

# 行動通訊與網路資料庫

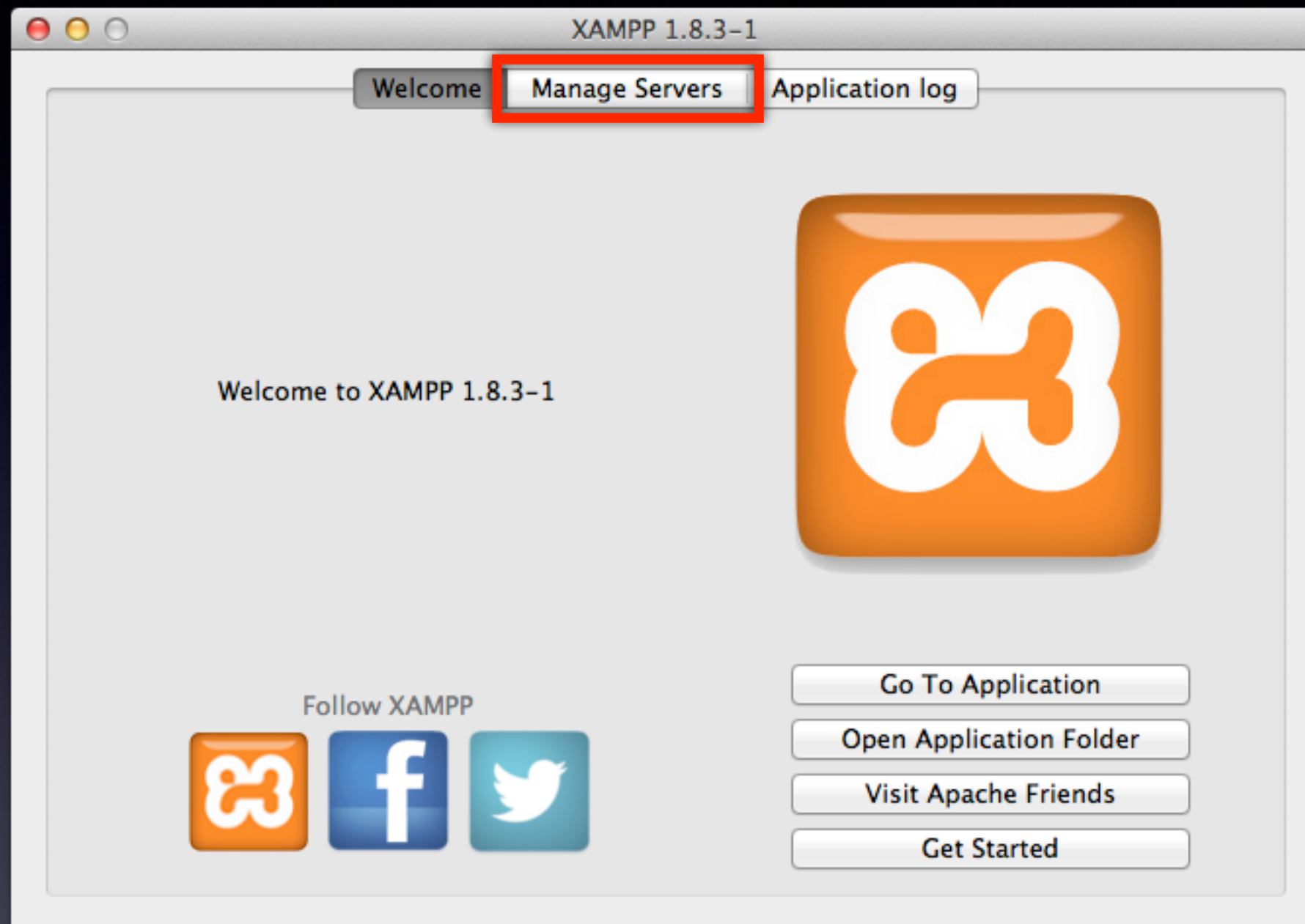
Android + PHP 存取 MySQL 資料庫

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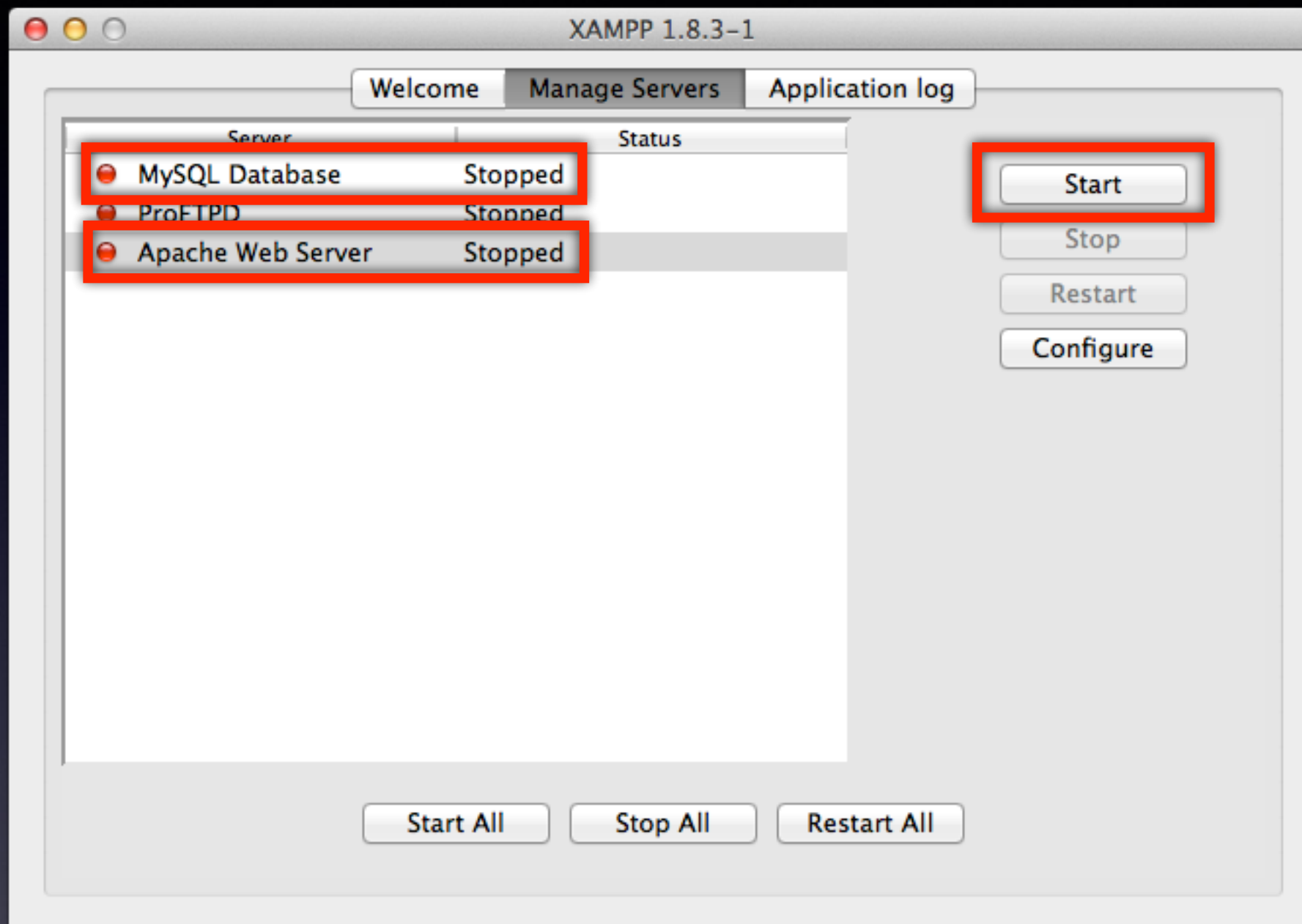
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- 安裝 Mac XAMPP 並啟動 Apache & MySQL 服務
- MySQL 環境設定
- 建立資料庫及建立資料表和新增欄位
- 建立 PHP 應用程式
- 建立 Android App

啟動 Apache & MySQL 服務

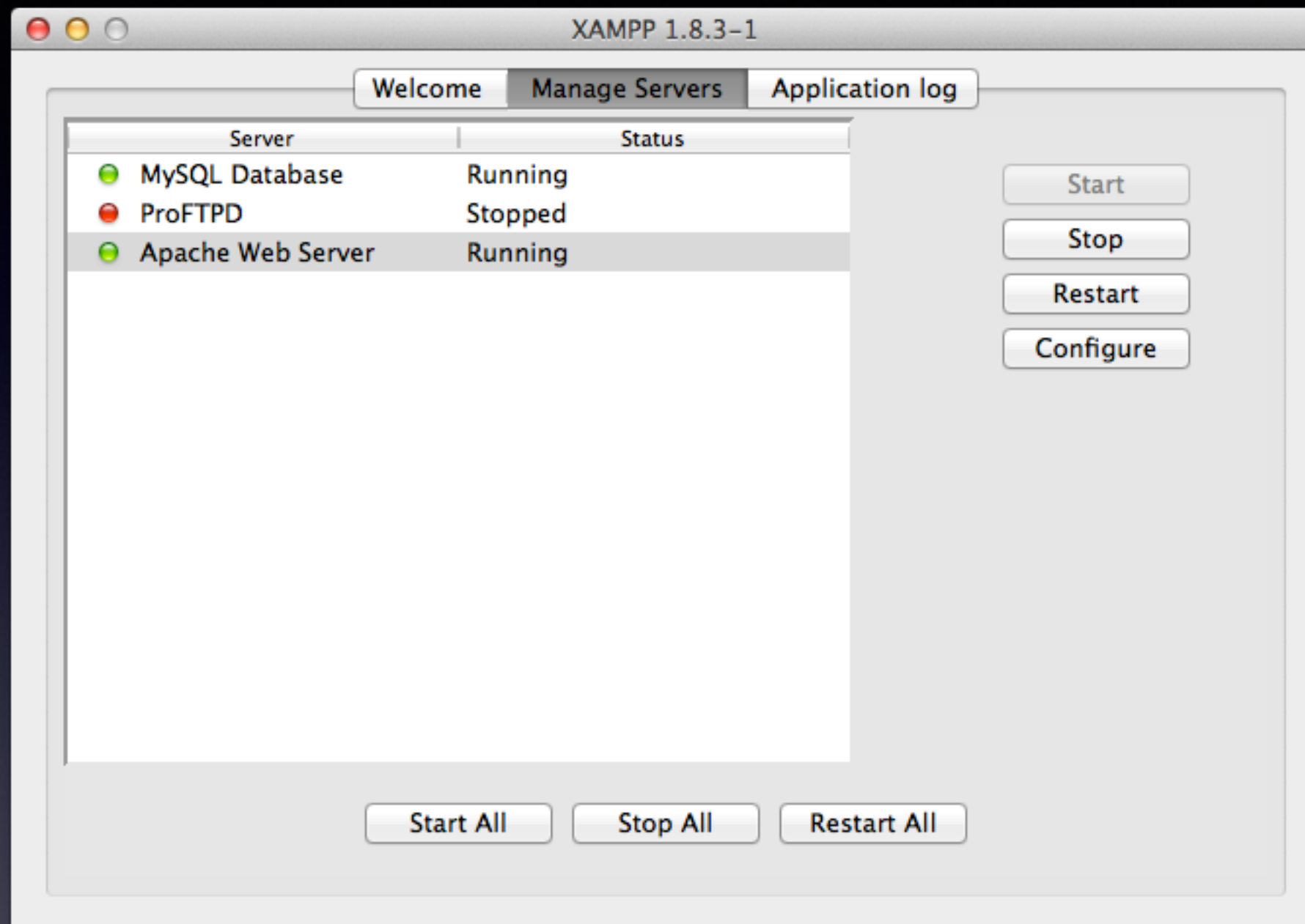


開啟 XAMPP 管理程式



啟動 MySQL 和 Apache Web Server





綠燈表示啟動完成

# MySQL 環境設定

XAMPP for OS X 1.8.3-1

localhost/xampp/index.php

# XAMPP for Mac OS X

English / Deutsch / Français / Nederlands / Polski / Italiano / Norsk / Español / 中文 / Português (Brasil) / 日本語

**XAMPP**  
欢迎  
状态  
安全  
文档  
组件  
Applications  
演示  
CD集  
生命周期  
Guest Book  
Instant Art  
phpinfo()  
电话簿  
phpMyAdmin  
©2002-2013  
...APACHE  
FRIENDS...

## 欢迎使用XAMPP for OS X 1.8.3-1!

祝贺您:  
您已经成功安装了XAMPP!

现在您可以开始使用Apache以及其他的组件。首先,您可以通过左侧的导航条上的'状态'功能来查看他们是否工作正常。

您可以通过浏览 <https://127.0.0.1> 或者 <https://localhost> 来验证OpenSSL

### Install applications on XAMPP using BitNami

Apache Friends and BitNami are cooperating to make dozens of open source applications available on XAMPP, for free. BitNami-packaged applications include Wordpress, Drupal, Joomla! and dozens of others and can be deployed with one-click installers. Visit the [BitNami XAMPP page](#) for details on the currently available apps.



進入 phpMyAdmin 資料庫管理介面



localhost / localhost | phpMyAdmin 4.0.4.1

localhost/phpmyadmin/index.php?db=&table=&server=1&target=&token=7f4686610ca2d2228ee4b7af6d6b9

phpMyAdmin


(最新資料表) ...

- cdcol
- information\_schema
- mysql
- performance\_schema
- phpmyadmin
- test

localhost


資料庫 SQL 狀態 使用者 匯出 輸入 設定 更多

### 一般設定

伺服器連線校對  :

utf8\_unicode\_ci


### 外觀設定

語系 - Language  :

中文 - Chinese traditional

主題: pmahomme


字體大小: 82%

 更多設定

### 資料庫伺服器

- 伺服器: Localhost via UNIX socket
- 伺服器類型: MySQL
- 伺服器版本: 5.6.12 - Source distribution
- 協定版本: 10
- 使用者: root@localhost
- 伺服器字元集: UTF-8 Unicode (utf8)

### 網站伺服器

- Apache/2.4.4 (Unix) PHP/5.5.3 OpenSSL/1.0.1e mod\_perl/2.0.8-dev Perl/v5.16.3
- 資料庫用戶端版本: libmysql - mysqlnd 5.0.11-dev - 20120503 - \$Id: 40933630edef551dfaca71298a83\$
- PHP 外掛: mysqli 

phpMyAdmin

對伺服器連線校對、語系設定

建立資料庫

localhost / localhost | phpMyAdmin 4.0.4.1

localhost/phpmyadmin/index.php?db=&table=&server=1&target=&token=7f4686610ca2d2228ee4b7af6d6b9

phpMyAdmin

(最新資料表) ...

cdcol  
information\_schema  
mysql  
performance\_schema  
phpmyadmin  
test

localhost

資料庫 SQL 狀態 使用者 匯出 輸入 設定 複製 更多

## 資料庫

建立新資料庫

demo utf8\_unicode\_ci 建立

資料庫	
<input type="checkbox"/> cdcol	檢查權限
<input type="checkbox"/> information_schema	檢查權限
<input type="checkbox"/> mysql	檢查權限
<input type="checkbox"/> performance_schema	檢查權限
<input type="checkbox"/> phpmyadmin	檢查權限
<input type="checkbox"/> test	檢查權限
總計: 6	

↑ ☐ 全選 選中項: 刪除

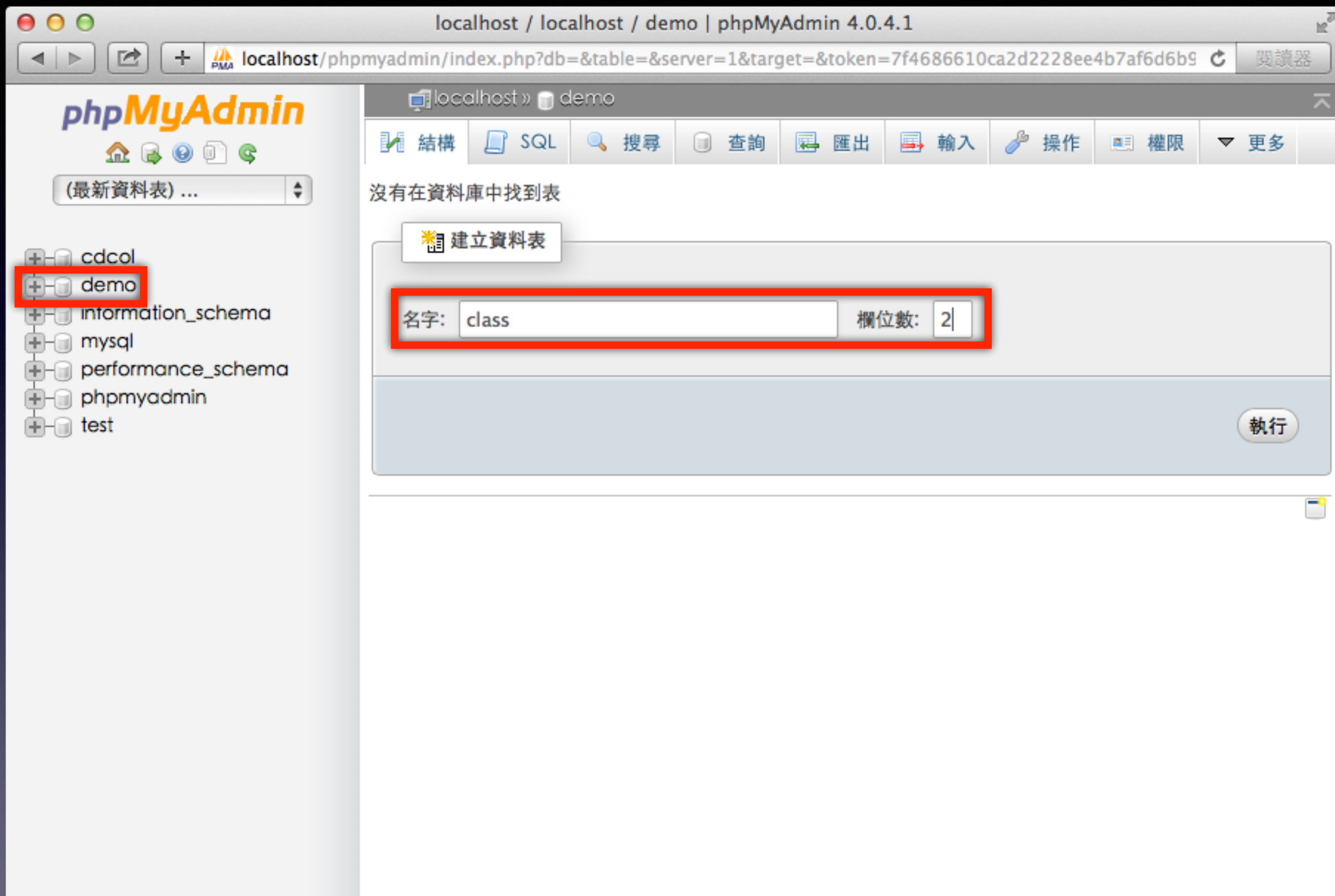
• 啓用統計

注意：在此啓用資料庫統計可能導致網站伺服器和 MySQL 伺服器之間的流量驟增。

建立 demo 資料庫

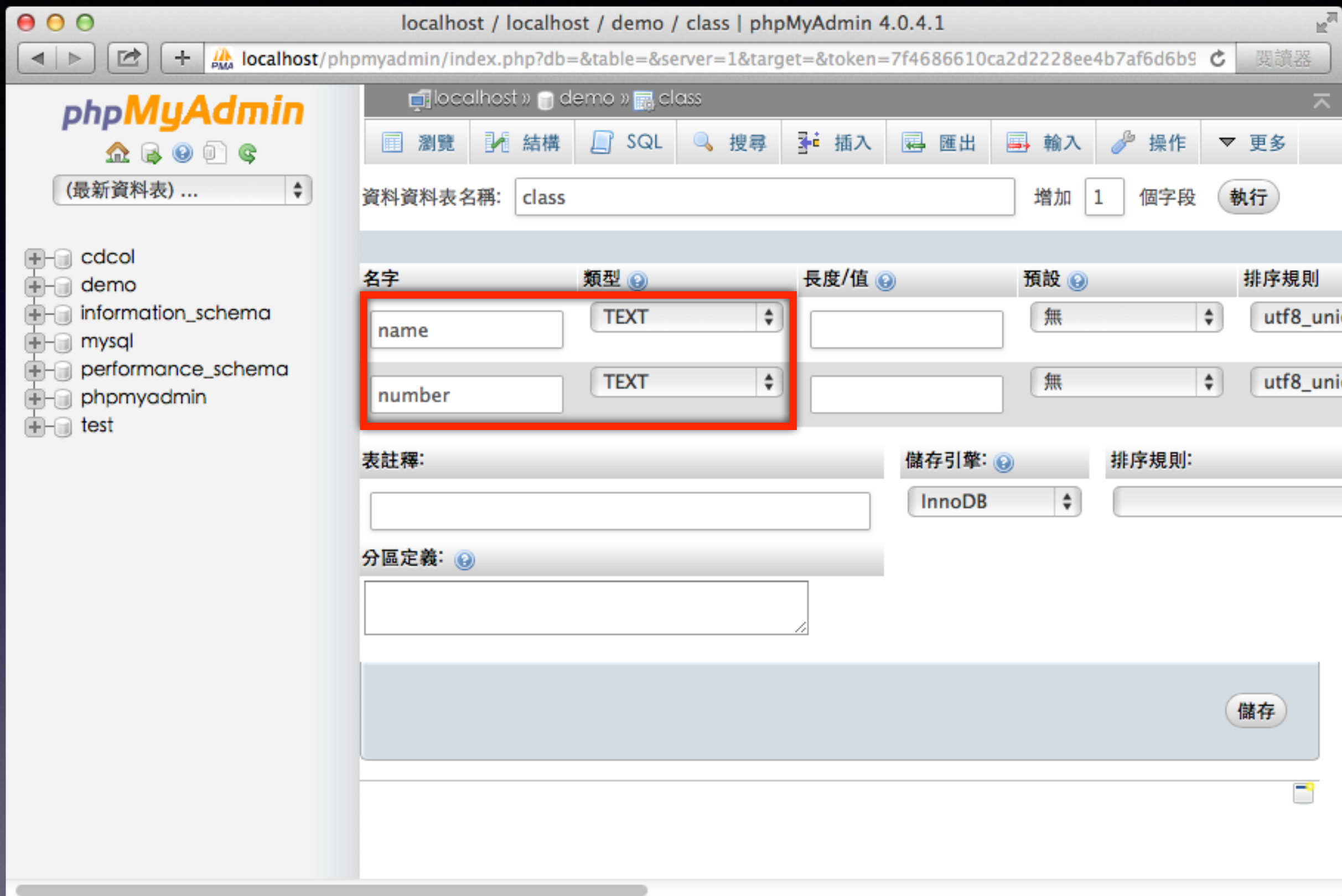
建立資料表和新增欄位



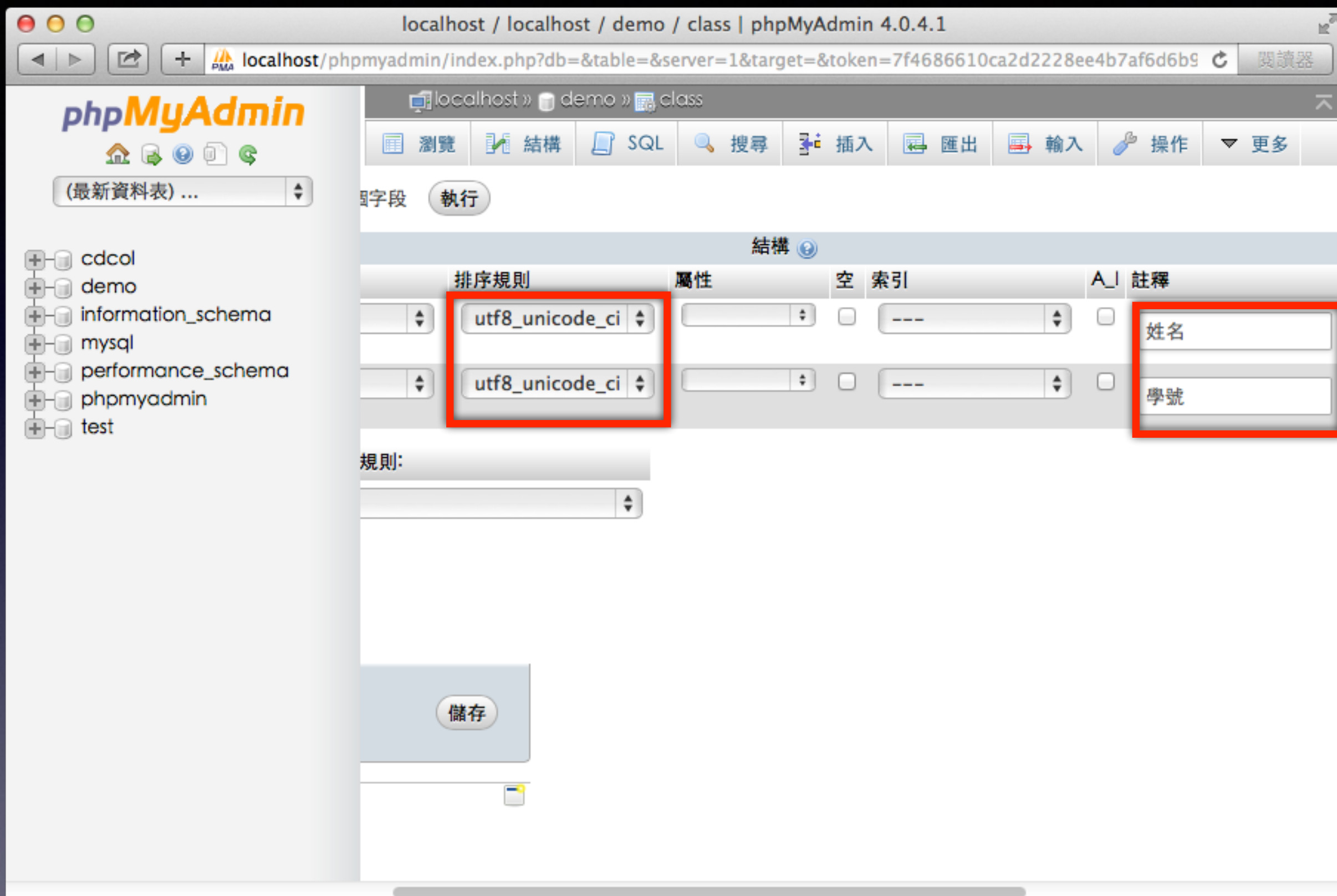


建立 class 資料表





新增 TEXT 類型的欄位 name 及 number



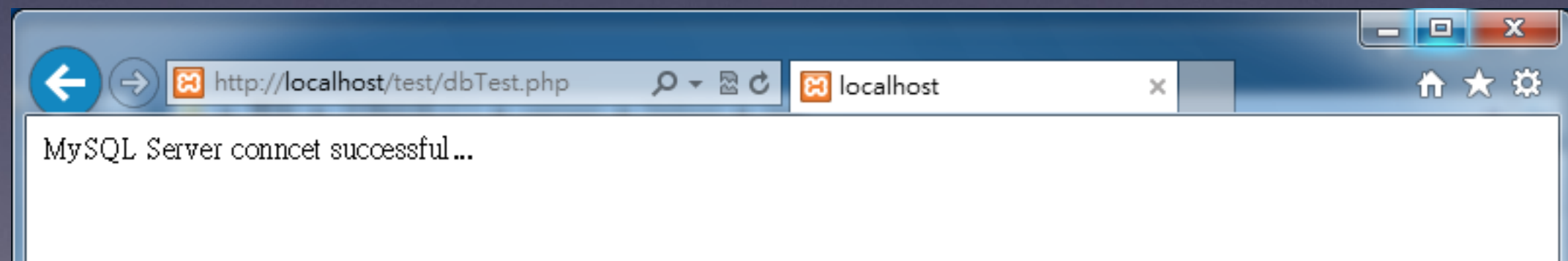
設定 utf8\_unicode\_ci 排序規則及增加註釋

# 建立 PHP 應用程式

# 資料庫連線測試

```
1 <?php
2     $db_link = mysql_connect("localhost", "root");
3
4     if (!$db_link) {
5         echo "MySQL Server connctet fail...";
6     } else {
7         echo "MySQL Server connctet successful...";
8     }
9
10    mysql_close($db_link);
11 ?>
```

dbTest.php



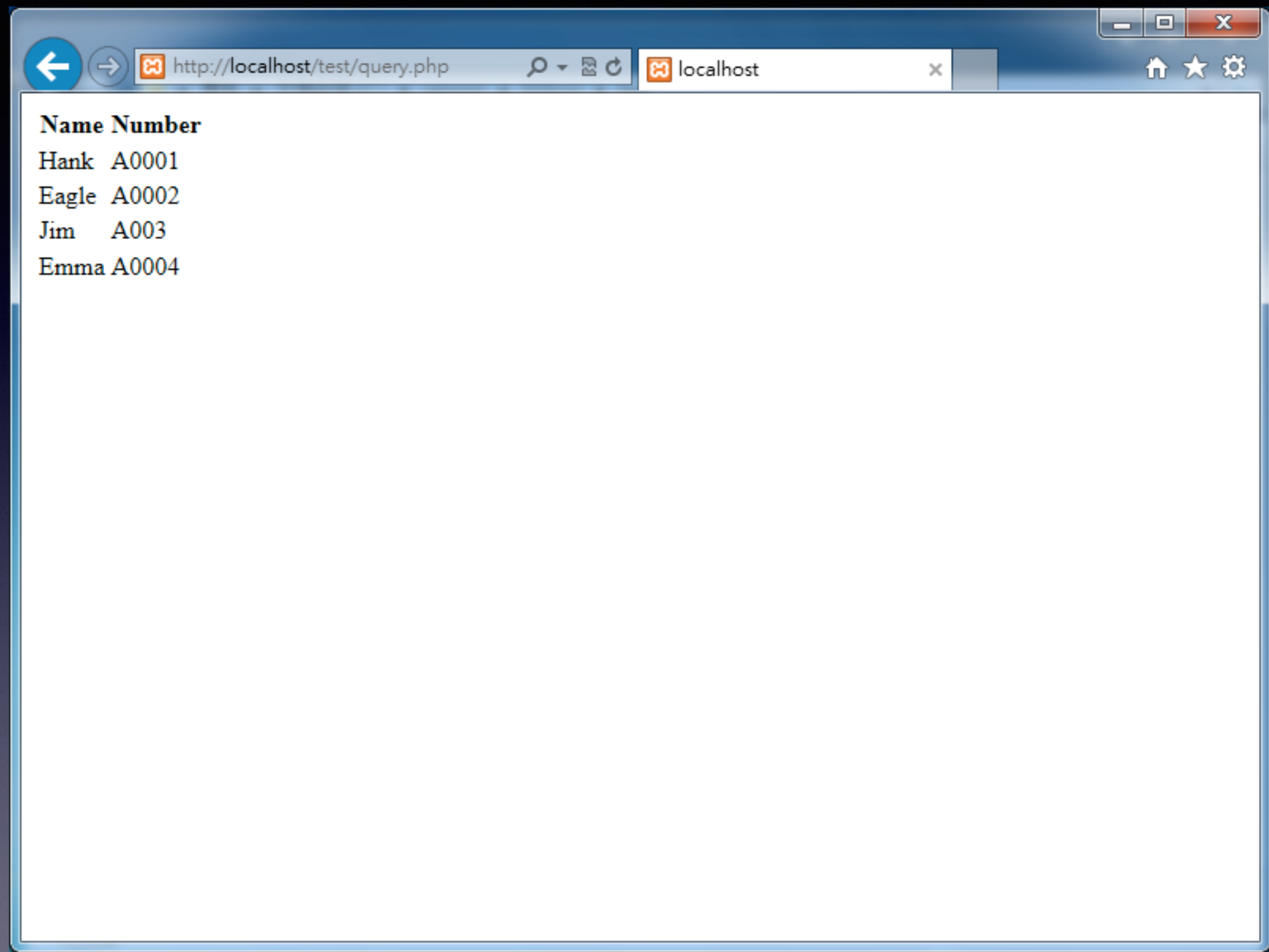


# 資料庫查詢

```
1  <?php
2      $database_dblink = "demo";
3      $username_dblink = "root";
4
5      $db_link = mysql_connect("localhost", $username_dblink);
6
7      mysql_query("SET NAMES utf8", $db_link);
8      mysql_query("SET CHARACTER_SET_CLIENT=utf8", $db_link);
9      mysql_query("SET CHARACTER_SET_RESULTS=utf8", $db_link);
10
11     mysql_select_db($database_dblink, $db_link);
12
13     $result = mysql_query("SELECT * FROM `class`", $db_link);
14
15     echo "<!DOCTYPE html><html><head>
16         <meta http-equiv='Content-Type' content='text/html; charset=UTF-8'>
17         </head><body><table border='1'><tr><th>Name</th><th>Number</th></tr>";
18
19     while ($row = mysql_fetch_array($result)) {
20         echo "<tr><td>" . $row['name'] . "</td><td>" . $row['number'] . "</td></tr>";
21     }
22
23     echo "</table></body></html>";
24
25     mysql_close($db_link);
26  ?>
```

query.php





Name	Number
------	--------

Hank	A0001
------	-------

Eagle	A0002
-------	-------

Jim	A003
-----	------

Emma	A0004
------	-------

# 資料庫新增

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>DB Test...</title>
5     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
6   </head>
7   <body>
8     <h2>DB Test...</h2>
9     <hr />
10    <form action="dbpost.php" method="post">
11      Name: <input type="text" name="name" />
12      Number: <input type="text" name="number" />
13      <br /><br />
14      <input type="submit" value="submit" />
15      <input type="reset" value="reset" />
16    </form>
17  </body>
18 </html>
```

dbTest.html

```

1  <?php
2      $db_link = mysql_connect("localhost", "root");
3
4      mysql_query("SET NAMES utf8", $db_link);
5      mysql_query("SET CHARACTER_SET_CLIENT=utf8", $db_link);
6      mysql_query("SET CHARACTER_SET_RESULTS=utf8", $db_link);
7      mysql_select_db("demo", $db_link);
8
9      $insertSQL = sprintf(
10         "INSERT INTO `class` (`name`, `number`) VALUES ('%s', '%s')",
11         $_POST["name"], $_POST["number"]);
12
13      mysql_query($insertSQL, $db_link) or die(mysql_error());
14      $result = mysql_query("SELECT * FROM `class`", $db_link);
15
16      echo "<!DOCTYPE html><html><head>
17         <meta http-equiv='Content-Type' content='text/html; charset=UTF-8'></head>
18         <body><table border='1'><tr><th>Name</th><th>Number</th></tr>";
19
20      while ($row = mysql_fetch_array($result)) {
21          echo "<tr><td>" . $row['name'] . "</td><td>" . $row['number'] . "</td></tr>";
22      }
23
24      echo "</table></body></html>";
25      mysql_close($db_link);
26  ?>

```

dbTest.php

Browser window showing a form titled "DB Test...". The address bar displays `http://localhost/test/dbPost.html`. The form contains two input fields: "Name:" with the value "Mitch" and "Number:" with the value "A0005". Below the fields are two buttons: "submit" and "reset".

**DB Test...**

Name:  Number:

Browser window showing the result of the database query. The address bar displays `http://localhost/test/dbpost.php`. The page shows a table with two columns: "Name" and "Number".

Name	Number
Hank	A0001
Eagle	A0002
Jim	A003
Emma	A0004
Mitch	A0005

# Android 新增程式

```
1 <?php
2     $database_dblink = "demo";
3     $username_dblink = "root";
4
5     $db_link = mysql_connect("localhost", $username_dblink);
6
7     mysql_query("SET NAMES utf8", $db_link);
8     mysql_query("SET CHARACTER_SET_CLIENT=utf8", $db_link);
9     mysql_query("SET CHARACTER_SET_RESULTS=utf8", $db_link);
10
11     mysql_select_db($database_dblink, $db_link);
12
13     $name = $_POST["name"];
14     $number = $_POST["number"];
15
16     $insertSQL = sprintf(
17         "INSERT INTO `class` (`name`, `number`) VALUES ('%s', '%s')", $name, $number);
18
19     mysql_query($insertSQL, $db_link) or die(mysql_error());
20     mysql_close($db_link);
21 ?>
```

androidSave.php



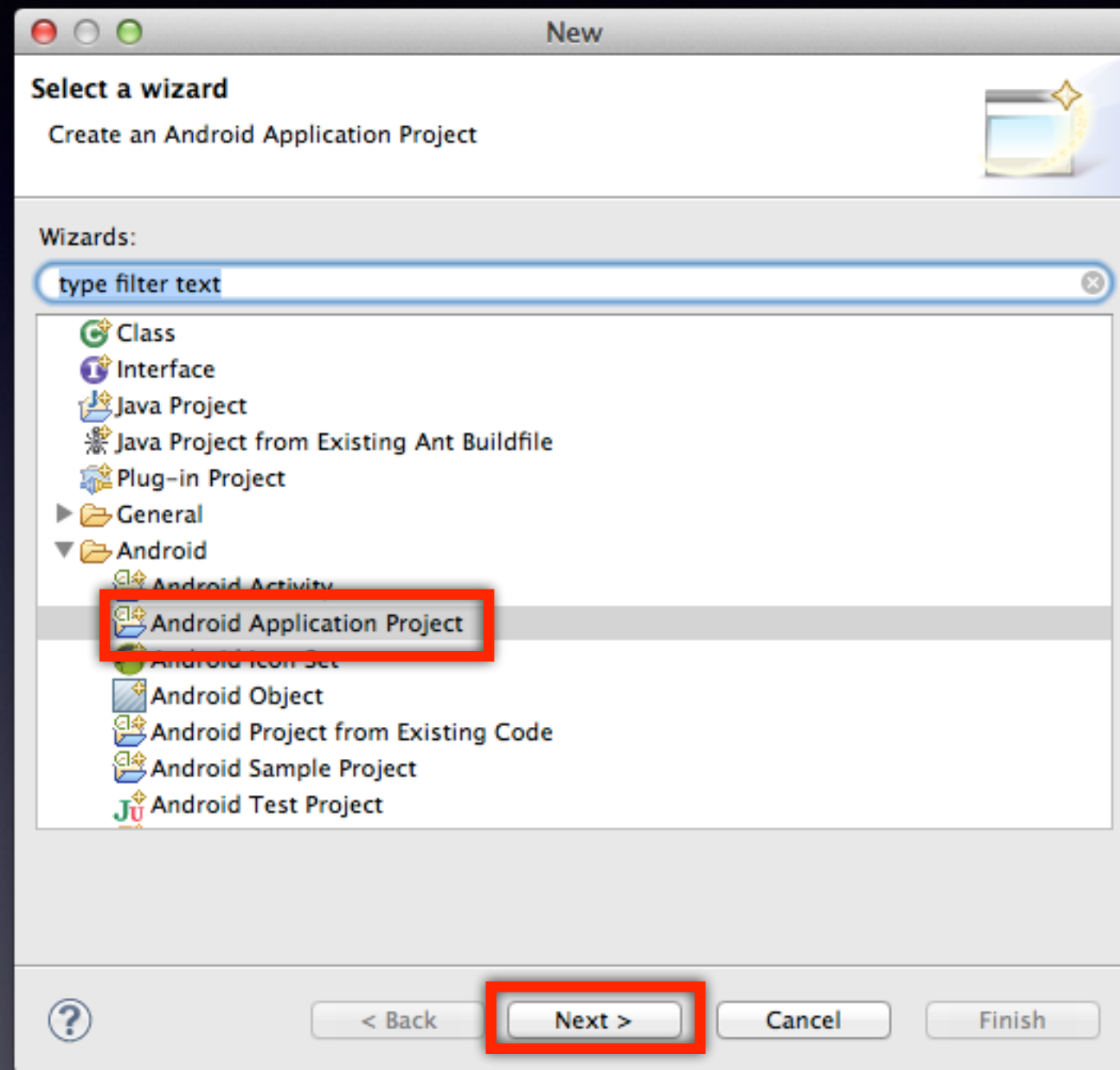
# Android 查詢程式

```
1 <?php
2     $database_dblink = "demo";
3     $username_dblink = "root";
4
5     $db_link = mysql_connect("localhost", $username_dblink);
6
7     mysql_query("SET NAMES utf8", $db_link);
8     mysql_query("SET CHARACTER_SET_CLIENT=utf8", $db_link);
9     mysql_query("SET CHARACTER_SET_RESULTS=utf8", $db_link);
10
11     mysql_select_db($database_dblink, $db_link);
12
13     $result = mysql_query("SELECT * FROM `class`", $db_link);
14     $json = array();
15
16     while ($row = mysql_fetch_array($result)) {
17         $json["class"][] = array("name" => $row['name'], "number" => $row['number']);
18     }
19
20     echo json_encode($json);
21
22     mysql_close($db_link);
23 ?>
```

androidQuery.php


建立 Android App

# 新增 Android 專案



New Android Application

Creates a new Android Application



Application Name:

Project Name:


Package Name:


Minimum Required SDK:

Target SDK:

Compile With:


Theme:

 The application name is shown in the Play Store, as well as in the Manage Application list in Settings.



New Android Application

Configure Project



☒ Create custom launcher icon

☒ Create activity

☐ Mark this project as a library


☒ Create Project in Workspace

Location:

Working sets

☐ Add project to working sets

Working sets:





New Android Application

Configure Launcher Icon

Configure the attributes of the icon set

Image

Clipart

Text

Image File: launcher\_icon 

Browse...

☒ Trim Surrounding Blank Space

Additional Padding: 

0%

Foreground Scaling: 

Crop

Center

Shape 

None

Square

Circle

Background Color:

Preview:

mdpi:

hdpi:

xhdpi:

xxhdpi:

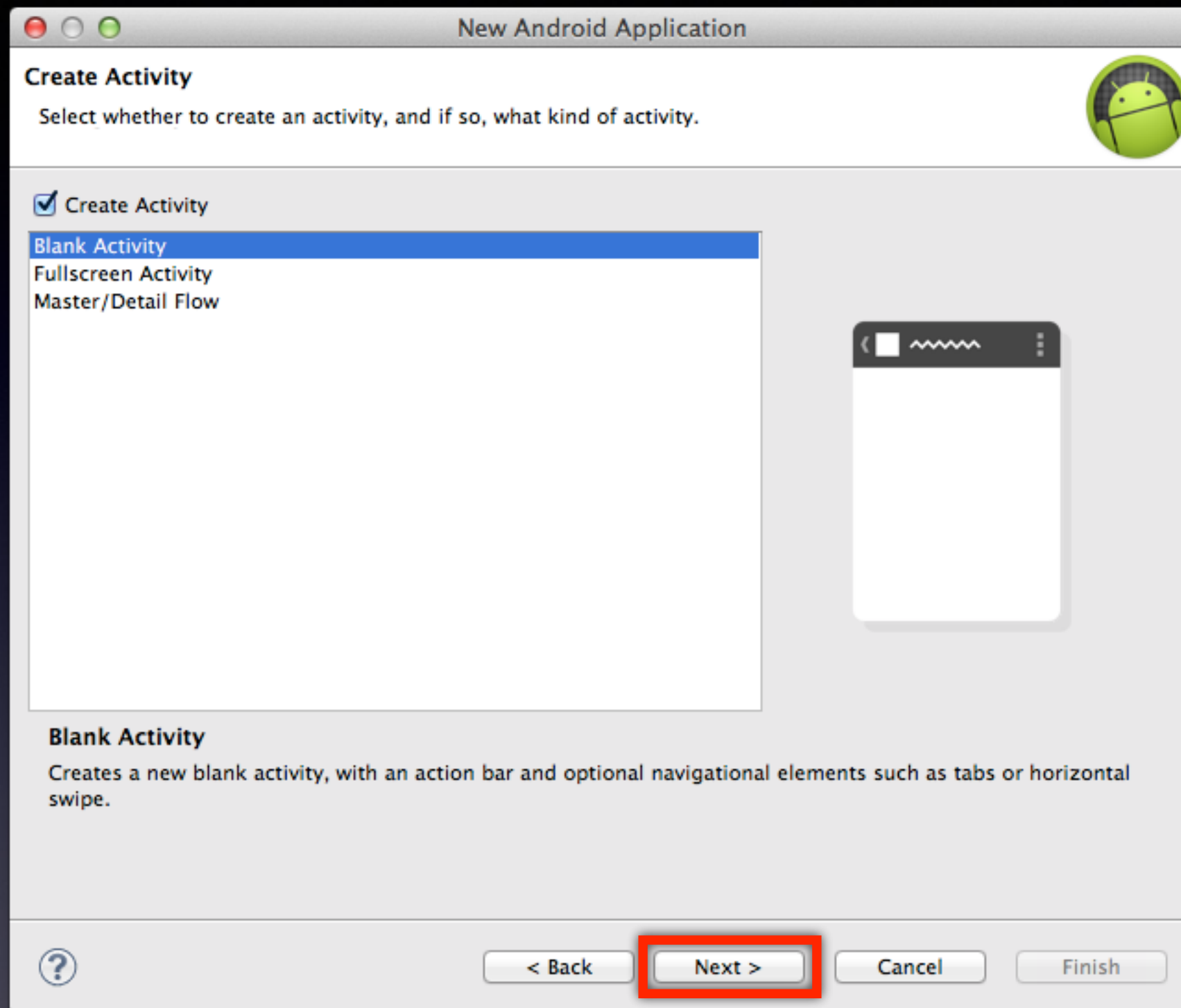
?

< Back

Next >

Cancel


Finish



New Android Application

Blank Activity

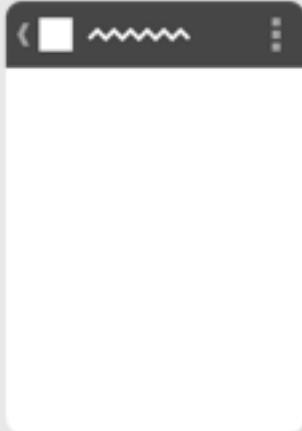
Creates a new blank activity, with an action bar and optional navigational elements such as tabs or horizontal swipe.




Activity Name ⓘ MainActivity

Layout Name ⓘ activity\_main

Navigation Type ⓘ None ▾



💡 The name of the activity class to create



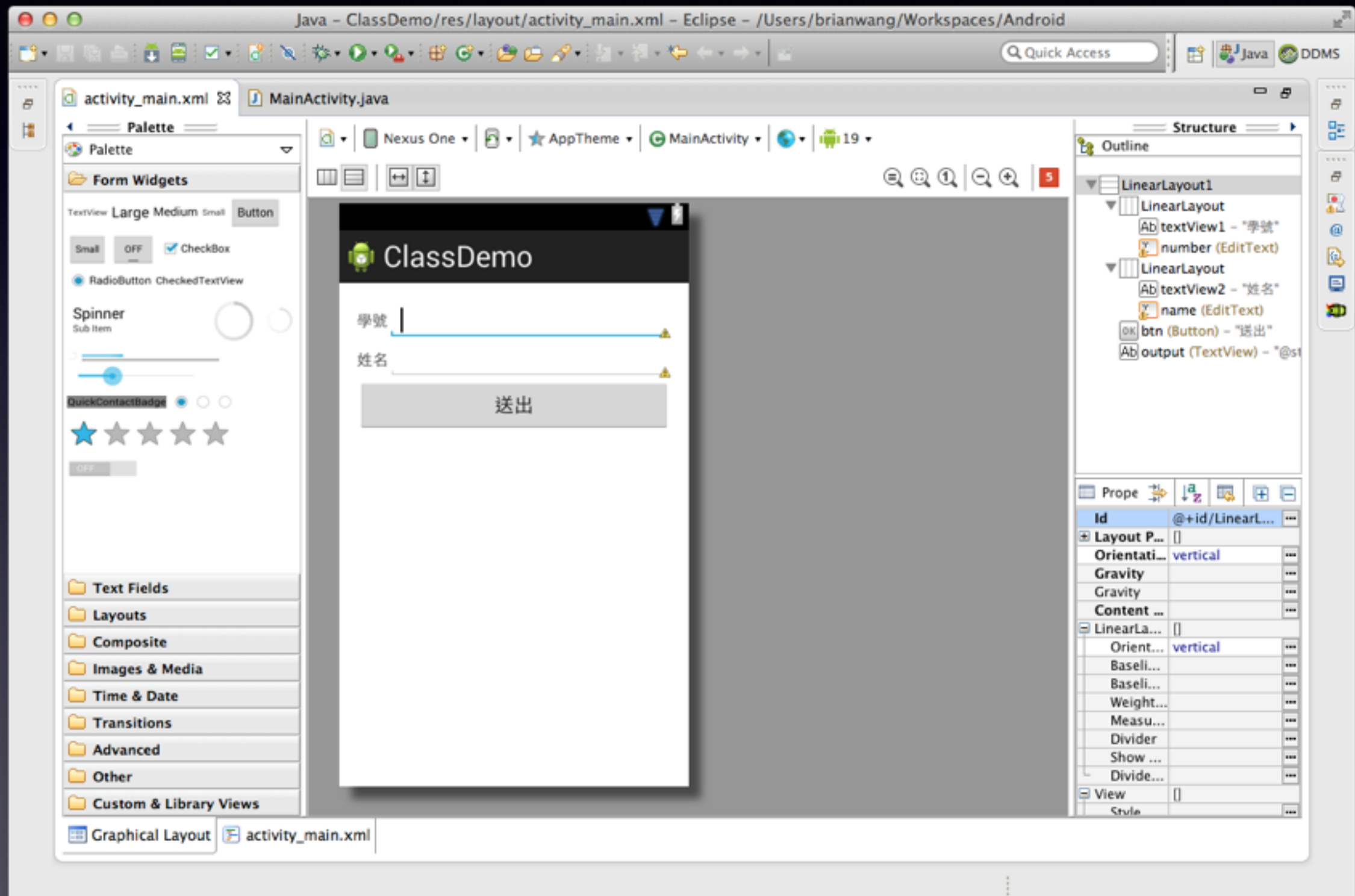
< Back

Next >

Cancel

Finish

# 建立版面配置



# 編輯 MainActivity.java

```
public class MainActivity extends Activity {

    private String url = "http://192.168.0.186/";

    @SuppressWarnings("NewApi")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        StrictMode.ThreadPolicy policy = new StrictMode.ThreadPolicy.Builder().permitAll().build();
        StrictMode.setThreadPolicy(policy);

        final EditText name = (EditText) findViewById(R.id.name);
        final EditText number = (EditText) findViewById(R.id.number);
        final TextView output = (TextView) findViewById(R.id.output);

        Button claeRBtn = (Button) findViewById(R.id.clearBtn);
        claeRBtn.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                name.setText("");
                number.setText("");
                output.setText("");
            }

        });
    }
}
```



```
Button saveBtn = (Button) findViewById(R.id.saveBtn);
saveBtn.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {
        try {
            List<NameValuePair> params = new ArrayList<NameValuePair>();
            params.add(new BasicNameValuePair("name", name.getText().toString()));
            params.add(new BasicNameValuePair("number", number.getText().toString()));

            HttpPost post = new HttpPost(url + "test/androidSave.php");
            post.setEntity(new UrlEncodedFormEntity(params, HTTP.UTF_8));
            HttpResponse response = new DefaultHttpClient().execute(post);

            if (response.getStatusLine().getStatusCode() == 200) {
                Toast.makeText(MainActivity.this, "Save successful!", Toast.LENGTH_SHORT).show();
            }
        } catch (Exception e) {
            Log.e("Save error!", e.getMessage());
            Toast.makeText(MainActivity.this, "Save error!", Toast.LENGTH_SHORT).show();
        }
    }
});
```

```

Button queryBtn = (Button) findViewById(R.id.queryBtn);
queryBtn.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {
        try {
            HttpResponse response = new DefaultHttpClient().execute(new HttpGet(url + "test/androidQuery.php"));

            if (response.getStatusLine().getStatusCode() == 200) {
                String json = EntityUtils.toString(response.getEntity());
                JSONObject responseJson = new JSONObject(json);
                JSONArray array = responseJson.getJSONArray("class");

                StringBuilder sb = new StringBuilder();
                sb.append("姓名\t學號\n");

                for (int i = 0; i < array.length(); i++) {
                    JSONObject object = array.getJSONObject(i);

                    sb.append(object.getString("name")).append("\t");
                    sb.append(object.getString("number")).append("\n");
                }

                output.setText(sb.toString());
            }
        } catch (Exception e) {
            Log.e("Query error!", e.getMessage());
            Toast.makeText(MainActivity.this, "Query error!", Toast.LENGTH_SHORT).show();
        }
    }
});

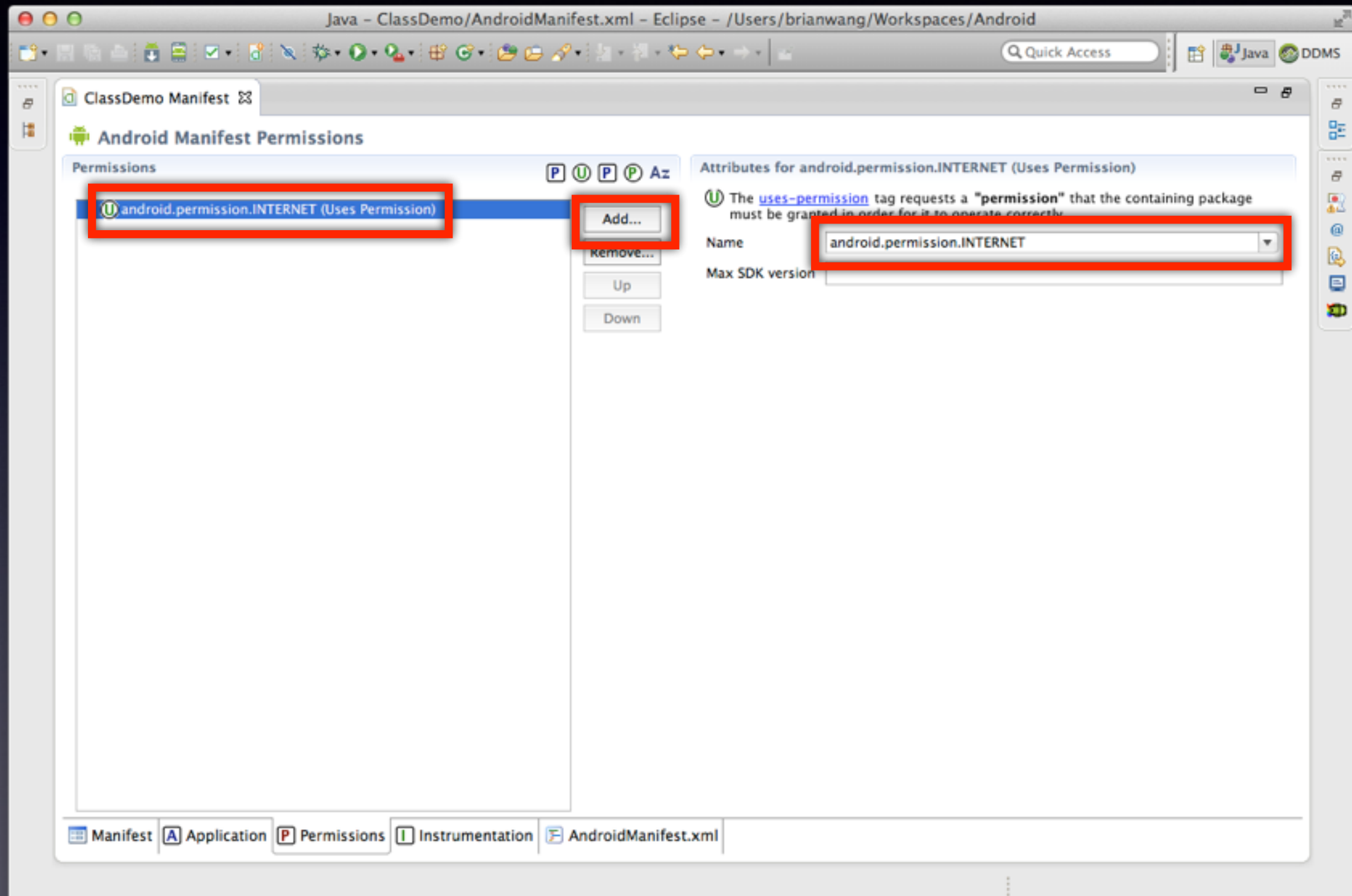
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.main, menu);
    return true;
}

}

```

# 新增權限設定





ClassDemo



學號：

姓名：

送出

查詢

清除



ClassDemo



學號： A0004

姓名： Emma

送出

查詢

清除

姓名 學號

Hank A0001

Eagle A0002

Jim A003