

# App Inventor for Android



Getting started

CAVE Education





機器人王國

[www.robotkingdom.com.tw](http://www.robotkingdom.com.tw)



CAVE 教育團隊

[www.cavedu.com](http://www.cavedu.com)

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# App Inventor中文教學網



App Inventor TW  
中文學習網

[www.appinventor.tw](http://www.appinventor.tw)



<http://www.appinventor.tw/>



# Android 手機程式超簡單 !!

▶ App Inventor ◀

入門卷



CAVE 教育團隊

曾吉弘、蔡宜坦、黃凱群、賴偉民、盧玟攸、施力維 著

Make:  
makezine.com.tw



# Android 手機程式超簡單 !!

▶ App Inventor ◀

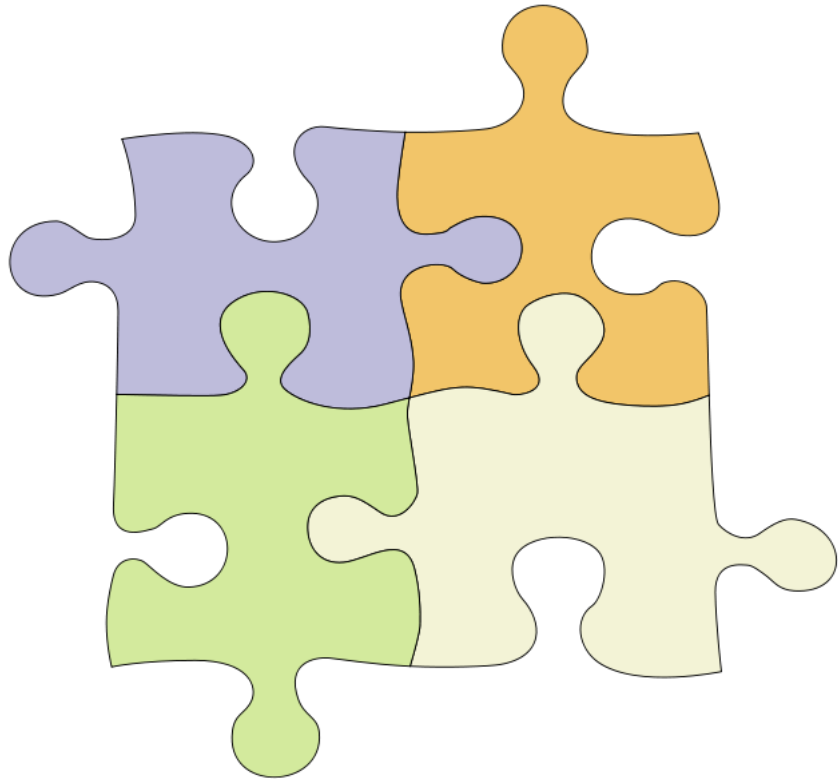
機器人卷



CAVE 教育團隊

曾吉弘、賴偉民、謝宗翰、林毓祥、薛皓云 著





```
when ContactPicker.AfterPicking
do
  set ContactName.Text to ContactPicker.ContactName
  set ContactEmail.Text to ContactPicker.EmailAddress
  set Image1.Picture to ContactPicker.Picture
```



```

#include <sstream>
#include <windows.h>
#include <map>

#include "EmoStateDLL.h"
#include "edk.h"
#include "edkErrorCode.h"
#include "NXT++.h"

#pragma comment(lib, "../lib/edk.lib")
#pragma comment(lib, "../lib/NXT++.d.lib")

EE_DataChannel_t targetChannellist[] =
{
    ED_COUNTER,
    ED_AF3, ED_F7, ED_F3, ED_FC5, ED_T7,
    ED_P7, ED_O1, ED_O2, ED_P8, ED_T8,
    ED_FC6, ED_F4, ED_F8, ED_AF4, ED_GYROX, ED_GYROY, ED_TIMESTAMP,
    ED_FUNC_ID, ED_FUNC_VALUE, ED_MARKER, ED_SYNC_SIGNAL
};

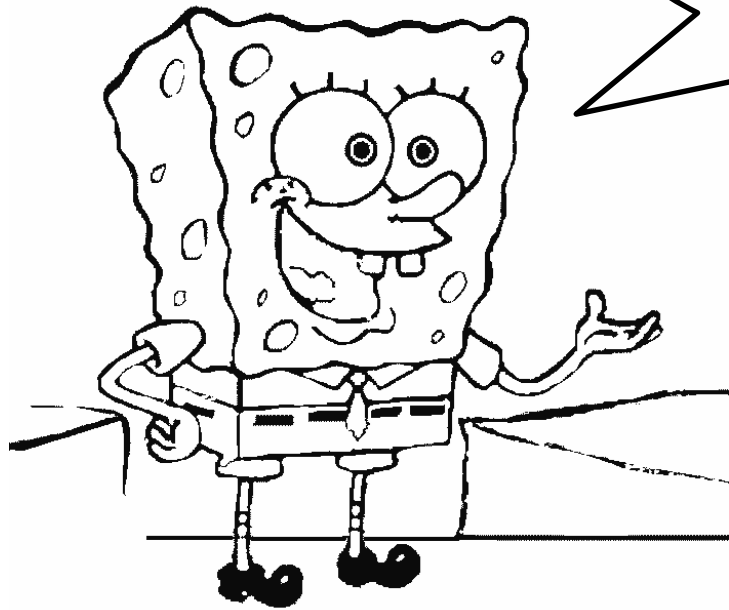
const char header[] = "COUNTER,AF3,F7,F3, FC5, T7, P7, O1, O2,P8"
                    ", T8, FC6, F4,F8, AF4,GYROX, GYROY, TIMESTAMP, "
                    "FUNC_ID, FUNC_VALUE, MARKER, SYNC_SIGNAL, TOUCH_SENSOR";

int main(int argc, char** argv)
{
    EmoEngineEventHandle eEvent          = EE_EmoEngineEventCreate();
    EmoStateHandle eState                 = EE_EmoStateCreate();
    unsigned int userID                   = 0;
    const unsigned short composerPort    = 1726;
    float secs                            = 1;
    unsigned int datarate                 = 0;
    bool readytocollect                  = false;
    int option                            = 0;
    int state                             = 0;
    int T_Sensor                          = 0;

    //Making BT connection with NXT
    std::cout<< "Making bluetooth connection with NXT.....";
    Comm::NXTComm comm;

```





0010011111001101100011100111001...



告訴我1加到10是多少

電腦科學家：



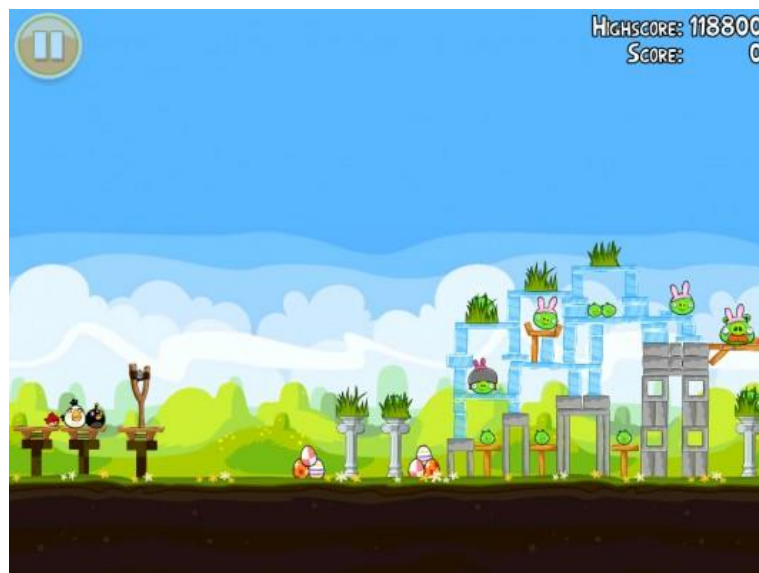
0010011111001101100011100111001

Assembly, C, C++, JAVA.....



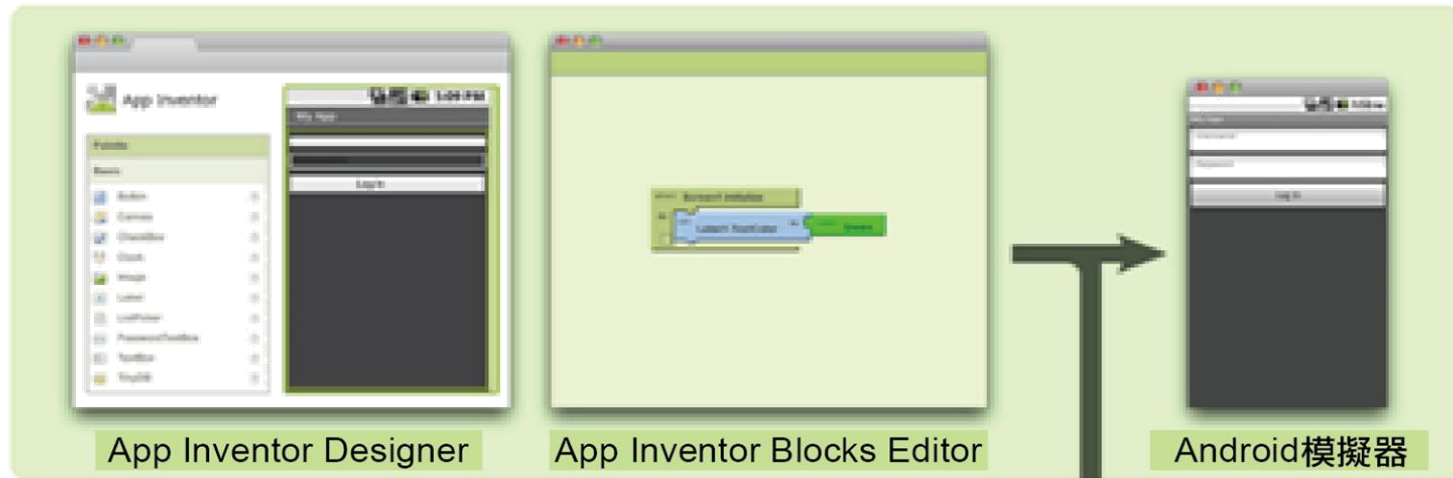


工程師：





Google App Inventor伺服器



App Inventor Designer

App Inventor Blocks Editor

Android 模擬器



Android 裝置



# 您需要：

1. Gmail帳號→登入[MIT App Inventor](#)網站
2. [Java執行環境\(JRE\)](#)
3. 下載[AppInventor\\_Setup\\_Installer\\_v\\_1\\_2.exe](#)
4. 設定手機



# 環境需求

## 系統要求

電腦和作業系統

Macintosh ( 英特爾處理器 ) : Mac OS X的10.5 , 10.6

Windows:Windows XP和Windows Vista , Windows 7

GNU / Linux的 : Ubuntu的8 + , Debian 5+

## 瀏覽器

Mozilla **Firefox** 3.6 or higher或更高

Google瀏覽器4.0或更高

Apple Safari 5.0或更高

Microsoft Internet Explorer 7或更高





[Java in Action](#) [Downloads](#) [Help Center](#)

#### HELP RESOURCES

- [Installing Java](#)
- [Remove Older Versions](#)
- [Using Java](#)
- [FAQ: General Questions](#)
- [FAQ: Mobile Java](#)
- [Support Options](#)

### How do I test whether Java is working on my computer?



**Java 正在執行中**  
✓ 已安裝最新的 Java

您的 Java 配置如下所示：

供應商：[Sun Microsystems Inc.](#)  
版本：Java SE 6 Update 24  
作業系統：Windows 7 6.1  
架構：x86

If you cannot see your machine info listed above, please check these additional configurations:

1. [Enable Java through your Web browser](#)
2. [Enable Java through the "Java Plug-in Control Panel"](#)
3. [Clearing your Web Browser Cache](#)
4. [Firefox 3.6 and above requires Java 6 Update 10 or above](#)
5. [Java and Google Chrome Browser](#)
6. [Supported System Configurations](#)

<http://www.java.com/en/download/testjava.jsp>



# App Inventor指令中譯下載



App Inventor TW  
中文學習網

[www.appinventor.tw](http://www.appinventor.tw)



搜尋這個協作平台

 +1 { 36

App Inventor中文學習網

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[條碼掃描](#)  
[Activity Starter](#)

## App Inventor中文學習網

歡迎光臨App Inventor中文學習網。App Inventor 原是Google實驗室 (Google Lab) 的一個子計畫，由一群Google工程師與勇於挑戰的Google使用者共同參與(更多介紹)。App Inventor於 2012年1月1日移交給**麻省理工學院行動學習中心**，並已於3月4日以MIT App Inventor名稱公佈使用。

本站為CAVE教育團隊與翰尼斯企業有限公司合作架設的App Inventor教學網站，目的在於提供有興趣進行手機程式開發的學習者們一個優質的學習環境，所有內容歡迎註明出處後轉載。任何問題請聯絡：service@appinventor.tw

[MIT App Inventor 官方網站](#)

[四月份挑戰題](#)











# MIT App Inventor 首頁



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Create Mobile Apps

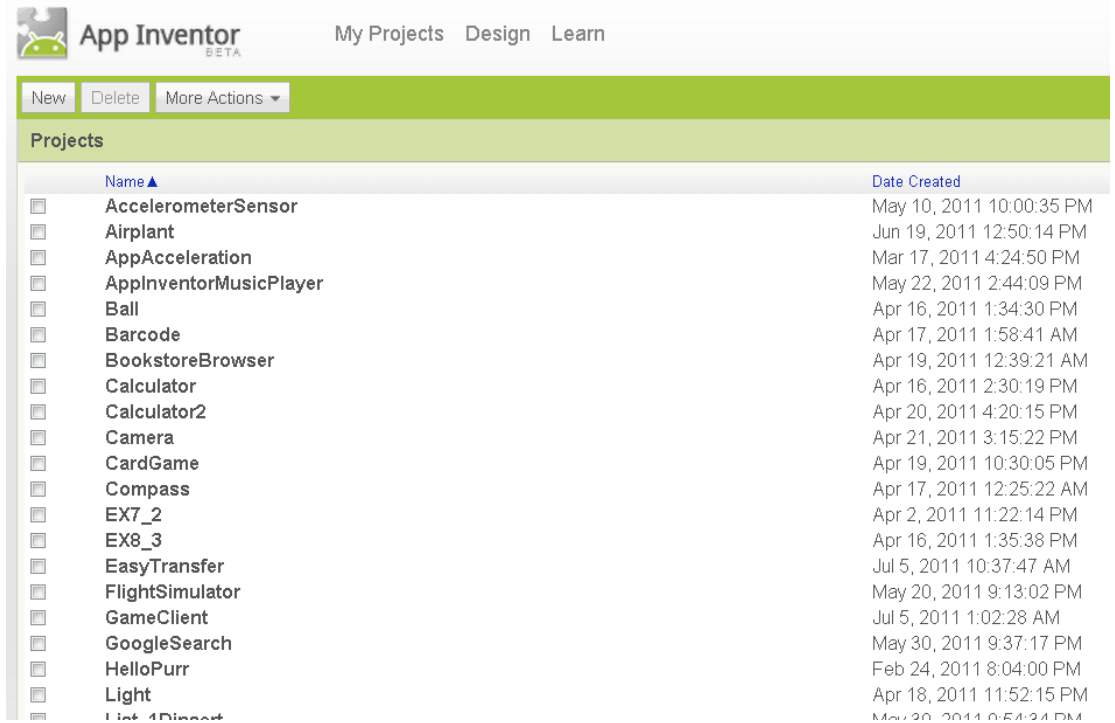
© 2012 [Massachusetts Institute of Technology](#)

[Contact Us](#)



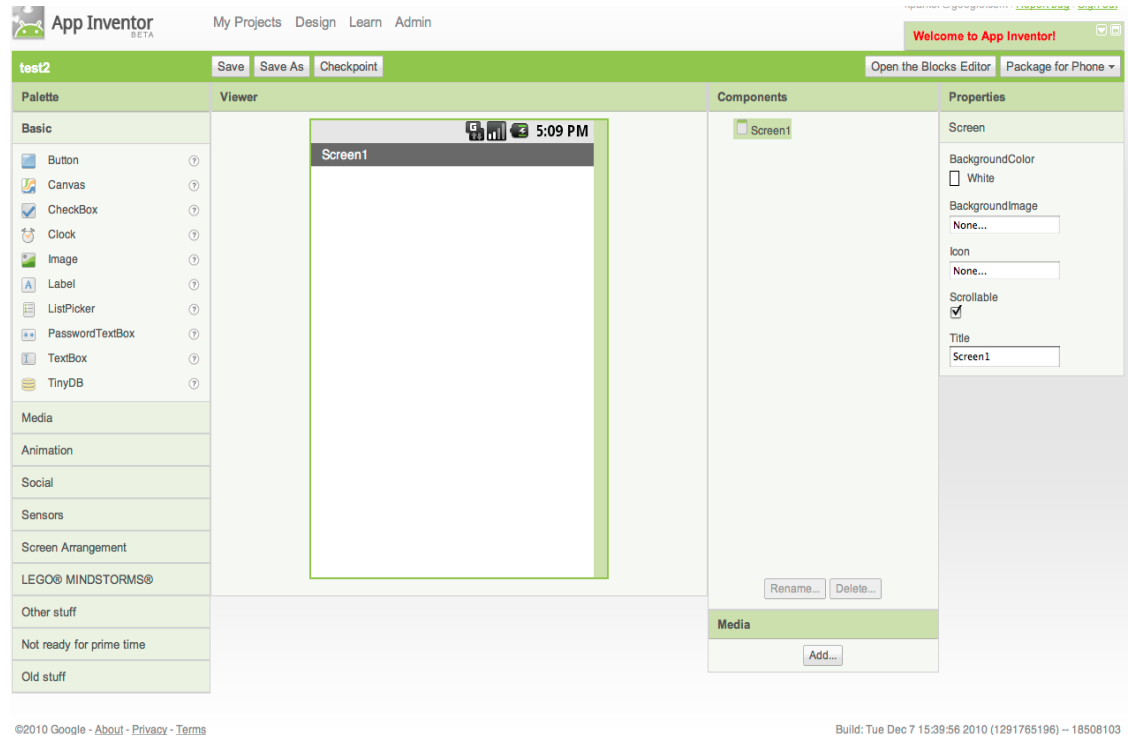
# My Projects 頁面

- 下載原始碼 (.zip)
- 上傳原始碼
- 無法多人共用



# Designer 頁面

- 決定程式畫面
  - 新增元件
  - 決定元件屬性
- 下載安裝檔(.apk)
- 上傳多媒體檔案



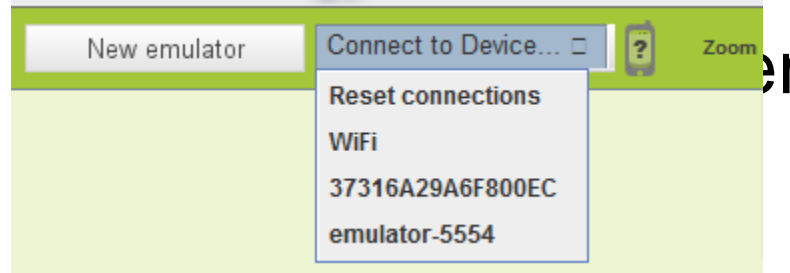
# Block Editor 頁面

- 圖形化程式設計
- 啟動模擬器
- 將程式與實體機器或模擬器連接，可同步修改。



# 如何同步程式

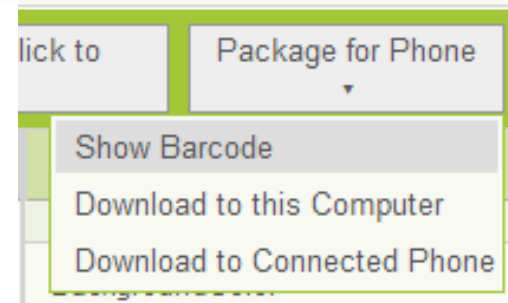
- 程式沒有真的安裝到裝置上
- 在Blocks Editor中選擇裝置
  - 模擬器，例如emulator 5554
  - 實體裝置



- 使用 [MIT AICompanion](https://MITAICompanion.com) 進行無線同步



# 如何安裝程式



- 程式已安裝到裝置上，之後可隨時使用
- Show Barcode
  - 顯示一個二維條碼之後，使用手機掃描即可下載 .apk 安裝檔
- Download to this computer
  - 下載 .apk 安裝檔
- Download to Connected Phone
  - 直接安裝與電腦USB連線之裝置(需安裝driver)



# 第一個範例：按鈕改顏色

Button / Label





# 功能說明

- 按下按鈕，更改按鈕的背景顏色與Label的字樣
- 加入 `if /else` 結構來切換兩種狀況



# Designer 頁面

The image shows the Designer application interface for creating mobile screens. The top bar includes the project name "test1108" and buttons for "Save", "Save As", "Checkpoint", "Add Screen", and "Remove Screen". On the right, it indicates "Blocks Editor is open" and a "Package for Phone" dropdown.

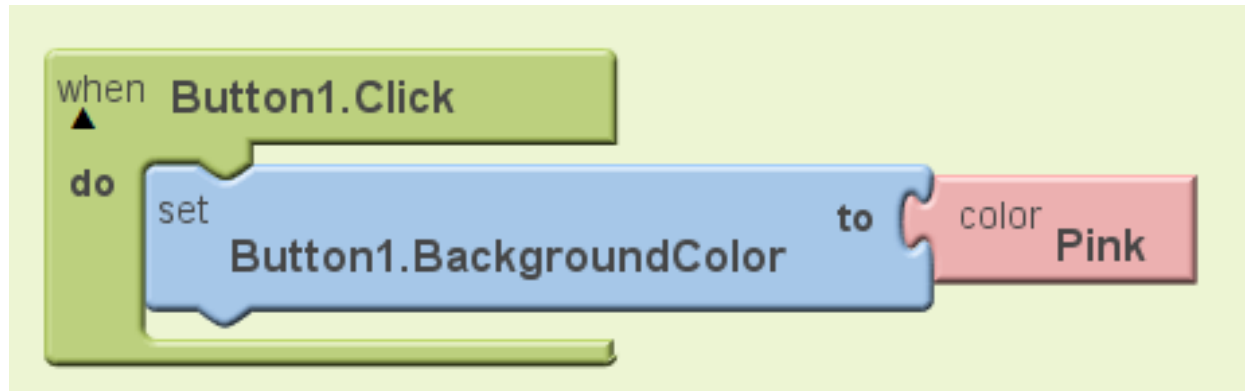
The interface is divided into four main panels:

- Palette:** A list of UI components categorized into "Basic", "Media", "Animation", "Social", "Sensors", and "Screen Arrangement". The "Basic" category includes Button, Canvas, CheckBox, Clock, Image, Label, ListPicker, PasswordTextBox, Slider, TextBox, and TinyDB.
- Viewer:** A preview window showing a mobile screen. It has a status bar at the top with icons for signal, battery, and time (5:09 PM). The screen content includes a green button with the text "請按我" and a pink label with the text "Text for Label1". A checkbox "Display hidden components in Viewer" is visible above the screen.
- Components:** A tree view showing the hierarchy of components on the screen: "Screen1" containing "Button1" and "Label1".
- Properties:** A panel for configuring the selected component (Label1). Properties include: BackgroundColor (Pink), FontBold (unchecked), FontItalic (unchecked), FontSize (30), FontTypeface (default), Text (Text for Label1), TextAlignment (left), TextColor (Black), Visible (showing), and Width (Automatic...).

Buttons for "Rename" and "Delete" are located at the bottom of the Components panel.



# Blocks Editor程式

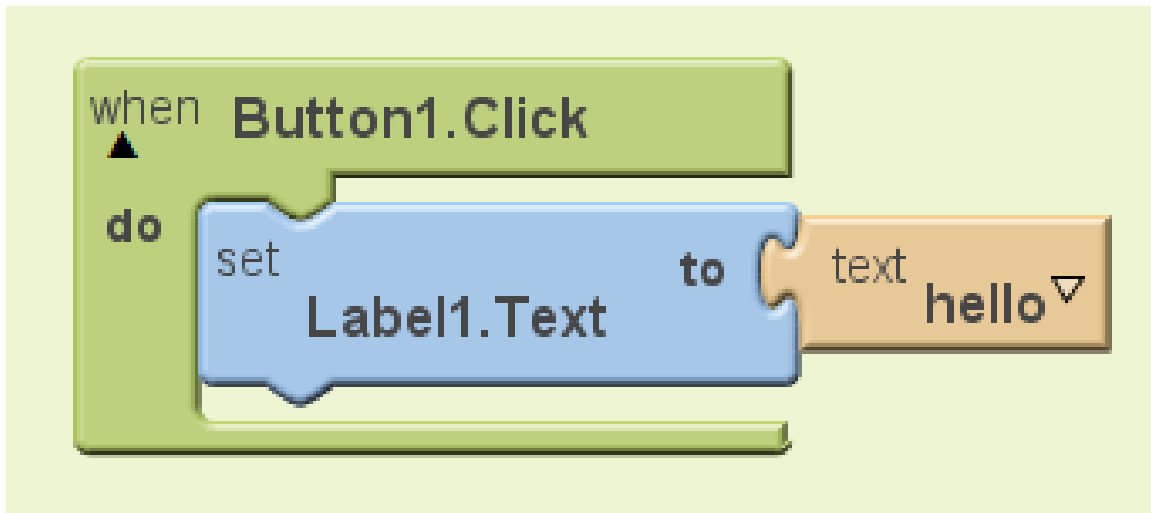


# 加入if / else結構

```
when Button1.Click
do
  ifelse test Button1.BackgroundColor = color Green
  then-do set Button1.BackgroundColor to color Pink
  else-do set Button1.BackgroundColor to color Green
```



# 改變Label 字樣



# 計算機

TextBox / Notifier



# Designer 頁面



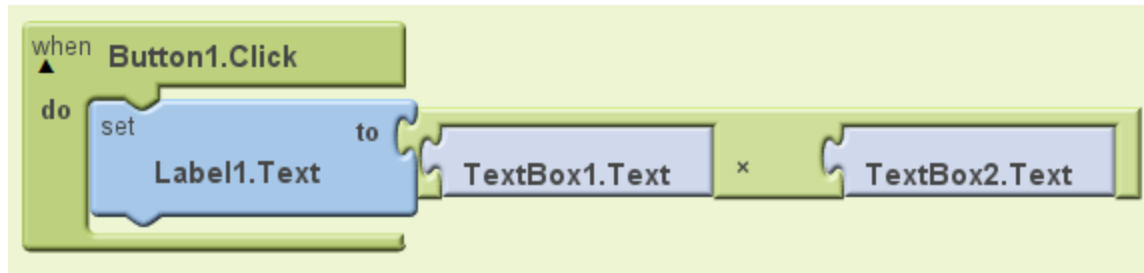
# 功能說明

- 按下按鈕後，把兩個TextBox的Text欄位內容相乘之後，顯示於 Label
- 勾選TextBox 的 NumbersOnly欄位，讓螢幕小鍵盤只能顯示數字
- 使用Notifier，當任一欄位為空時，顯示錯誤畫面





# Blocks Editor程式



# 設定 NumbersOnly

Properties

BackgroundColor  
■ Default

Enabled

FontBold

FontItalic

FontSize  
30

FontTypeface  
default

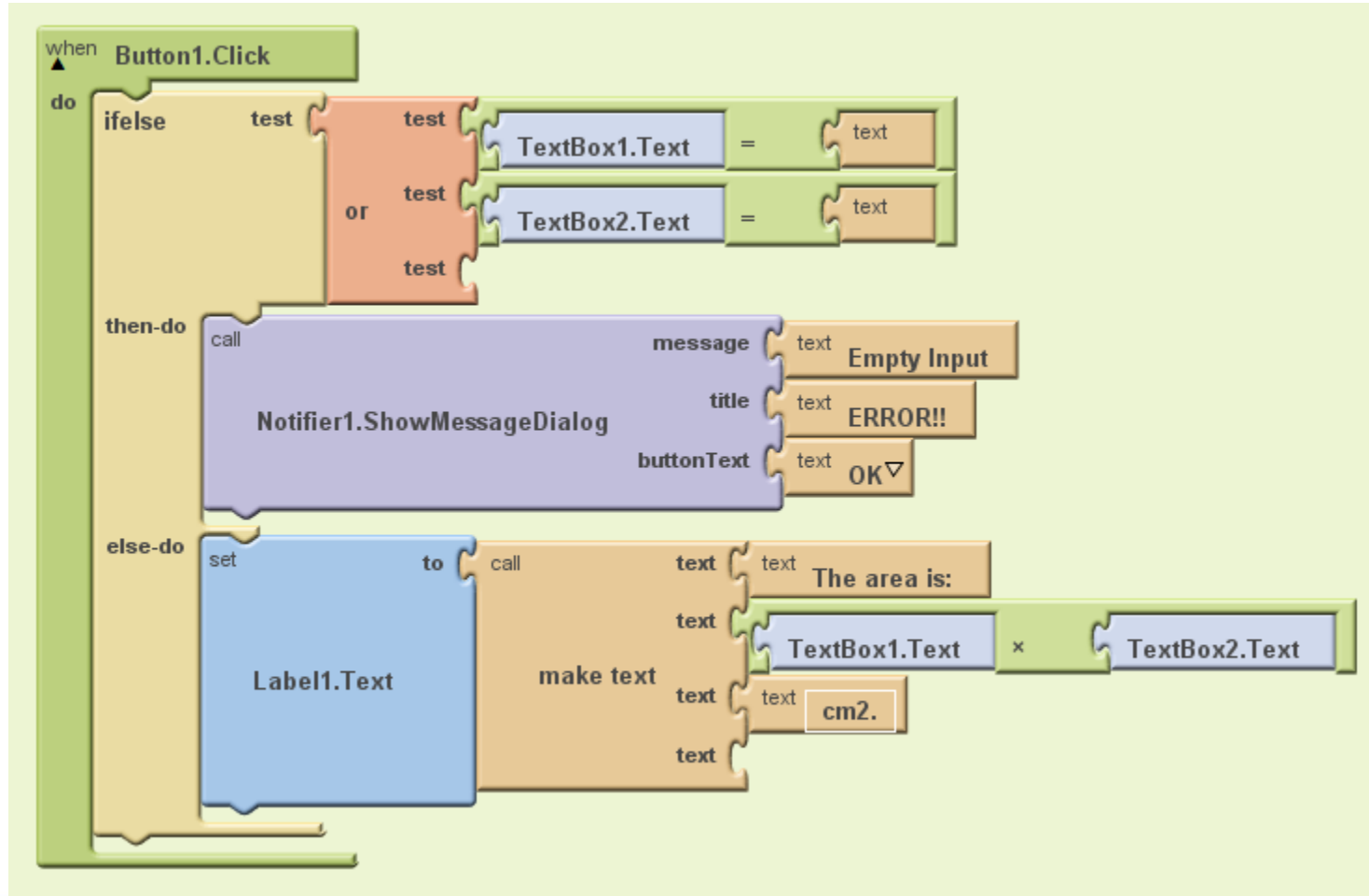
Hint  
Hint for TextBox1

MultiLine

NumbersOnly



# 使用Notifier元件檢查空欄位



# 執行結果

- 正確



- 任一欄位為空



# 其它補充範例



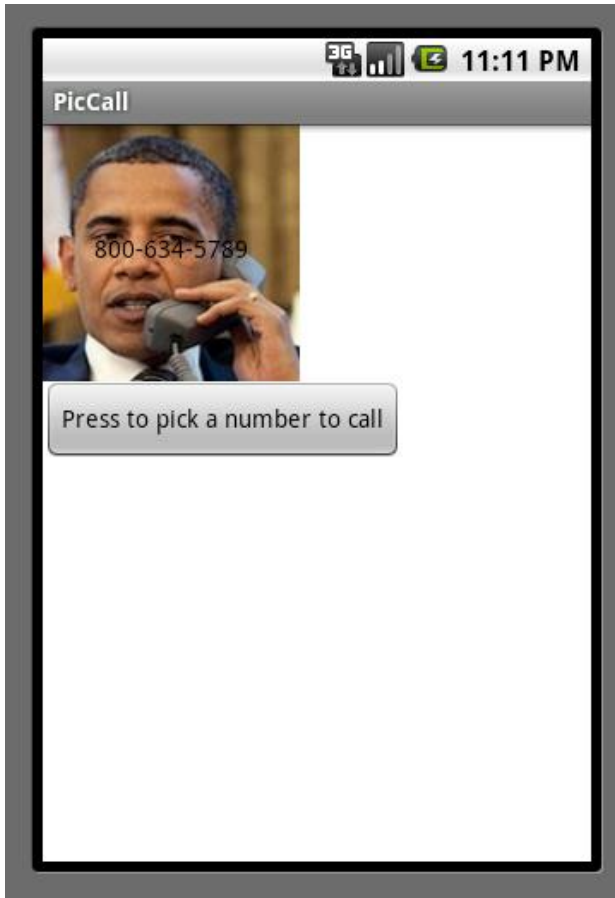
# HelloPurr



- 媒體檔案配置
- Button



# PicCall



- Button
- PhoneCall
- PhoneNumberPicker
- Image
- Label



# PaintPot

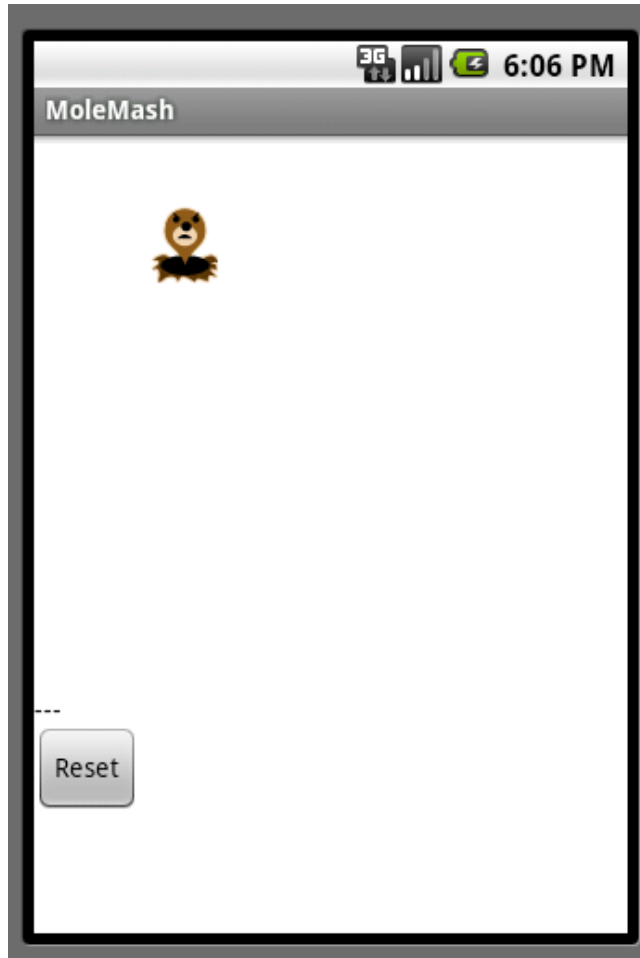


- Button
- Canvas
- Screen Arrangement
- Variables





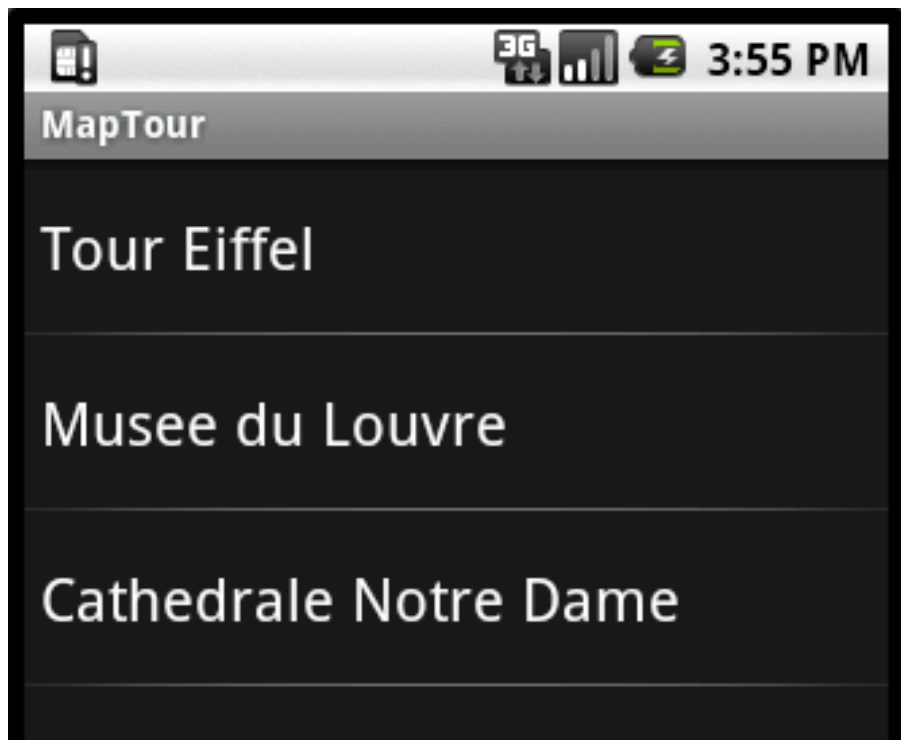
# MoleMash



- Button
- Canvas
- Label
- ImageSprite
- Clock
- Random numbers
- Procedures
- Math



# MapTour



- ListPicker
- ActivityStarter



# MapTour

Property	Value
Action	android.intent.action.VIEW
ActivityPackage	com.google.android.apps.maps
ActivityClass	com.google.android.maps.MapActivity

[http://mapki.com/wiki/Google\\_Map\\_Parameters](http://mapki.com/wiki/Google_Map_Parameters)

