on two 7-seg displays.
int dataIn = 4;
int klock = 6;
int latch = 5;
int bitNum = 0;
int decNum = 0;
int units;
int tens;

int numMatrix[10][8]{
  //segments
  //g,f,e,d,c,b,a,na
  {0,1,1,1,1,1,1,0}, //ZERO
  {0,0,0,0,1,1,0,0}, //ONE
  {1,0,1,1,0,1,1,0}, //TWO
  {1,0,0,1,1,1,1,0}, //THREE
  {1,1,0,0,1,1,0,0}, //FOUR
  {1,1,0,1,1,0,1,0}, //FIVE
  {1,1,1,1,1,0,1,0}, //SIX
  {0,0,0,0,1,1,1,0}, //SEVEN
  {1,1,1,1,1,1,1,0}, //EIGHT
  {1,1,0,1,1,1,1,0}, //NINE
};

void loop() {
  tens = decNum/10;
  units = decNum - (tens*10);

  for(bitNum = 0;bitNum < 8;bitNum++){
    digitalWrite(dataIn,numMatrix[tens][bitNum]);
    Klocking();
  }
  for(bitNum = 0;bitNum < 8;bitNum++){
    digitalWrite(dataIn,numMatrix[units][bitNum]);
    Klocking();
  }
  Latch();
  delay(500);
  decNum++;
  if(decNum > 99){
    decNum = 0;
  }
}

void setup() {
  pinMode(dataIn,OUTPUT);
  pinMode(klock,OUTPUT);
  pinMode(latch,OUTPUT);
}

void Klocking(){
  digitalWrite(klock,1);
  digitalWrite(klock,0);
}

void Latch(){
  digitalWrite(latch,1);
  digitalWrite(latch,0);
}

```

