程式：檢查Access Point(熱點) 是否連上

**開啟程式CheckAP**

**程式位址：**[**https://github.com/brucetsao/BruceCourses/blob/master/105ANQU\_IOT/Code/CheckAP/CheckAP.ino**](https://github.com/brucetsao/BruceCourses/blob/master/105ANQU_IOT/Code/CheckAP/CheckAP.ino)

|  |
| --- |
| #include <WiFi.h>uint8\_t MacData[6];char ssid[] = "Apple\_TC\_Wi-Fi"; // your network SSID (name)char pass[] = "27541147"; // your network passwordIPAddress Meip ,Megateway ,Mesubnet ;String MacAddress ;int status = WL\_IDLE\_STATUS;void setup() { MacAddress = GetWifiMac() ; ShowMac() ; initializeWiFi(); printWifiData() ;}void loop() { // run over and over }void ShowMac(){  Serial.print("MAC:"); Serial.print(MacAddress); Serial.print("\n");}String GetWifiMac(){ String tt ; String t1,t2,t3,t4,t5,t6 ; WiFi.status(); //this method must be used for get MAC WiFi.macAddress(MacData);  Serial.print("Mac:"); Serial.print(MacData[0],HEX) ; Serial.print("/"); Serial.print(MacData[1],HEX) ; Serial.print("/"); Serial.print(MacData[2],HEX) ; Serial.print("/"); Serial.print(MacData[3],HEX) ; Serial.print("/"); Serial.print(MacData[4],HEX) ; Serial.print("/"); Serial.print(MacData[5],HEX) ; Serial.print("~");  t1 = print2HEX((int)MacData[0]); t2 = print2HEX((int)MacData[1]); t3 = print2HEX((int)MacData[2]); t4 = print2HEX((int)MacData[3]); t5 = print2HEX((int)MacData[4]); t6 = print2HEX((int)MacData[5]); tt = (t1+t2+t3+t4+t5+t6) ;Serial.print(tt);Serial.print("\n");  return tt ;}String print2HEX(int number) { String ttt ; if (number >= 0 && number < 16) { ttt = String("0") + String(number,HEX); } else { ttt = String(number,HEX); } return ttt ;}void printWifiData() { // print your WiFi shield's IP address: Meip = WiFi.localIP(); Serial.print("IP Address: "); Serial.println(Meip); Serial.print("\n"); // print your MAC address: byte mac[6]; WiFi.macAddress(mac); Serial.print("MAC address: "); Serial.print(mac[5], HEX); Serial.print(":"); Serial.print(mac[4], HEX); Serial.print(":"); Serial.print(mac[3], HEX); Serial.print(":"); Serial.print(mac[2], HEX); Serial.print(":"); Serial.print(mac[1], HEX); Serial.print(":"); Serial.println(mac[0], HEX); // print your subnet mask: Mesubnet = WiFi.subnetMask(); Serial.print("NetMask: "); Serial.println(Mesubnet); // print your gateway address: Megateway = WiFi.gatewayIP(); Serial.print("Gateway: "); Serial.println(Megateway);}void ShowInternetStatus(){  if (WiFi.status()) { Meip = WiFi.localIP(); Serial.print("Get IP is:"); Serial.print(Meip); Serial.print("\n");  } else { Serial.print("DisConnected:"); Serial.print("\n"); }}void initializeWiFi() { while (status != WL\_CONNECTED) { Serial.print("Attempting to connect to SSID: "); Serial.println(ssid); // Connect to WPA/WPA2 network. Change this line if using open or WEP network: status = WiFi.begin(ssid, pass); // status = WiFi.begin(ssid); // wait 10 seconds for connection: delay(10000); } Serial.print("\n Success to connect AP:") ; Serial.print(ssid) ; Serial.print("\n") ; } |

**PS:請修改**

**char ssid[] = "NQU\_IOT"; // your network SSID (name)**

**char pass[] = "12345678"; // your network password**

=========================================

**CheckAP程式重點解說**

#include <WiFi.h> 使用網路必要函數

uint8\_t MacData[6]; 儲存 MAC資料

IPAddress Meip ,Megateway ,Mesubnet ; 宣告ip、閘道器、子網路遮罩

int status = WL\_IDLE\_STATUS; 連線網路狀態

GetWifiMac() 取得MAC函數

 ShowMac() ; 秀出MAC資料

WiFi.status(); 顯示WIFI狀態

WiFi.macAddress(MacData); 取得MAC資料

initializeWiFi(); 進行連線

printWifiData() ; 列印網路狀態資訊

status = WiFi.begin(ssid); 不使用加密連AP

 status = WiFi.begin(ssid, pass); 使用加密連AP

status == WL\_CONNECTED 連AP是否成功

WiFi.status() 連接成功狀態

Meip = WiFi.localIP(); 取得連線IP

Megateway = WiFi.gatewayIP();取得連線閘道器

WiFi.subnetMask(); 取得連線子網路遮罩