實驗二 LED 跑馬燈製作

實驗目的：Arduino外接到麵包板接8顆 LED，實作跑馬燈展示，呈現結果。

實驗步驟：重複1-6步驟。每一步驟之間暫停間隔2秒鐘，每行LED間隔0.5秒。

完成後，將程式碼貼至每一項目中，解釋程式設計之原理。

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程式碼:

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| const byte NUM=8;  const byte led[]={11,10,9,8,5,4,3,2};  const int delaytime=500;  int ii;  void setup() {  for(ii=0;ii<NUM;ii++){  pinMode(led[ii],OUTPUT);  digitalWrite(led[ii],HIGH);  }}  void loop() {  for(ii=0;ii<NUM;ii++)  {  digitalWrite(led[ii],LOW);//右到左  delay(delaytime);  digitalWrite(led[ii],HIGH);  }  delay(500);  for(ii=0;ii<NUM;ii++)  {  digitalWrite(led[ii],HIGH);  }    //2.-------------------  for(ii=NUM-1;ii>=0;ii--)  {  digitalWrite(led[ii],LOW);//左到右  delay(delaytime);  digitalWrite(led[ii],HIGH);  }  delay(1000);  for(ii=0;ii<NUM;ii++)  {  digitalWrite(led[ii],HIGH);  }  //3.  for(ii=0;ii<NUM;ii++)  {  digitalWrite(led[ii],LOW);  delay(delaytime);  }  for(ii=0;ii<NUM;ii++)  {  digitalWrite(led[ii],HIGH);    }  delay(delaytime);  //4.  for(ii=NUM-1;ii>=0;ii--)  {  digitalWrite(led[ii],LOW);  delay(delaytime);  }  for(ii=NUM-1;ii>=0;ii--)  {  digitalWrite(led[ii],HIGH);    }    //5-----------------  for(ii=0;ii<4;ii++)  {  digitalWrite(led[ii],LOW);  digitalWrite(led[7-ii],LOW);  delay(delaytime);  digitalWrite(led[ii],HIGH);  digitalWrite(led[7-ii],HIGH);  }  for(ii=0;ii<NUM;ii++)  {  digitalWrite(led[ii],HIGH);  }  delay(delaytime);    for(ii=3;ii>=0;ii--)  {  digitalWrite(led[ii],LOW);  digitalWrite(led[7-ii],LOW);  delay(delaytime);  digitalWrite(led[ii],HIGH);  digitalWrite(led[7-ii],HIGH);  }  for(ii=0;ii<NUM;ii++)  {  digitalWrite(led[ii],HIGH);  }  delay(delaytime);  /\*6-------------------------------------\*/  for(ii=0;ii<4;ii++)  {  digitalWrite(led[ii],LOW);  digitalWrite(led[7-ii],LOW);  delay(delaytime);  }  for(ii=0;ii<4;ii++)  {  digitalWrite(led[ii],HIGH);  digitalWrite(led[7-ii],HIGH);    }  delay(delaytime);  for(ii=3;ii>=0;ii--)  {  digitalWrite(led[ii],LOW);  digitalWrite(led[7-ii],LOW);  delay(delaytime);  }  for(ii=3;ii>=0;ii--)  {  digitalWrite(led[ii],HIGH);  digitalWrite(led[7-ii],HIGH);    }  delay(delaytime);  }+ |