

Start your Android with Google APP Inventor

CAVE Education

CAVE 教師團隊



Google App Inventor



APP Inventor的優勢

- 1、簡單
- 2、易懂
- 3、好上手



影音媒體配置 - 逗貓遊戲

觸控繪畫 / 設定顏色 / 清除螢幕

連接Google map/ 搜尋地標



APP Inventor 教學範例

影音媒體配置-逗貓遊戲:

利用手機的人機互動介面達到觸摸貓圖片時
發出貓叫聲。



Designer



MEOW Save Save As Checkpoint

Palette Viewer

Basic

- Button
- Canvas
- CheckBox
- Clock
- Image
- Label
- ListPicker
- PasswordTextBox
- TextBox
- TinyDB

Media

Animation

Social

Sensors

Screen Arrangement

LEGO® MINDSTORMS®

Display Invisible Components in Viewer

Screen1

Text for Button1

5:09 PM



Image

kitty.png...

Text

Text for Button1

TextAlignment

center ▾

TextColor

■ Default

Visible

Width

Fill parent...

Height

300 pixels...



MEOW Save Save As Checkpoint Open the Blocks Editor Pack

Palette Viewer Components Properties

Basic

Media

- Camera
- ImagePicker
- Player
- Sound
- VideoPlayer

Animation

Social

Sensors

Screen Arrangement

LEGO® MINDSTORMS®

Other stuff

Not ready for prime time

Old stuff

Display Invisible Components in Viewer

Screen1

5:09 PM

Text for Button1

Non-visible components

Sound1

Screen1

- Button1
- Sound1

MinimumInterval

500

Source

meow.mp3...

Rename... Delete...

Media

- kitty.png
- meow.mp3

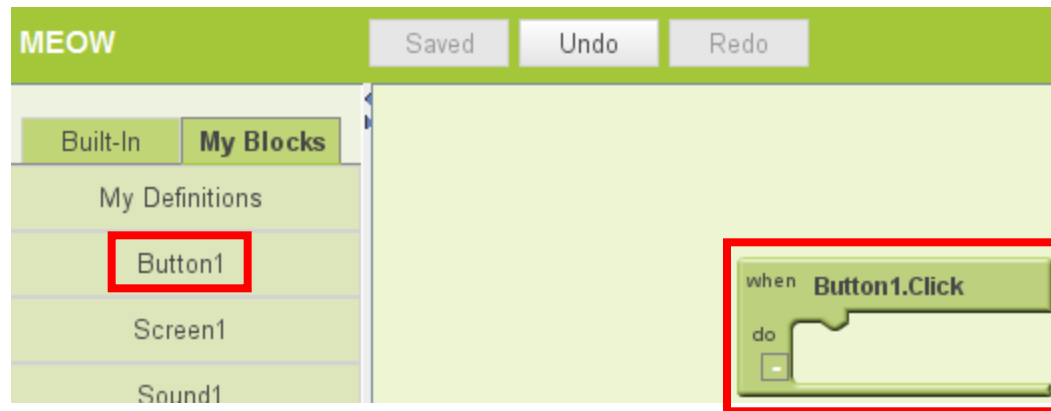
Add...



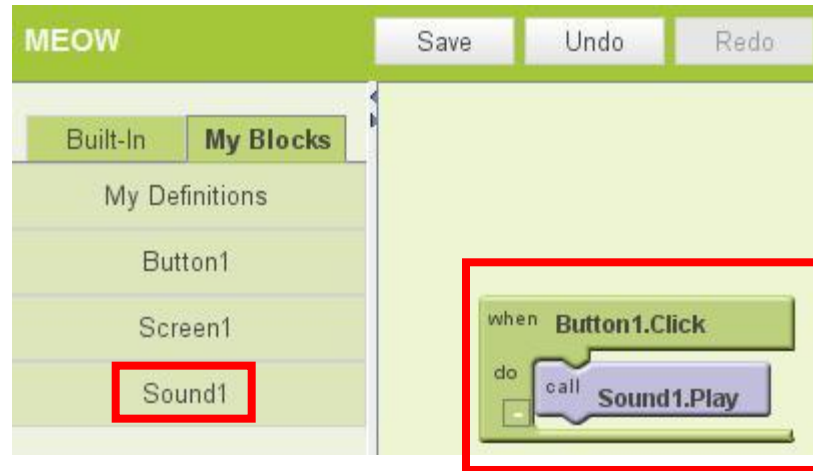
Block Editor



My Blocks\Button1\Button1.Click



My Blocks\Sound1\Sound1.Play



MEOW Saved Undo Redo **New emulator** Connect to Device... ? Zoom

Built-In **My Blocks**

My Definitions

Button1

Screen1

Sound1

when **Button1.Click**

do call **Sound1.Play**

5554:<build>

Starting the emulator. Please be patient.

5554:<build> 5556:<build>

Please wait. It can take 2 or 3 minutes for the emulator to become ready — even longer the first time.

The emulator will be ready when the phone screen has a picture background as shown in the right image here. If it has a lock screen, as shown in the left, slide the bar with the green lock icon to the right to unlock it.

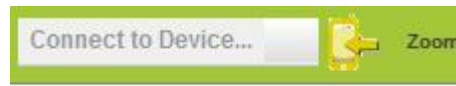
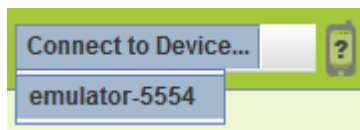
Even after the picture appears, continue to wait for the emulator to finish preparing the SD card: watch the notification area at the top of the emulator screen.

When the emulator is ready, choose it from the Connect to Device menu to connect

The Troubleshooting Guide at <http://appinventor.googlelabs.com/learn/troubleshooting.html> may provide further help.

OK







APP Inventor 教學範例

觸控繪畫 / 設定顏色 / 清除螢幕

觸控式介面應用

單點/畫線

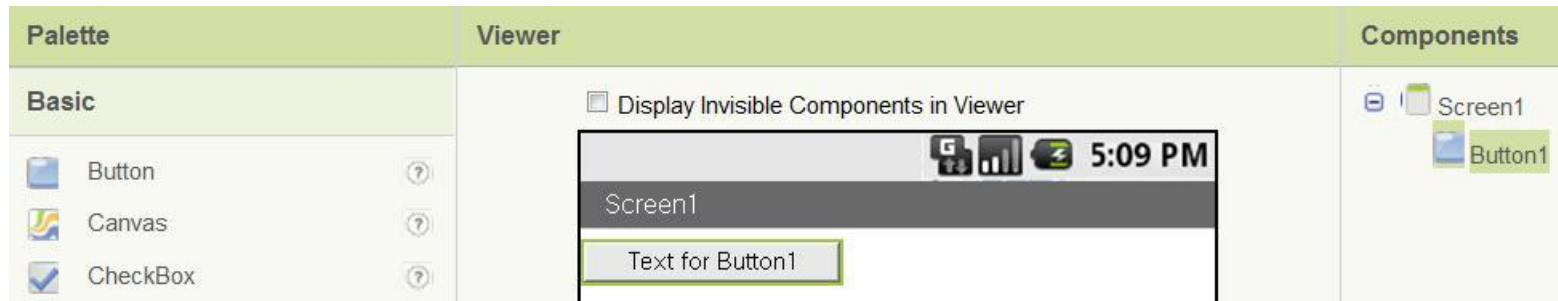
顏色選擇



Designer



建立按鈕



Display Invisible Components in Viewer

Screen1

Green

Screen1

Green

Components

- Screen1
 - Green

Properties

BackgroundColor

Green

Enabled

FontBold

FontItalic

FontSize

14.0

FontTypeface

default

Image

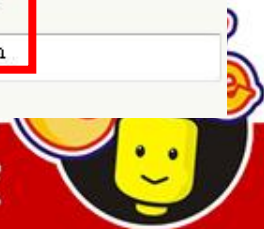
None...

Rename... Delete...

Media

Text

Green



Display Invisible Components in Viewer

Screen1

Green

Blue

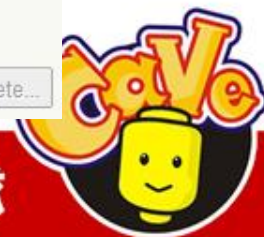
Red





5:09 PM

Components

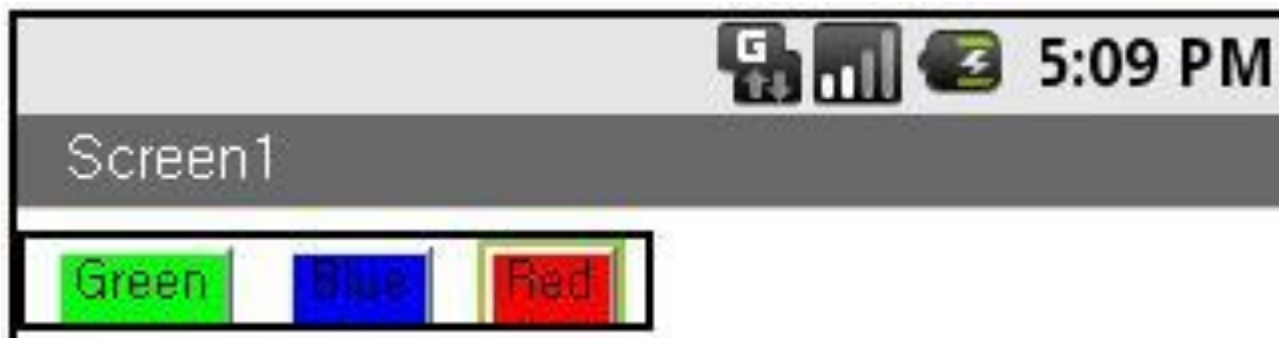
- Screen1
 - Green
 - Blue
 - Red

Rename... Delete...

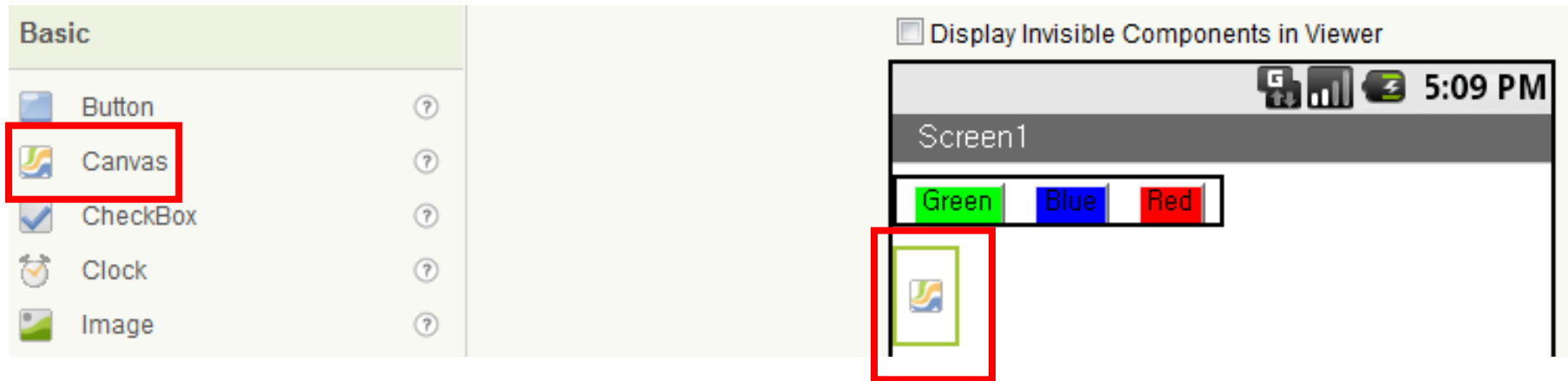


Palette	Viewer	Components
Basic	<input type="checkbox"/> Display Invisible Components in Viewer 	<ul style="list-style-type: none">Screen1<ul style="list-style-type: none">GreenBlueRedHorizontalArrangement1
Media		
Animation		
Social		
Sensors		
Screen Arrangement		
 HorizontalArrangement ?		
 TableArrangement ?		
 VerticalArrangement ?		





建立圖示






Display Invisible Components in Viewer

Screen1

Green Blue Red



Components

- Screen1
 - HorizontalArrangement1
 - Green
 - Blue
 - Red
 - Canvas1

Properties

BackgroundColor

White

BackgroundImage

Gozila1.jpg...

LineWidth

2.0

PaintColor

Black

Visible

Width

Fill parent...

Height

Fill parent...

Rename... Delete...

Media

Gozila.jpg



Screen1

Green

Blue

Red



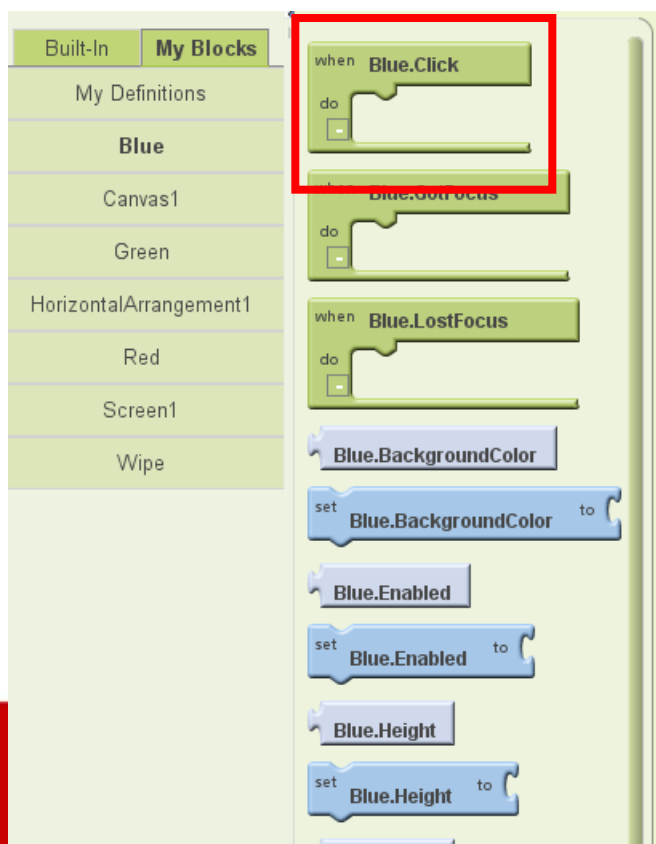
Wipe



Block Editor



點選藍色按鈕:My Block\Blue\Blue.Click

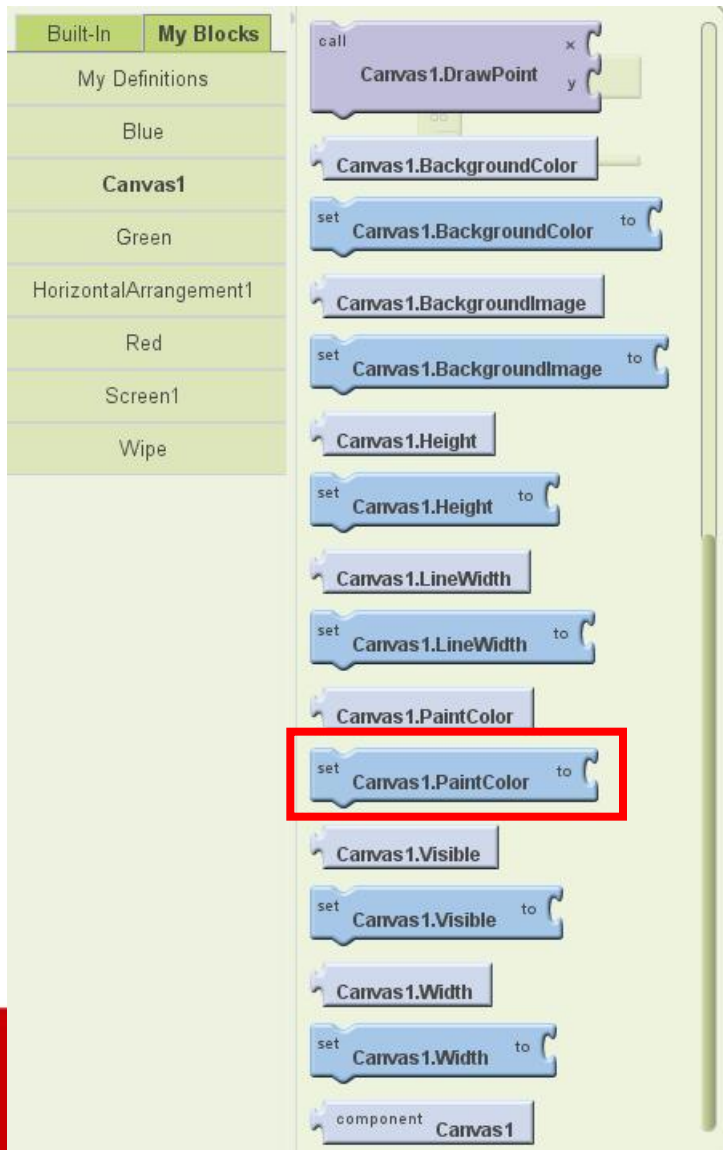


⇒

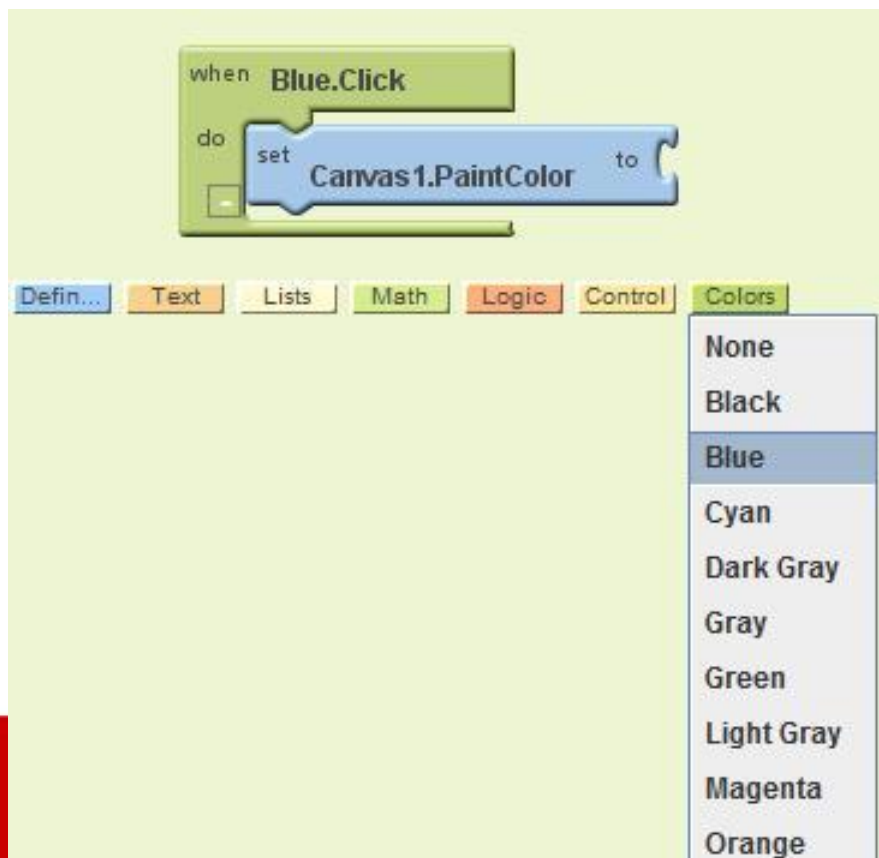


設定畫筆顏色:

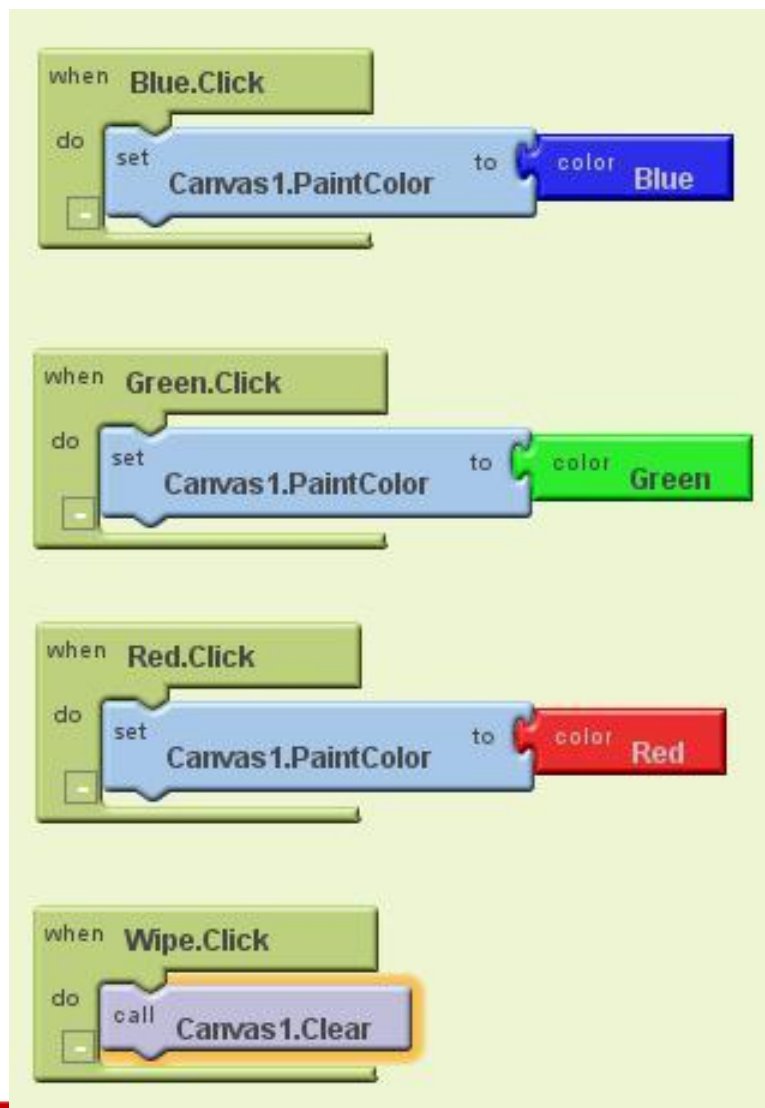
My Blocks\Canvas\Canvas1.PaintColor



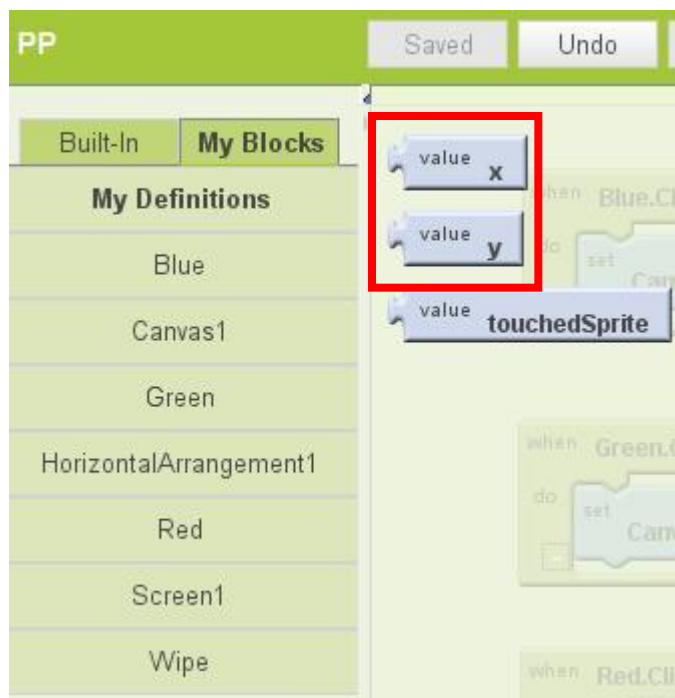
畫筆設定為藍色:Colors\Blue



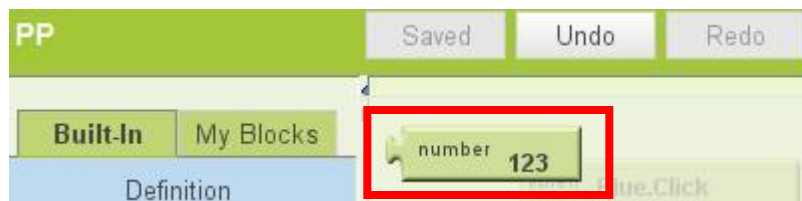
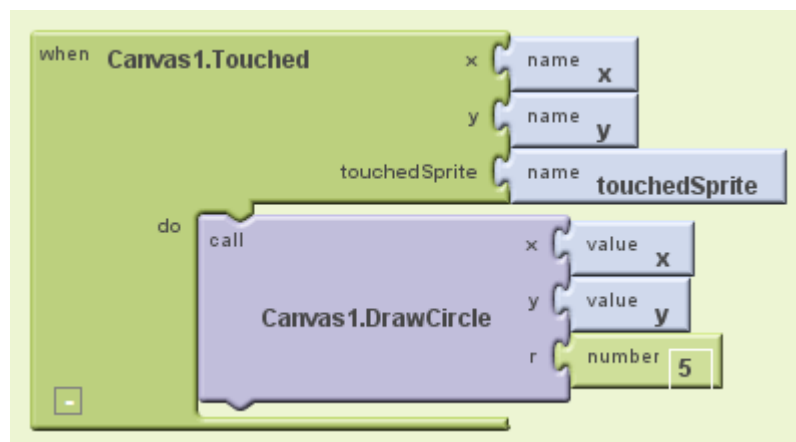
設定三種畫筆顏色並再設定一個清除螢幕



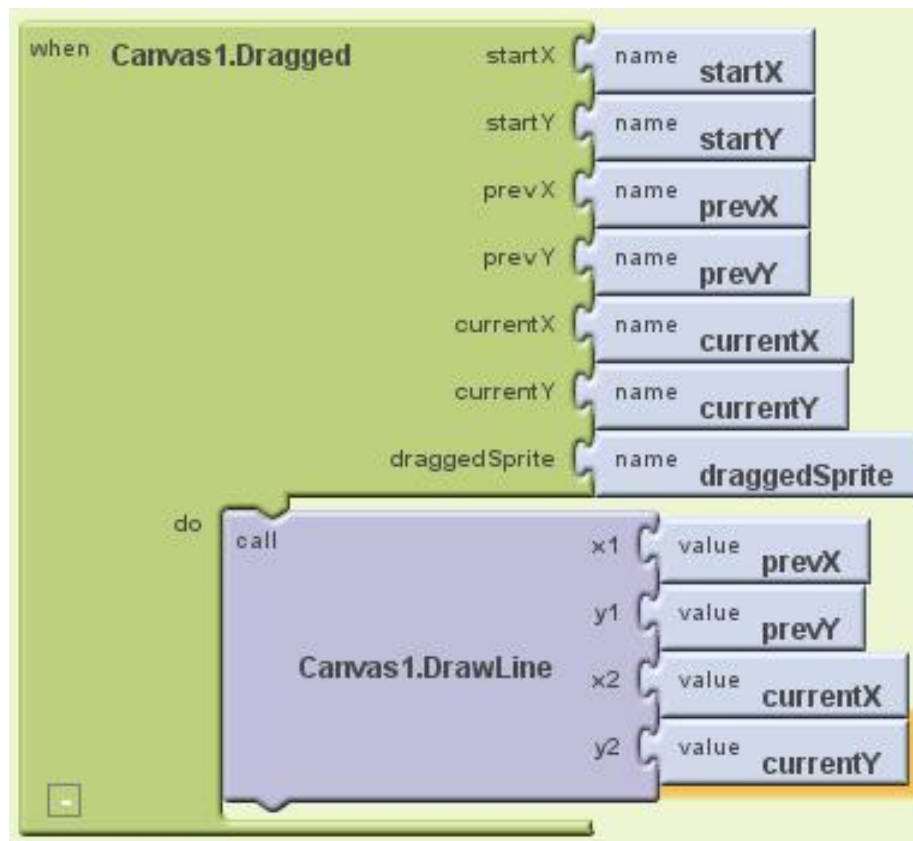
設定畫筆直徑(在此題設定下筆時為圓圈)



=>



設定移動畫筆時的樣式(在此設定為直線)



```
when Blue.Click
do
  set Canvas1.PaintColor to color Blue
```

```
when Green.Click
do
  set Canvas1.PaintColor to color Green
```

```
when Red.Click
do
  set Canvas1.PaintColor to color Red
```

```
when Wipe.Click
do
  call Canvas1.Clear
```

```
when Canvas1.Touched
  x name x
  y name y
  touchedSprite name touchedSprite
do
  call Canvas1.DrawCircle
    x value x
    y value y
    r number 5
```

```
when Canvas1.Dragged
  startX name startX
  startY name startY
  prevX name prevX
  prevY name prevY
  currentX name currentX
  currentY name currentY
  draggedSprite name draggedSprite
do
  call Canvas1.DrawLine
    x1 value prevX
    y1 value prevY
    x2 value currentX
    y2 value currentY
```



APP Inventor 教學範例

配合Google Map搜尋地標



Designer



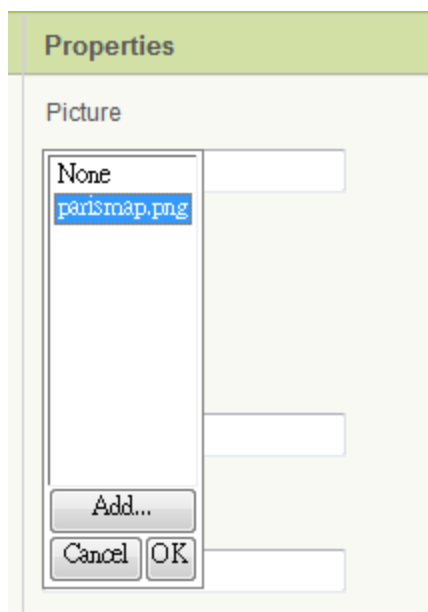
Palette\Basic\Image

Palette\Basic>ListPicker

Palette\Other stuff \ActivityStarter



在Image元件picture的地方放上parismap的圖片，請注意本圖片並無實際作用。



在ActivityStarter 元件加入下列設定，代表要
呼叫Google Map

Property	
Action	<code>android.intent.action.VIEW</code>
ActivityPackage	<code>com.google.android.apps.maps</code>
ActivityClass	<code>com.google.android.maps.Map Activity</code>



Palette

Basic

- Button
- Canvas
- CheckBox
- Clock
- Image
- Label
- ListPicker
- PasswordTextBox
- TextBox
- TinyDB

Media

Animation

Social

Sensors

Screen Arrangement

Other stuff

Not ready for prime time

Old stuff

Viewer

Non-visible components

- ActivityStarter1

Components

- Screen1
 - Image1
 - ListPicker1
 - ActivityStarter1

Media

- parismap.png

Properties

Image

Picture: parismap.png...

Visible:

Width: Automatic...

Height: Automatic...

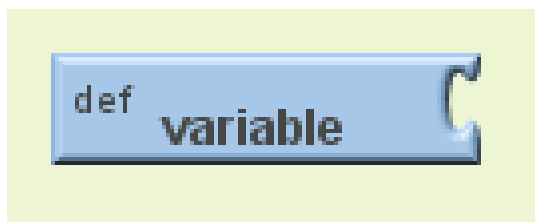


Block Editor



新增變數

(1) Built-in\Definition\def variable

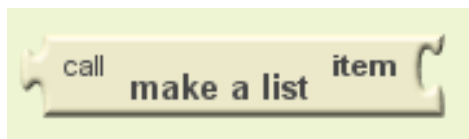


(2) 將variable改名為destinations



建立列表

(1) Built-in\Lists\make a list



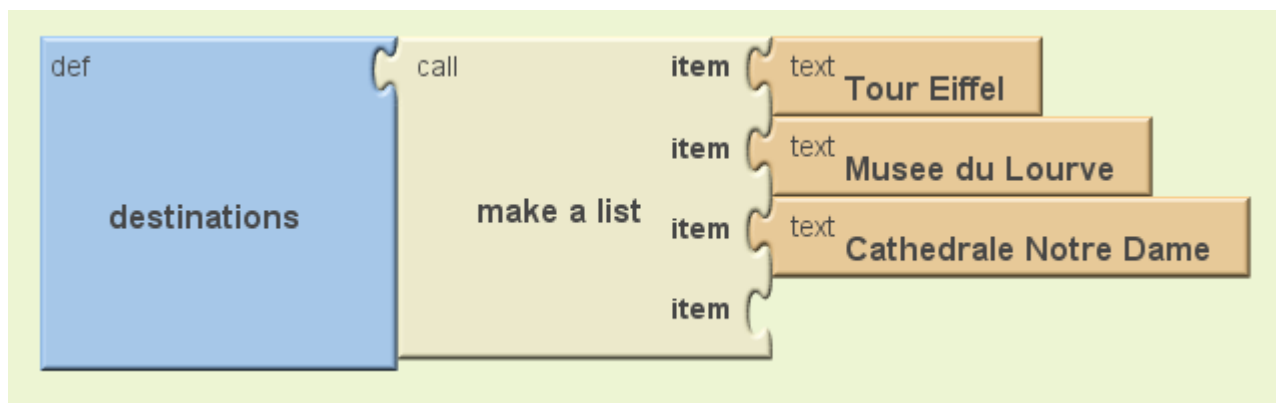
(2) Built-in\Texts\text



(3) 拉出三個text分別打入Tour Eiffel、Musee du Louvre、Cathedrale Notre Dame等地名

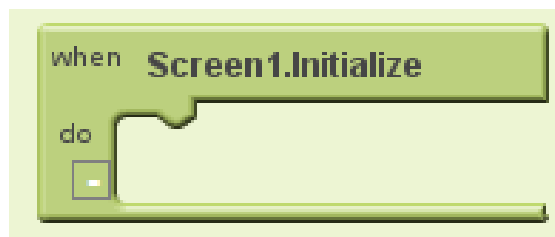


將destinations、make a list和三個text連接起來

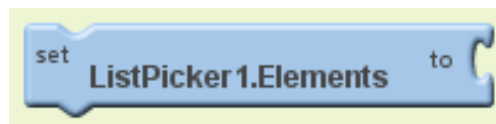


設定螢幕初始狀態

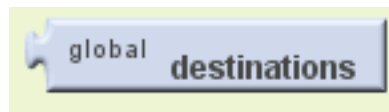
(1) My Blocks\Screen 1\ Screen 1.Initialize



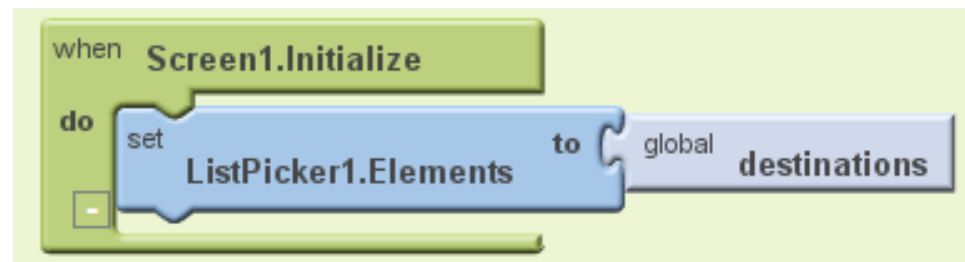
(2) My Blocks>ListPicker 1\ ListPicker1.Elements



(3)My Blocks\My Definitions\global destinations



當程式開始時，將ListPicker會去抓 destination的內容

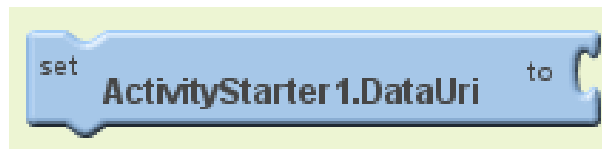


設定搜尋目標與啟動地圖

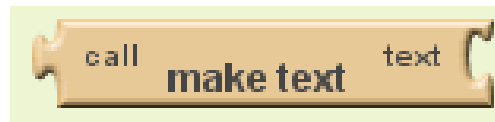
(1)My Blocks>ListPicker 1>ListPicker 1.AfterPicking



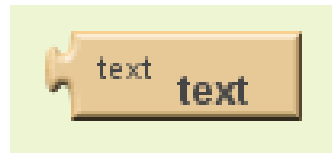
(2)My Blocks\ ActivityStarter 1\ActivityStarter
1.DataUri



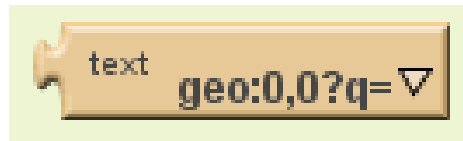
(3)Built-in\Texts\make text



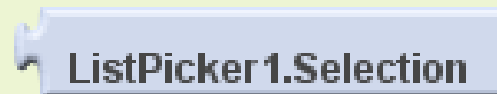
(4) Built-in\Texts\text



(5) 將text內容改為geo:0,0?q=



(6)My Blocks\ListPicker 1>ListPicker 1.Selection

A Scratch block with a tab on the left side, containing the text "ListPicker 1.Selection".

ListPicker 1.Selection

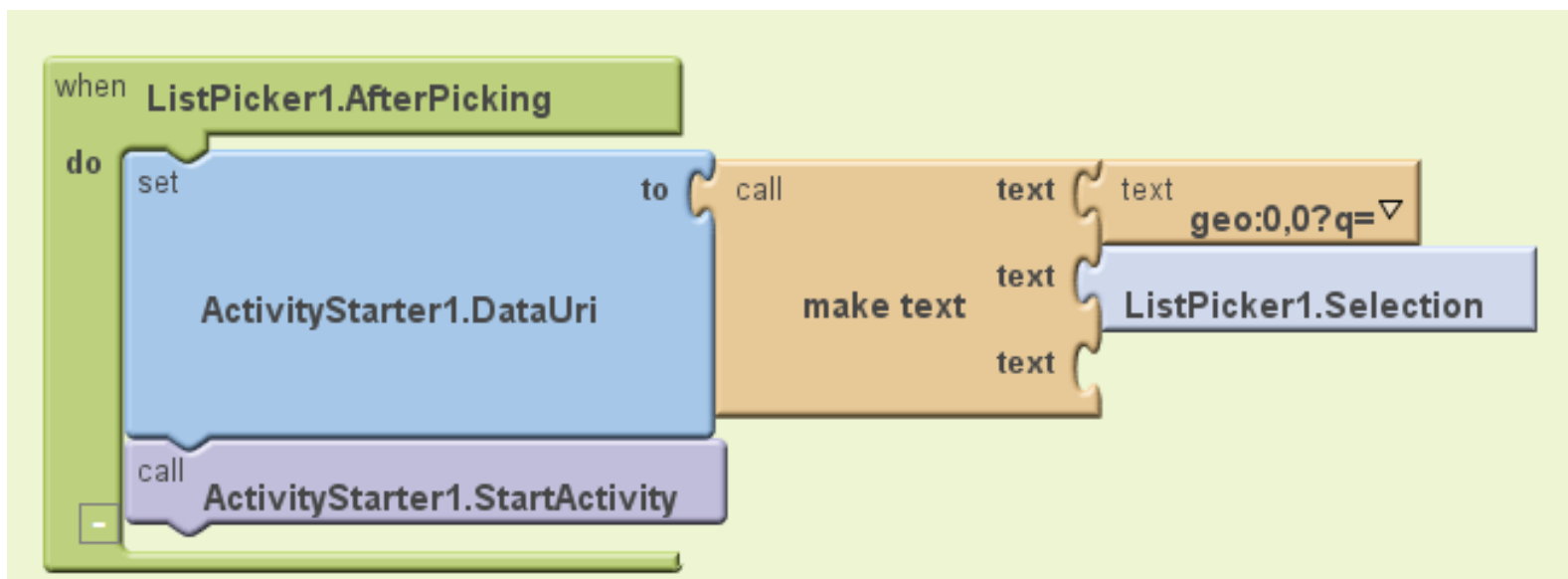
(7)My Blocks\ActivityStarter 1\ActivityStarter 1.StartActivity

A Scratch block with a tab on the left side, containing the text "call ActivityStarter1.StartActivity".

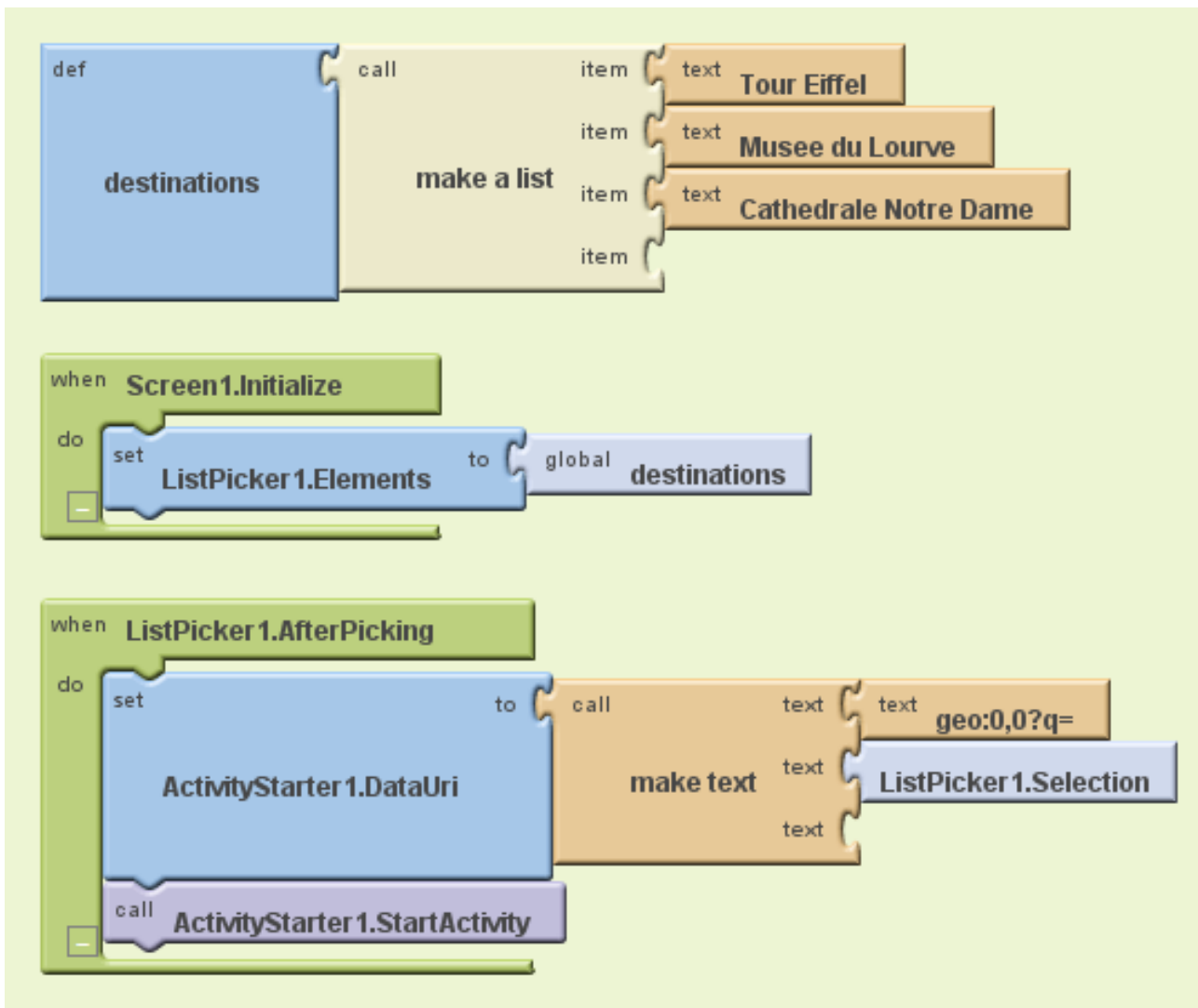
call ActivityStarter1.StartActivity



選擇ListPicker某元件之後即透過ActivityStarter來處理。意即將地圖資訊透過網路送出到Google Map後顯示。



程式完成



延伸練習

在手機列表中加入「Taipei 101」的選項並順利顯示

直接輸入經緯度後顯示位置(可透過Google Map查詢某地點之經緯度)

