

Android Training for Java Developers

4. Building User Interface

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View Hierarchy: components

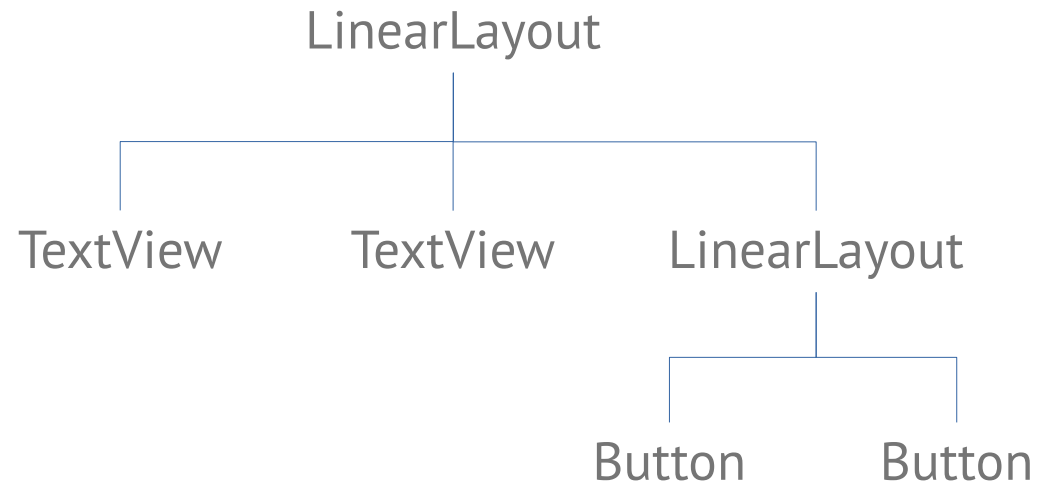
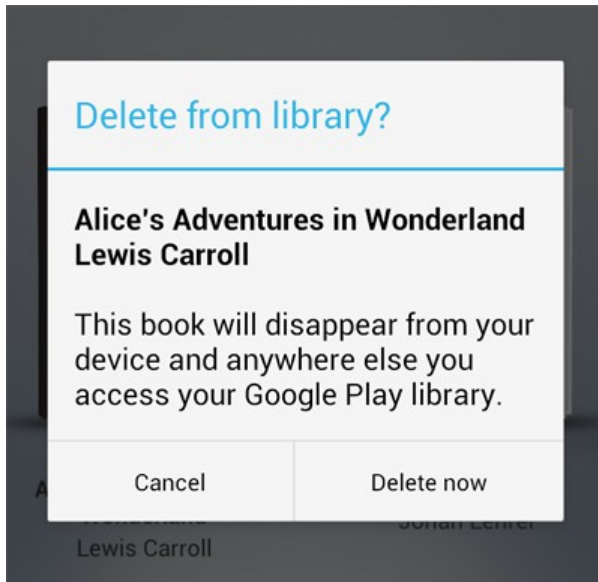
View — occupies a rectangular area on the screen and is responsible for drawing and event handling

<https://developer.android.com/reference/android/view/View.html>

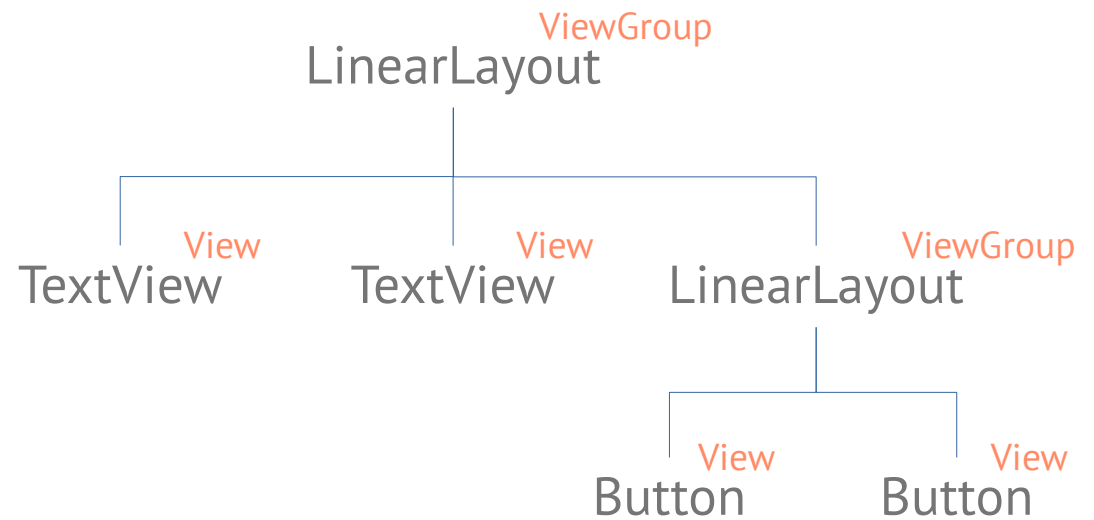
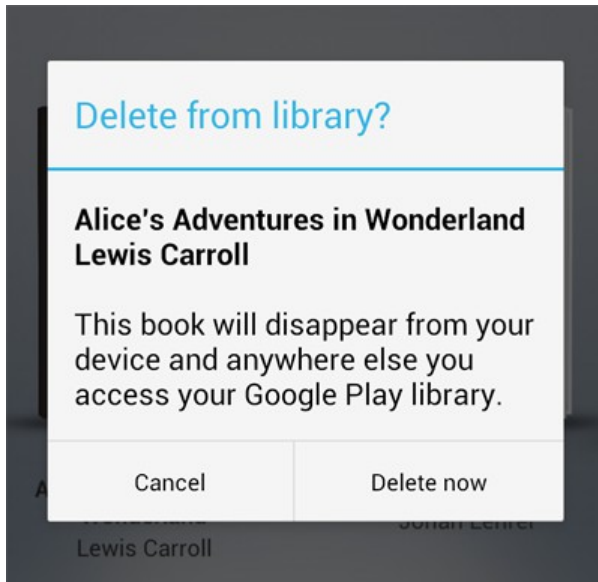
ViewGroup — special view that can contain other views (called children)

<https://developer.android.com/reference/android/view/ViewGroup.html>

View Hierarchy: example



View Hierarchy: example



Measurement Units

dp

density-independent pixel — abstract measurement unit, which makes layout looking same in different screen sizes and densities

sp

scale-independent pixel — almost the same as dp, but used only for specifying the size of any text, which is going to be drawn on the Widget

px

pixel — **highly NOT recommended**, in case of using pixels your layout will look different depends on screen size and density

mm

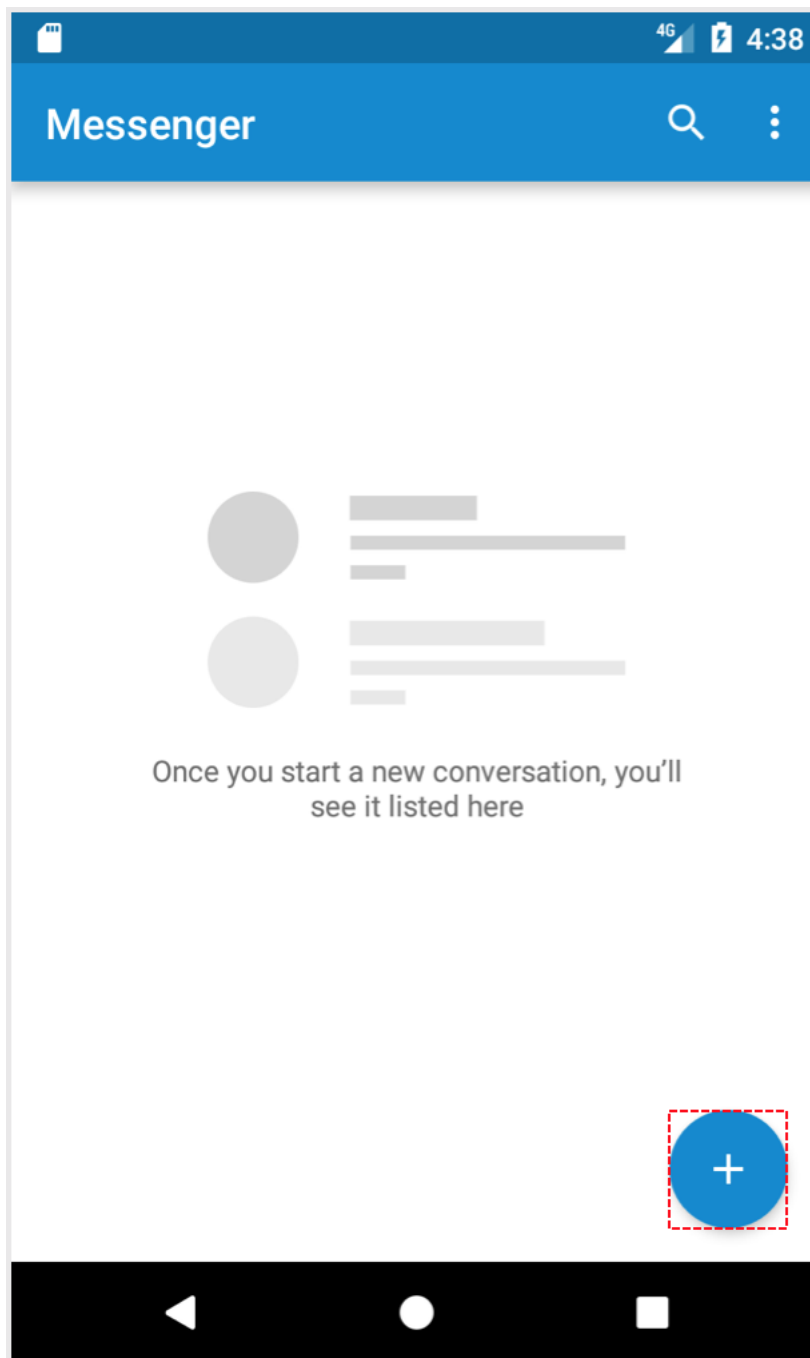
milimeter — physical measurement unit, depends on screen size

in

inch — physical measurement unit, depends on screen size

Layouting
Live DEMO/Workshop

Layouting DEBUGGING

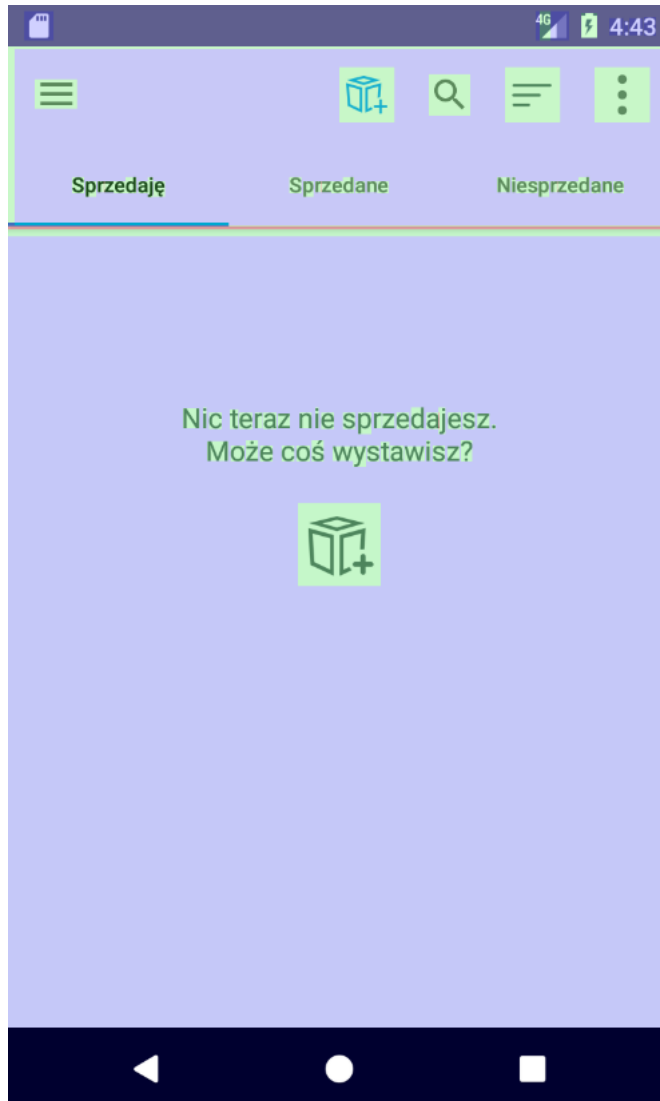


- ▼ (0) FrameLayout [0,48][768,...
- ▼ (0) ViewGroup [0,48][768...
- ▼ (0) FrameLayout [0,48]
- ▶ (0) ViewGroup [0,48]
- ▼ (1) FrameLayout [0,160]
- ▼ (0) FrameLayout [0,...
- (0) android.support...
- ▼ (1) FrameLayout
- ▼ (0) LinearLayout
- (0) ImageV...
- (1) TextVie...
- (2) ImageView {S**

Node Detail

index	2
text	
resource-id	com.google.android.app...
class	android.widget.ImageView
package	com.google.android.app...
content-d...	Start new conversation
checkable	false
checked	false
clickable	true
enabled	true
focusable	false
focused	false
scrollable	false
long-clicka...	false
password	false

GPU Overdrawing



OK

Not so good

