

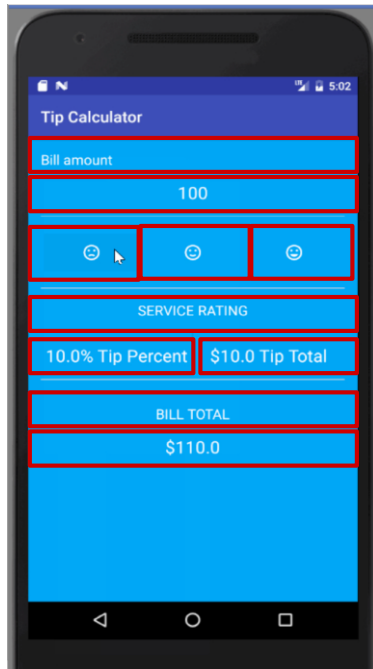
Android App Development for Beginners

Lesson 1

Basic UI Elements



Layouts - Views

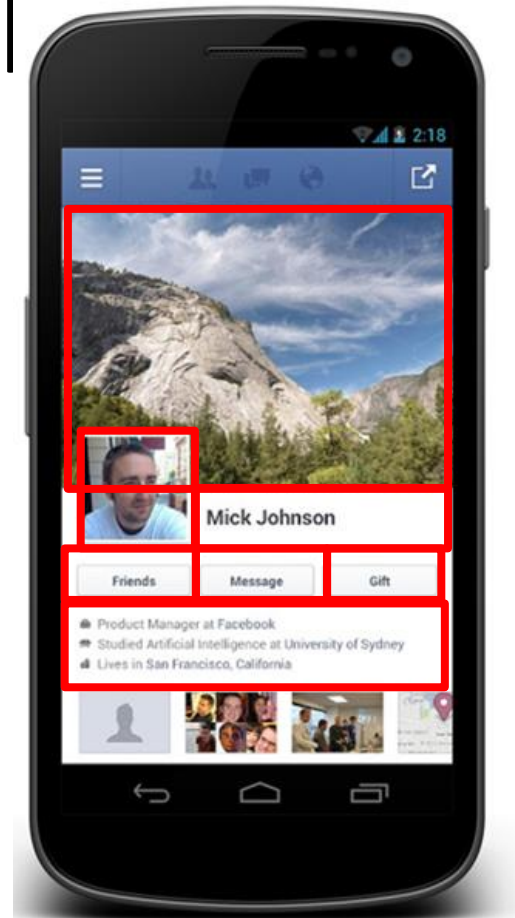


A view is a **rectangle on the screen that shows some content.**

It can be a button, an image, a piece of text or anything else that the app can display.

Layouts - Facebook example

- one view to display your cover photo.
- another view to display your profile picture
- ... and some others textviews to display your profile details.



Layouts - Definition

Individual views make up what we call the layout of the screen

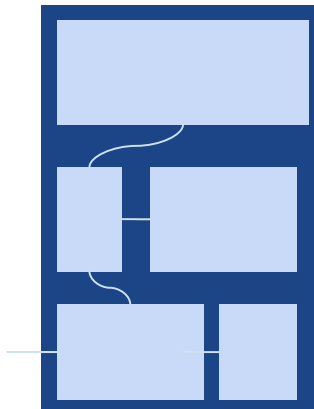
Create a layout:

- Declaring the UI elements in XML.
- Instantiating layout elements at runtime

Layouts - ViewGroups

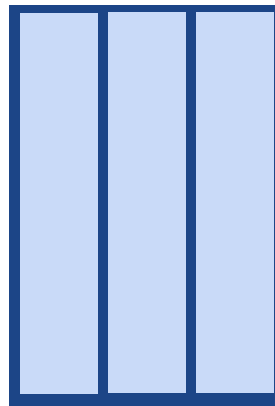
A ViewGroup is a special view that can contain other views.

ConstraintLayout



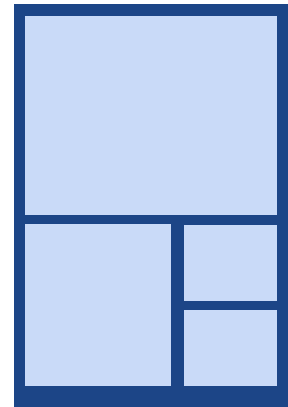
Large and Complex Layouts

LinearLayout



Single horizontal or vertical row

RelativeLayout

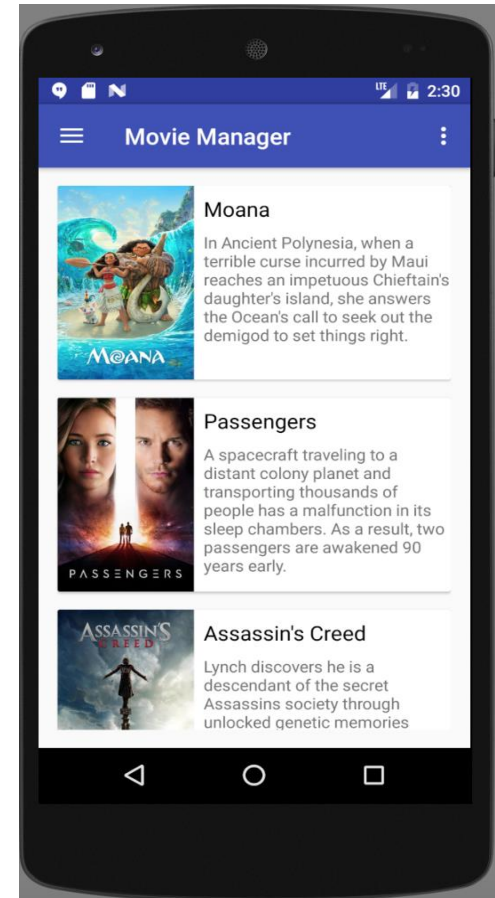


Child objects relative to each other

Layouts - Conclusion

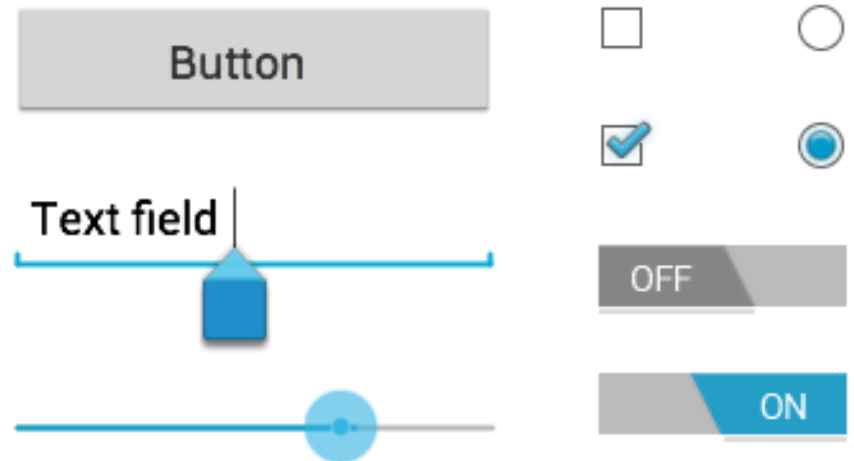
The layout is the **design of what the user sees on the screen** composed for:

- **Views**
Rectangular areas that show some content.
- **ViewGroups**
Contains small views (childrens)



Input Controls

Input controls are the interactive components in your app's user interface.



Input Controls

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="match_parent"
```

```
    android:orientation="horizontal">
```

```
    <EditText android:id="@+id/edit_message"
```

```
        android:layout_weight="1"
```

```
        android:layout_width="0dp"
```

```
        android:layout_height="wrap_content"
```

```
        android:hint="@string/edit_message" />
```

```
    <Button android:id="@+id/button_send"
```

```
        android:layout_width="wrap_content"
```

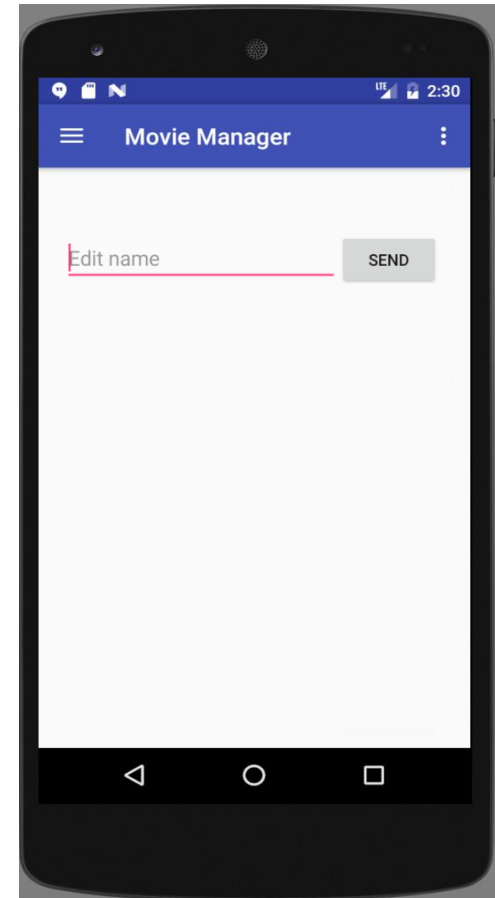
```
        android:layout_height="wrap_content"
```

```
        android:text="@string/button_send"
```

```
        android:onClick="sendMessage" />
```

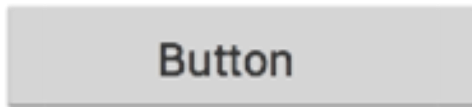
```
</LinearLayout>
```

Result:



Input Controls - Button

Element that can be pressed or clicked
by the user to perform an action



```
<Button android:id="@+id/button_send"  
        android:layout_width="wrap_content"  
        android:layout_height="wrap_content"  
        android:text="@string/button_send"  
        android:onClick="sendMessage" />
```

Input Controls - TextField

A text field is an element where the user can enter data.



Af

Afghanistan

```
<EditText  
    android:id="@+id/edit_message"  
    android:layout_weight="1"  
    android:layout_width="0dp"  
    android:layout_height="wrap_content"  
    android:hint="@string/edit_message" />
```

```
<AutoCompleteTextView  
    android:id="@+id/autocomplete_country"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content" />
```

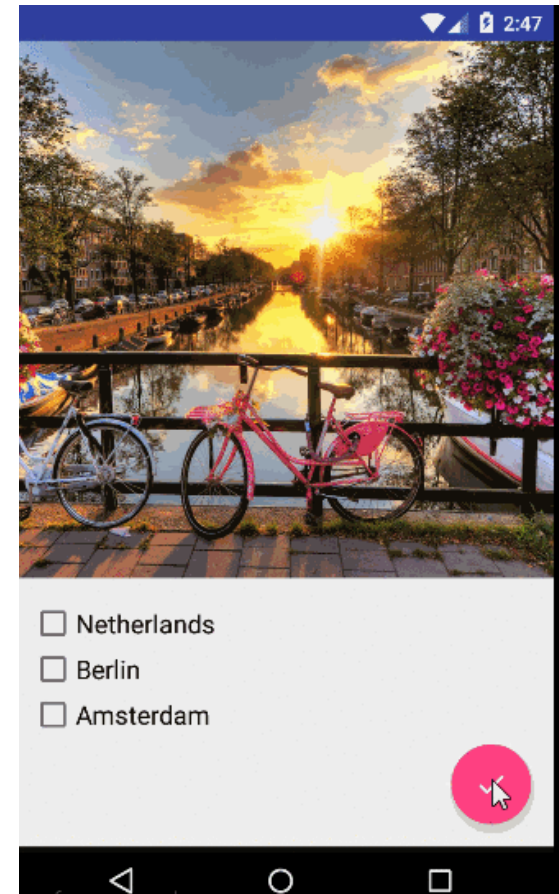
Input Controls - CheckBox

A checkbox is an on/off switch that can be toggled by the user:

```
<CheckBox  
    android:id="@+id/option_one_cb"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" />
```

```
<CheckBox  
    android:id="@+id/option_two_cb"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content" />
```

```
<CheckBox  
    android:id="@+id/option_three_cb"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"/>
```





Input Controls - RadioButton

```
<RadioGroup
  android:id="@+id/radio_button_group"
  android:layout_width="match_parent"
  android:layout_height="wrap_content"
  android:orientation="vertical">
  <RadioButton
    android:id="@+id/option_one"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"/>
  <RadioButton
    android:id="@+id/option_two"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
  <RadioButton
    android:id="@+id/option_three"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
</RadioGroup>
```



With a RadioButton only one option can be selected in the group.

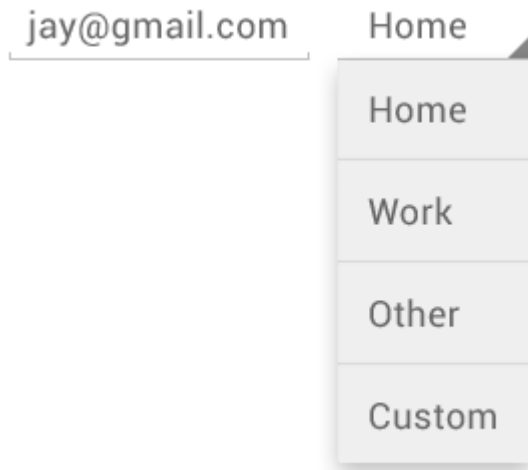
Input Controls - ToggleButton

On/off button with a light indicator



```
<ToggleButton  
    android:id="@+id/toggleButton"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:textOn="@string/toggle_turn_on"  
    android:textOff="@string/toggle_turn_off"  
    android:checked="true" />
```

Input Controls - Spinner



Drop-down list that allows users to select one value.

```
<Spinner  
    android:id="@+id/types_spinner"  
    android:layout_width="fill_parent"  
    android:layout_height="wrap_content" />
```

Input Controls - Pickers

Allow users to select a single value for a set by using up/down buttons or via a swipe gesture





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