



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

International ICT Week
July 3-7, 2023

Mobile Apps for Android

with MIT App Inventor 2

**Fast visual development with
media, GPS and databases**






Session 3

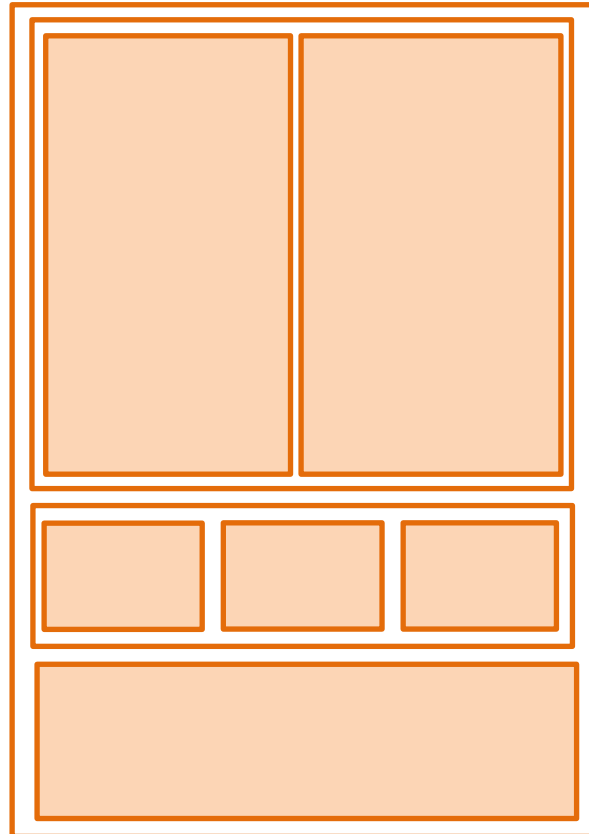
- Components. Images, audio and video
- Camera. Sensors: GPS, accelerometer...
- Programming with the Block Editor
- Distribution of elements on the screen
- User interface objects

Distribution of elements on the screen

Layout

Layout

-  HorizontalArrangement ?
-  HorizontalScrollArrangement ?
-  TableArrangement ?
-  VerticalArrangement ?
-  VerticalScrollArrangement ?



“Responsive” concept

Properties

HorizontalArrangement1

AlignHorizontal

Left : 1 ▾

AlignVertical

Top : 1 ▾

BackgroundColor

■ Default

Height

Automatic...

Width

Automatic

Fill parent

pixels

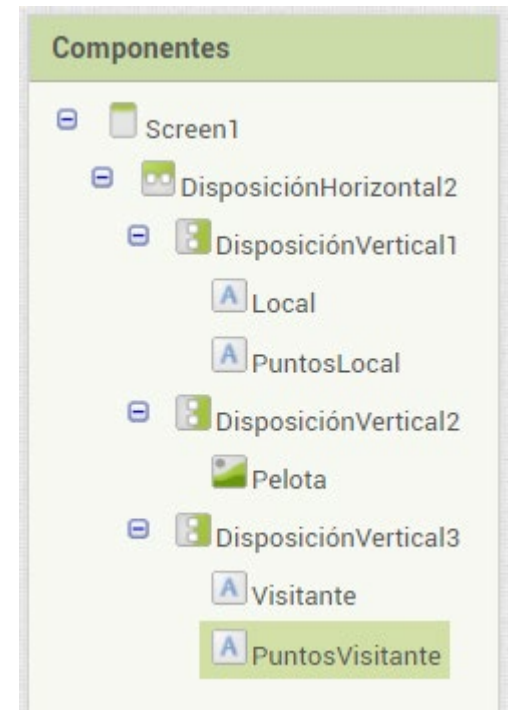
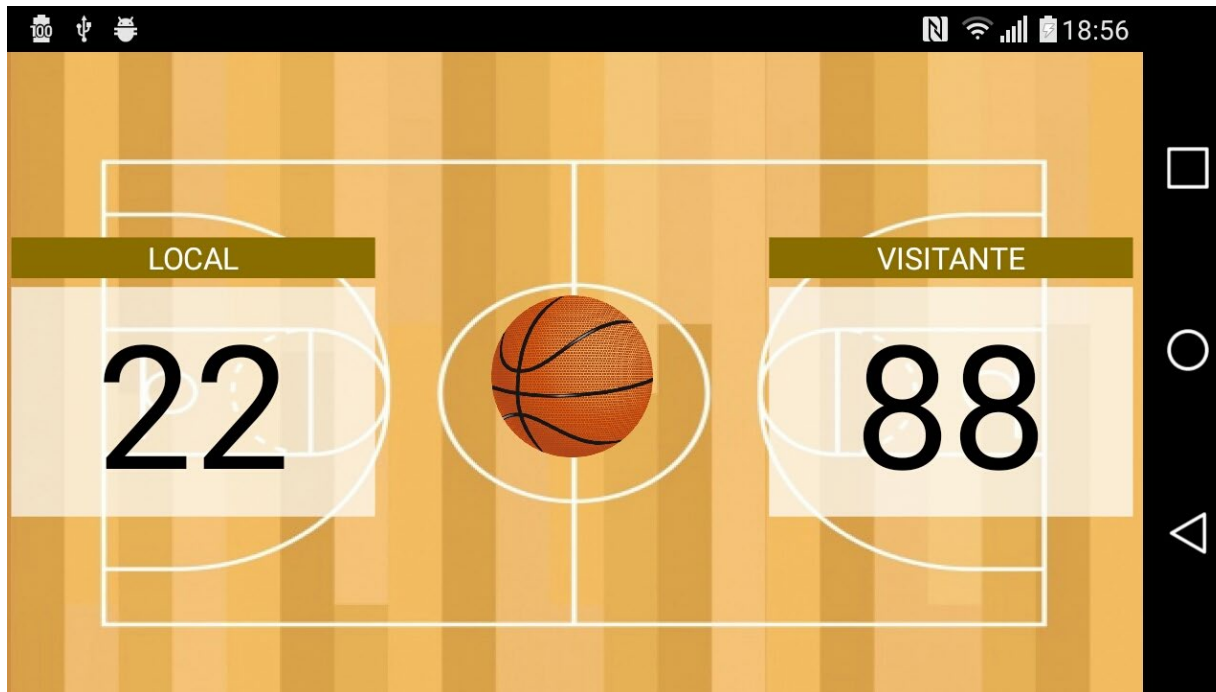
percent

Cancel

OK

Distribution of elements on the screen

Practice: Achive a screen distribution similar to this example. Here some clues...



User interface objects

User Interface

- Button
- CheckBox
- DatePicker
- Image
- Label
- ListPicker
- ListView
- Notifier
- PasswordTextBox
- Slider
- Spinner
- Switch
- TextBox
- TimePicker
- WebView

Practice:

- Try all these basic elements using the available tools.
- Test Notifier with progress bar 3 seconds.

```
cuando Botón2 .Clic
ejecutar
  poner Reloj1 . IntervaloDelTemporizador como 3000
  poner Reloj1 . TemporizadorHabilitado como cierto
  llamar Notificador1 . ShowProgressDialog
    mensaje " Espere 3 segundos..."
    titulo " Barra de progreso "

cuando Reloj1 . Temporizador
ejecutar
  llamar Notificador1 . DismissProgressDialog
```

- Make a currency converter that calls the Google converter and displays the result in a Web Viewer



















Hint: Use this string for the URL and alternative methods

<https://www.google.com/search?q=100+eur+to+dollar>

```
cuando Botón1 .Clic
ejecutar
  poner VisorWeb1 . UrlInicial como
    unir " http://www.google.com/search?q="
      CampoDeTexto1 . Texto
      "+eur+to+dollar"
  llamar VisorWeb1 . IrAlInicio
```

```
cuando Botón1 .Clic
ejecutar
  llamar VisorWeb1 . IrAlaUrl
    unir " http://www.google.com/search?q="
      CampoDeTexto1 . Texto
      "+eur+to+dollar"
```

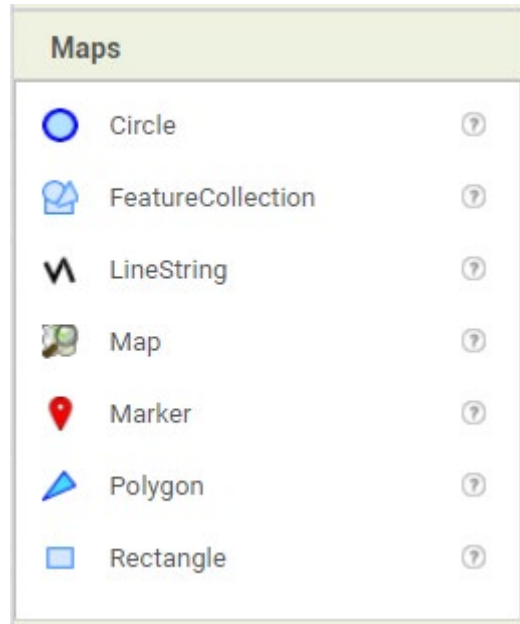
Sensor Objects

Sensors		
	AccelerometerSensor	
	BarcodeScanner	
	Clock	
	GyroscopeSensor	
	LocationSensor	
	NearField	
	OrientationSensor	
	Pedometer	
	ProximitySensor	

Practice:

- Show labels with current location and phone tilt values.
- Move a ball around the screen depending on the tilt value, as if the ball was affected by gravity.

Maps Objects



Practice: Create a map centered in user position, represented by red marker, with a green marker changing position randomly every 1 second around the user, in approximately +/- 100 meters.

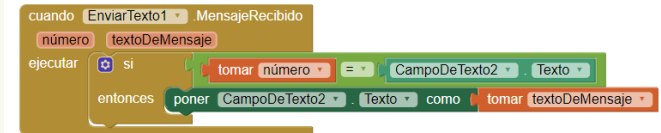
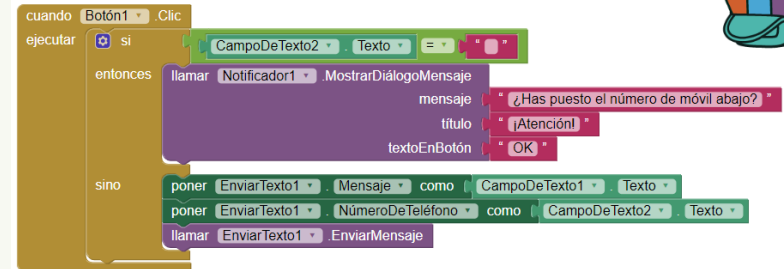
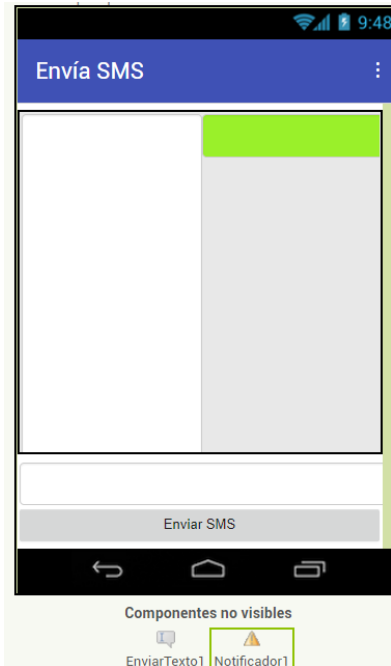
Para FeatureCollection use as examples GeoJson files from Valencia Open Data:

<http://gobiernoabierto.valencia.es/es/data/?groups=medio-ambiente>

Social Objects

Social

- ContactPicker
- EmailPicker
- PhoneCall
- PhoneNumberPicker
- Sharing
- Texting
- Twitter



Practice:

- Send an SMS text message to a specific number.
- Use “sharing” method to share that message on Whatsapp.

Credits:

- **Web MIT App Inventor [Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0)]**