實驗六: RFID-RC522

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一、電路圖
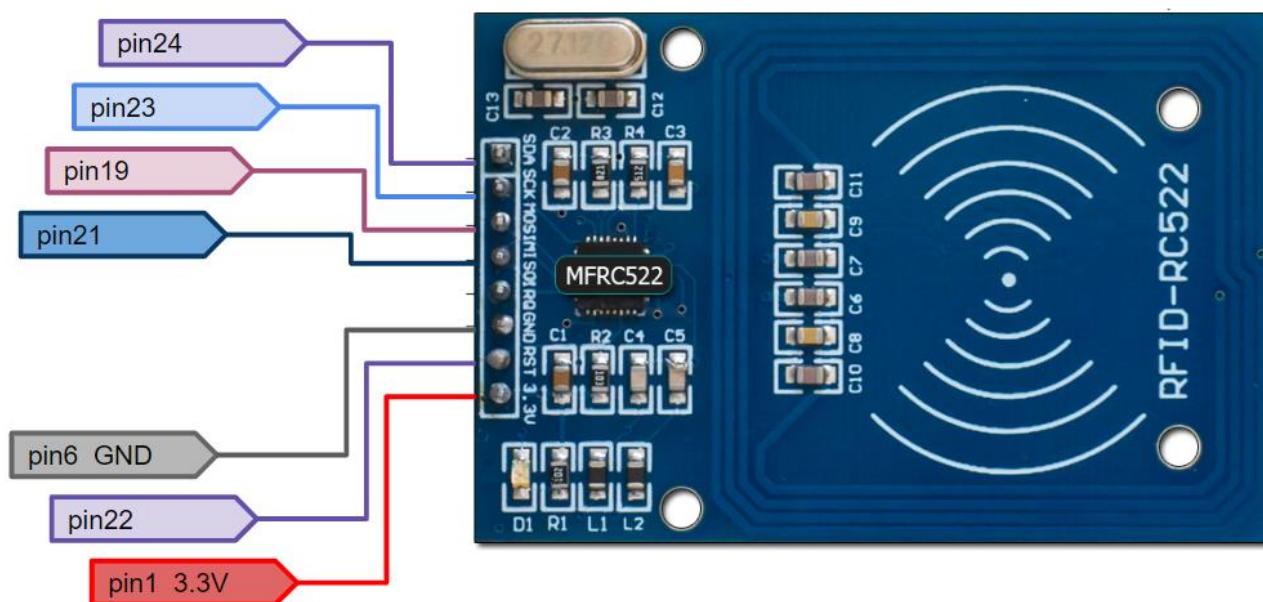
二、程式

需求
(1) 在編號 8 寫入英文名字
(2) 讀出名字和卡號進行簽到，連同刷卡時間，存放在 mySQL 資料庫。
程式說明
資料庫(表)直接沿用上週的，故附檔 LogRecord_GET.php、setup.php 與上週相同，紙本報告僅展示有更動的 index.php
完整程式碼: https://github.com/jessie900309/NTUE_RaspberryPiPractice/tree/master/20220526

index.php

```php
<?php
$host = "localhost";
$dbuser = "root";
$dbpasswd = "123456";
$DBNAME = "dht22 log";

$conn = mysqli connect($host, $dbuser, $dbpasswd, $DBNAME);

if(!$conn) {
    echo "Error: Unable to connect to MySQL." . PHP_EOL;
    echo "Debugging errno: " . mysqli connect errno() . PHP EOL;
    echo "Debugging error: " . mysqli connect error() . PHP EOL;
    die ("無法連線至資料庫");
}
// 設定連線編碼
mysqli query($conn, "SET NAMES 'utf8'");

$sql = "SELECT * FROM dht22 log.log ORDER BY \"time\" DESC;";
$ret = mysqli query($conn, $sql);
```

```php
if(!$ret){
    echo "Error: Unable to connect to MySQL." . PHP_EOL;
    echo "Debugging errno: " . mysqli_connect_errno() . PHP_EOL;
    echo "Debugging error: " . mysqli_connect_error() . PHP_EOL;
    die("error");
}

mysqli_close($conn);
?>
<!DOCTYPE html>
<html>
<head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css"
integrity="sha384-9aIt2nRpC12Uk9gS9baDl411NQApFmC26EwAOH8WgZl5MYYxFfc+NcPb1dKGj7Sk"
crossorigin="anonymous">
    <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js" integrity="sha384-
DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj" crossorigin="anonymous"></script>
    <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js" integrity="sha384-
Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo" crossorigin="anonymous"></script>
    <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/bootstrap.min.js" integrity="sha384-
OgVRvuATP1z7JjHLkuOU7Xw704+h835Lr+6QL9UvYjZE3Ipu6Tp75j7Bh/kR0JKI" crossorigin="anonymous"></script>
    <title>門禁管理系統</title>
</head>
<style>
    .table td {
        text-align: center;
    }
</style>
<body>
<!-- 上面的導航條 -->
<nav class="navbar navbar-expand-sm bg-dark navbar-dark">
    <!-- Brand -->
    <a class="navbar-brand" href="/index.php">門禁管理系統</a>

    <!-- Links -->
    <ul class="navbar-nav">
    </ul>
</nav>
<!-- 網頁本體 -->
<div class="container">
    <h1 style="text-align: center; margin-top: 1rem;">刷卡紀錄</h1>
    <div class="row">
        <div class="col">
            <div class="table-responsive">
                <table class="table table-bordered">
                    <thead>
                    <tr>
                        <th>    </th>
                        <th>卡號</th>
                        <th>時間</th>
                    </tr>
                    </thead>
                    <!--  -->
                    <tbody>
                    <?php
                    while($row = mysqli_fetch_array($ret, MYSQLI_NUM)){
                        echo "<tr>";
                        echo "<td>".$row[1] ."</td>\n";
                        echo "<td>".$row[2] ."</td>\n";
                        echo "<td>".$row[4] ."</td>\n";
                        echo "</tr>";
                    }
                    ?>
                    </tbody>
                </table>
            </div>
        </div>
    </div>
</div>
</body>
</html>
```

homework0526_repo6.py

```python
#!/usr/bin/env python
# -*- coding: utf8 -*-
import RPi.GPIO as GPIO
import mfrc522 as MFRC522
import signal
import requests

continue_reading = True
TARGET_URL = 'localhost'

# Capture SIGINT for cleanup when the script is aborted
def end_read(signal, frame):
    global continue_reading
    print("Ctrl+C captured, ending read.")
    continue_reading = False
    GPIO.cleanup()

signal.signal(signal.SIGINT, end_read)
MIFAREReader = MFRC522.MFRC522()

# Welcome message
print("Welcome to the MFRC522 data write/read example")
print("Hold a tag near the reader")
print("Press Ctrl-C to stop.")

# This loop keeps checking for chips. If one is near it will get the UID and authenticate
while continue_reading:
    # Scan for cards
    (status, TagType) = MIFAREReader.MFRC522_Request(MIFAREReader.PICC_REQIDL)
    # If a card is found
    if status == MIFAREReader.MI_OK:
        print("Card detected")
    # Get the UID of the card
    (status, uid) = MIFAREReader.MFRC522_Anticoll()
    # If we have the UID, continue
    if status == MIFAREReader.MI_OK:
        # Print UID
        print("UID length: ", len(uid))
        uid_len = len(uid) - 1
        uid_decimal = 0;
        for x in range(0, uid_len):
            uid_decimal = uid_decimal + uid[x] * 256 ** (uid_len - 1 - x)
        print("Card read UID decimal: " + str(uid_decimal))
        print("Card read UID hexcimal:0x{:X}".format(uid_decimal))

        # This is the default key for authentication
        key = [0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF]

        # Select the scanned tag
        MIFAREReader.MFRC522_SelectTag(uid)

        # Authenticate
        status = MIFAREReader.MFRC522_Auth(MIFAREReader.PICC_AUTHENT1A, 8, key, uid)

        # Check if authenticated
        if status == MIFAREReader.MI_OK:

            # Variable for the data to write
            my_name = "jessie Hsieh    "
            data = []
            # Fill the data with my name
            for x in range(0, 16):
                data.append(ord(my_name[x]))
            print("\n")

            # Write the data
            MIFAREReader.MFRC522_Write(8, data)

            # Check to see if it was written
            rdData = MIFAREReader.MFRC522_Read(8)
```

```
        # web
        nameData = "".join(chr(i) for i in rdData)
        r =
requests.get('http://{0}/LogRecord GET.php?TEMP C={1}&TEMP F={2}&HUMD={3}'.format(TARGET URL, uid decimal,
nameData, "0"))
        print("uid = ", uid decimal)
        print("name = ", nameData)
        print("Server Return Code :", r.status_code)

        # Make sure to stop reading for cards
        MIFAREReader.MFRC522 StopCrypto1()
        continue reading = False
    else:
        print("Authentication error")
```

三、影片連結


```
Welcome to the MFRC522 data write/read example
Hold a tag near the reader
Press Ctrl-C to stop.
Card detected
UID length:  5
Card read UID decimal: 392634722
Card read UID hexcimal:0x17672162


uid =  392634722
name =  jessie Hsieh
Server Return Code : 200
```


門禁管理系統		

刷卡紀錄

	卡號	時間
392634722	jessie Hsieh	2022-06-01 16:35:31
392634722	jessie Hsieh	2022-06-01 16:41:01

index.php

YouTube 影片連結 :（忘…忘記錄影了 quqqq）