Dati e View

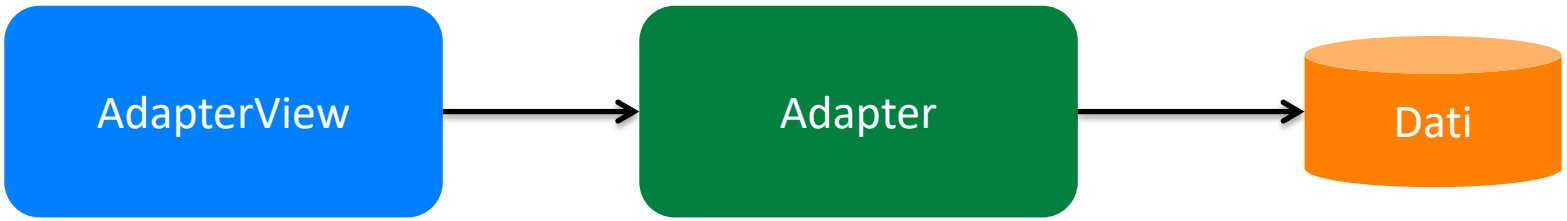
Layout dinamici

Problema

spesso i dati non disponibili se non in esecuzione e quindi devo gestire le view dinamicamante

Pattern Proposto:

Il layout (AdapterView) affida ad un oggetto Adapter la creazione delle view per visualizzare i dati



AdapterView

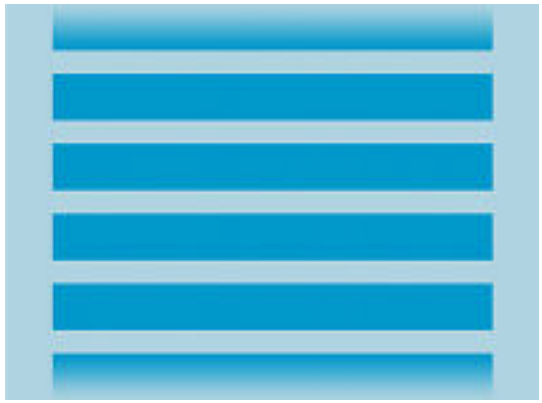
java.lang.Object

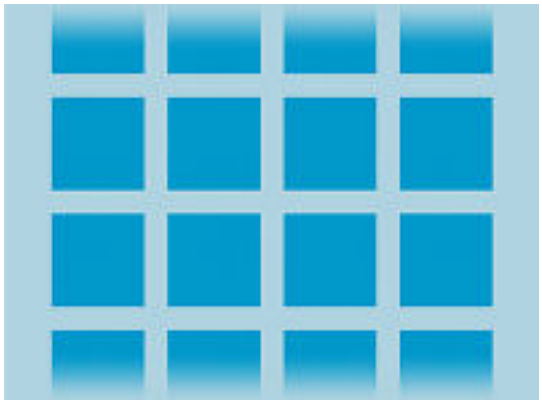
↳ android.view.View

↳ android.view.ViewGroup

↳ android.widget.AdapterView

- **ListView**, **GridView**, RecyclerView, etc.





Adapter

- Adapter/ListAdapter
  - **ArrayAdapter**<T>, **CursorAdapter**, **SimpleAdapter**, RecyclerView.Adapter, etc.

- Adattano dinamicamente i dati alla "vista" corrente
  - gestisce i dati (organizzati come lista)
  - se cambia la visuale vanno cambiante le view

- Gestisce le view che mostrano il singolo dato
  - se cambiano il dato va aggiornata le view

Interfaccia Adapter

Chiedo all'adapter una view

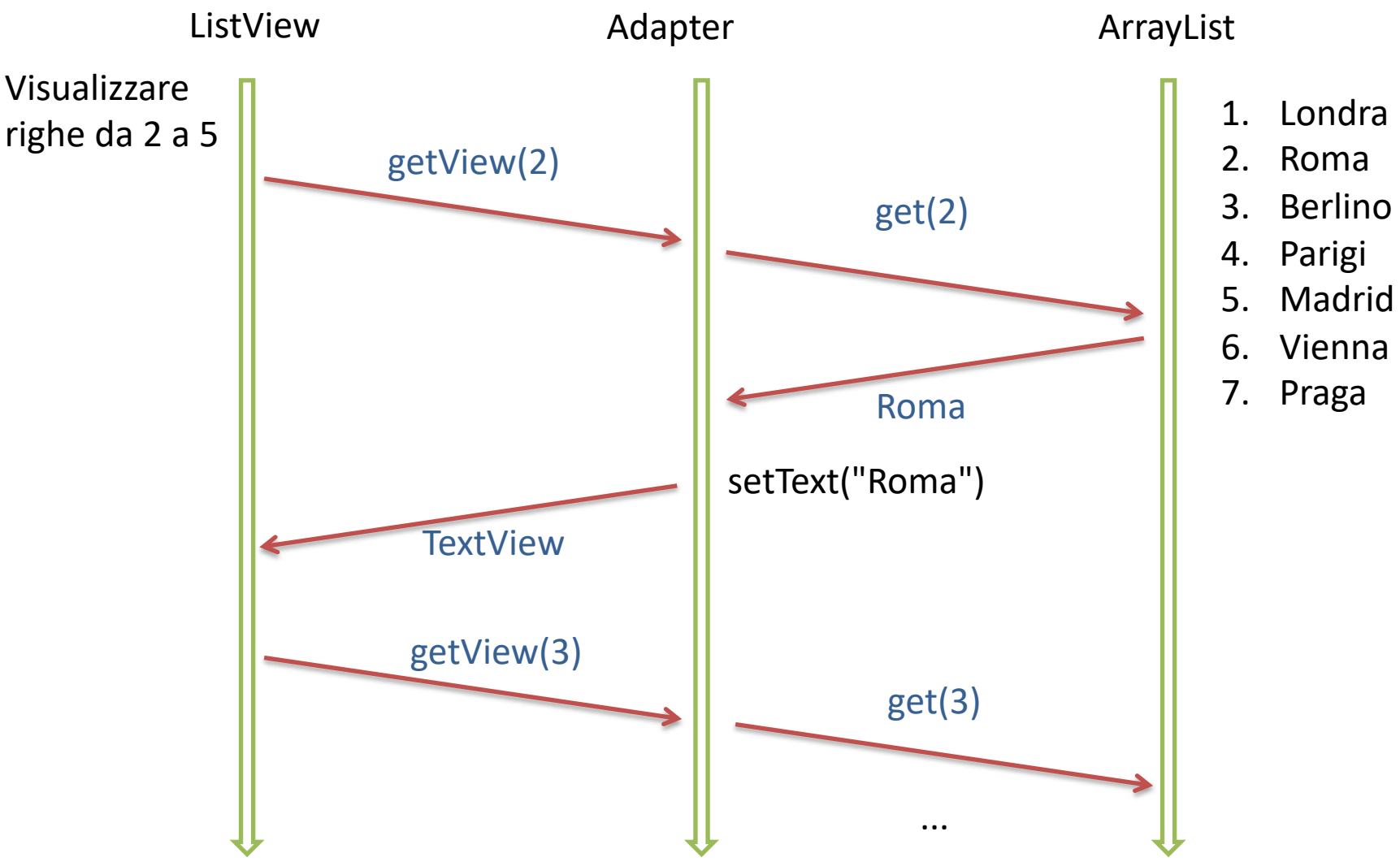
View getView (int position, View convertView, ViewGroup parent)

- Gestione dei dati
  - Object getItem (int position)
  - long getItemId (int position)
  - int getCount ()
  - boolean isEmpty ()

- Cambio dei dati
  - void registerDataSetObserver (DataSetObserver observer)
  - void unregisterDataSetObserver (DataSetObserver observer)

- Base Adapter
  - notifyDataSetChanged();

Interazioni



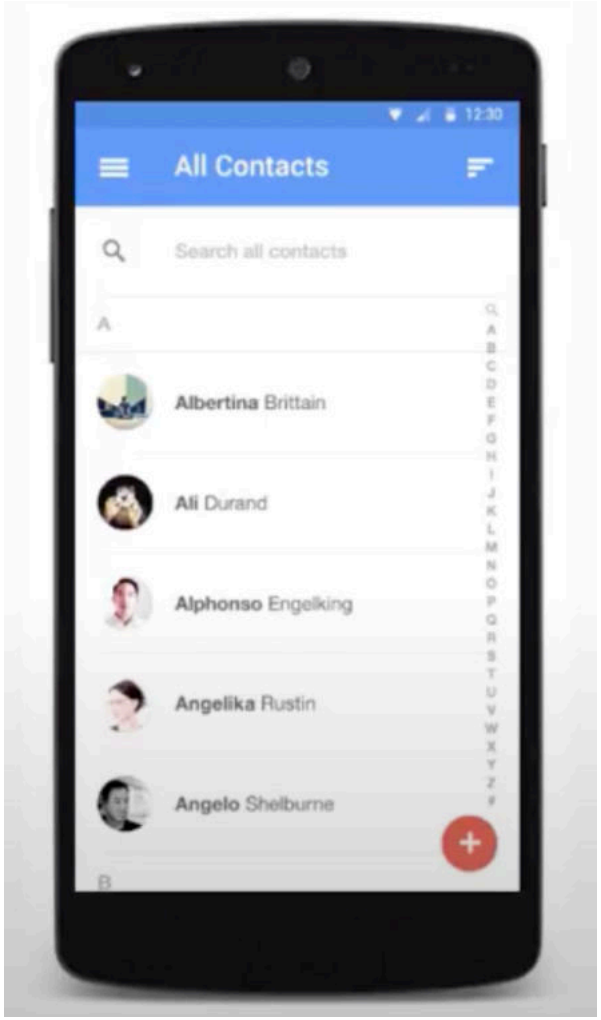
ListView

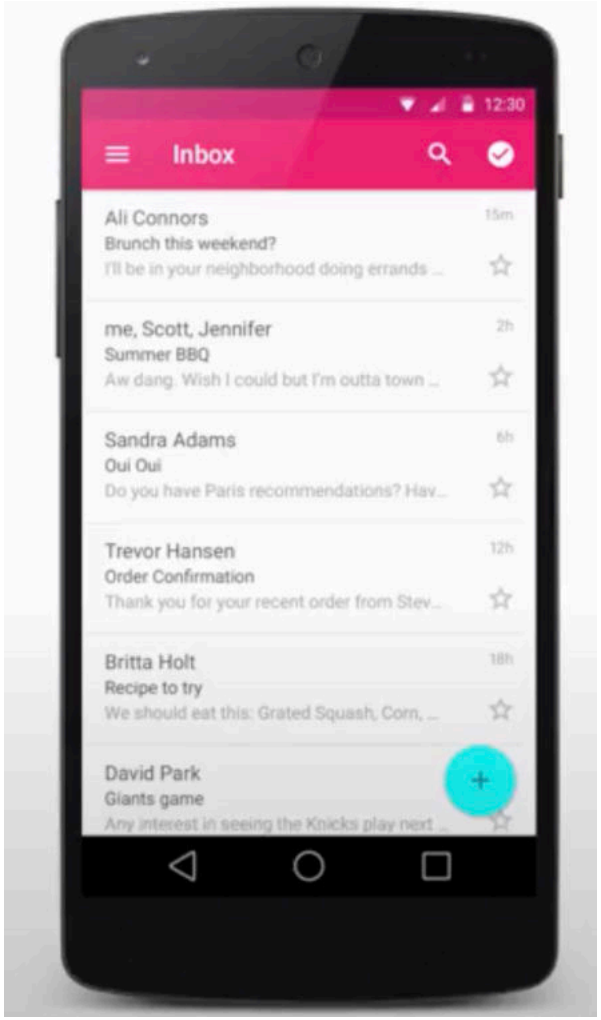
- uso di un ArrayAdapter con una ListView
  - progetto ArrayAdapterTest

```
ListView listView = (ListView) findViewById(R.id.arrayList);
String[] arrayData = getResources().getStringArray(R.array.array_data);
ArrayAdapter<String> arrayAdapter =
        new ArrayAdapter<String>
        (this,R.layout.row,R.id.rowText,arrayData);
listView.setAdapter(arrayAdapter);
```

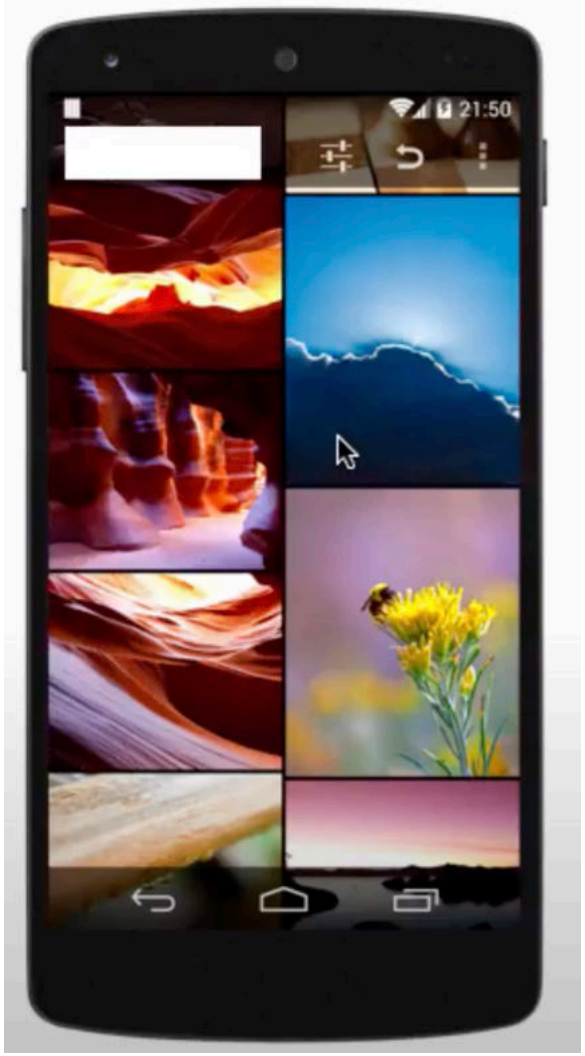
RECYCLERVIEW E CARD VIEW

RecyclerView

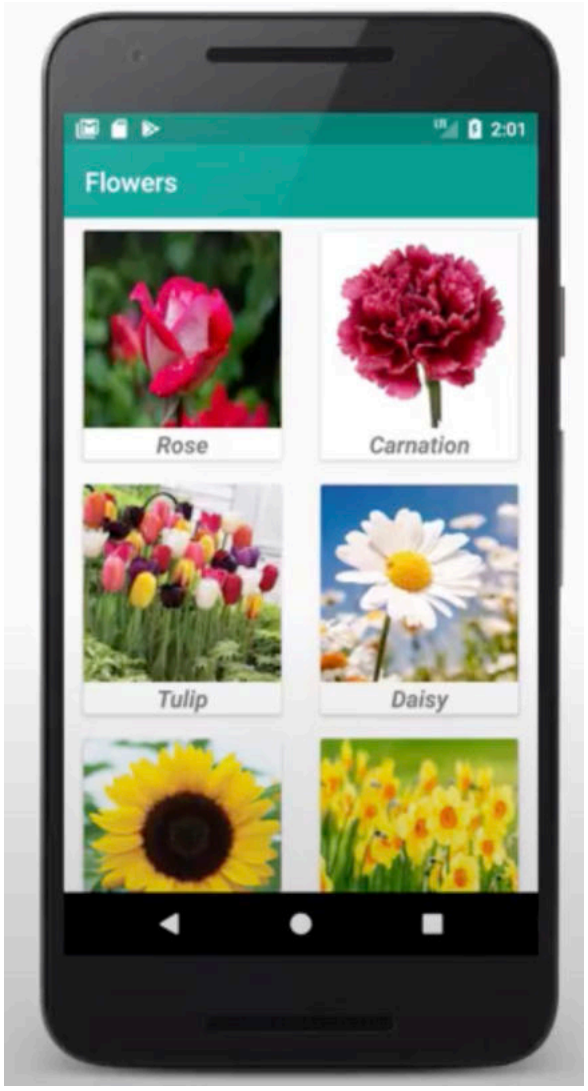


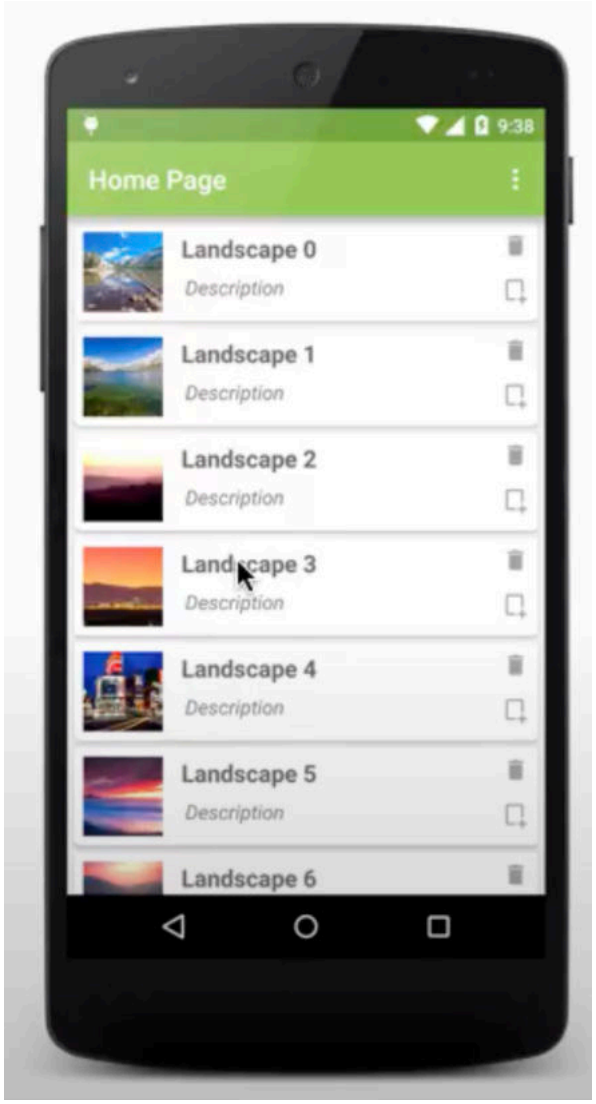


RecyclerView

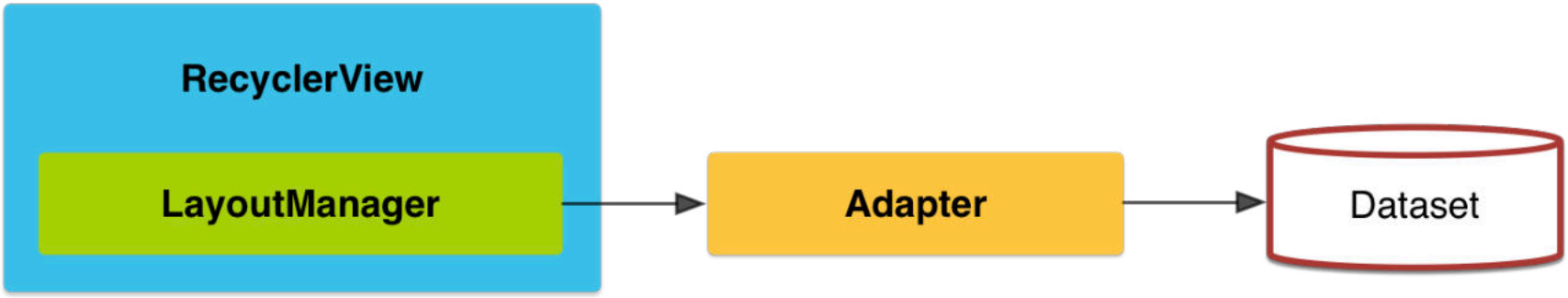


CardView

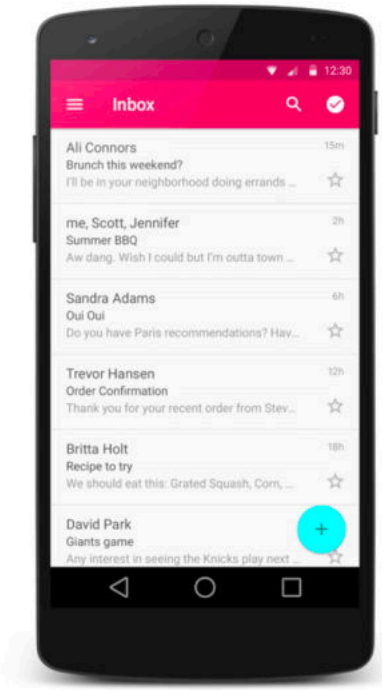

2:01
Flowers
Rose
Carnation
Tulip
Daisy


9:38
Home Page
Landscape 0
Description
Landscape 1
Description
Landscape 2
Description
Landscape 3
Description
Landscape 4
Description
Landscape 5
Description
Landscape 6

- RecyclerView
- LayoutManager
  - LinearLayoutManager
  - GridLayoutManager
  - StaggeredGridLayoutManager



RecyclerView



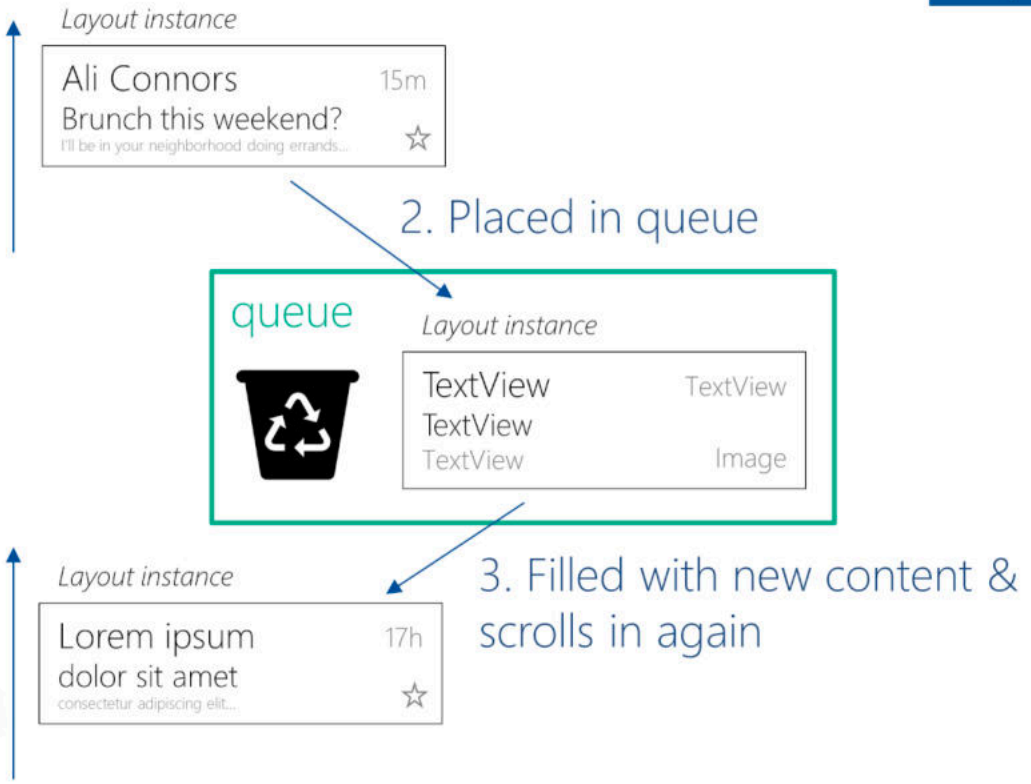
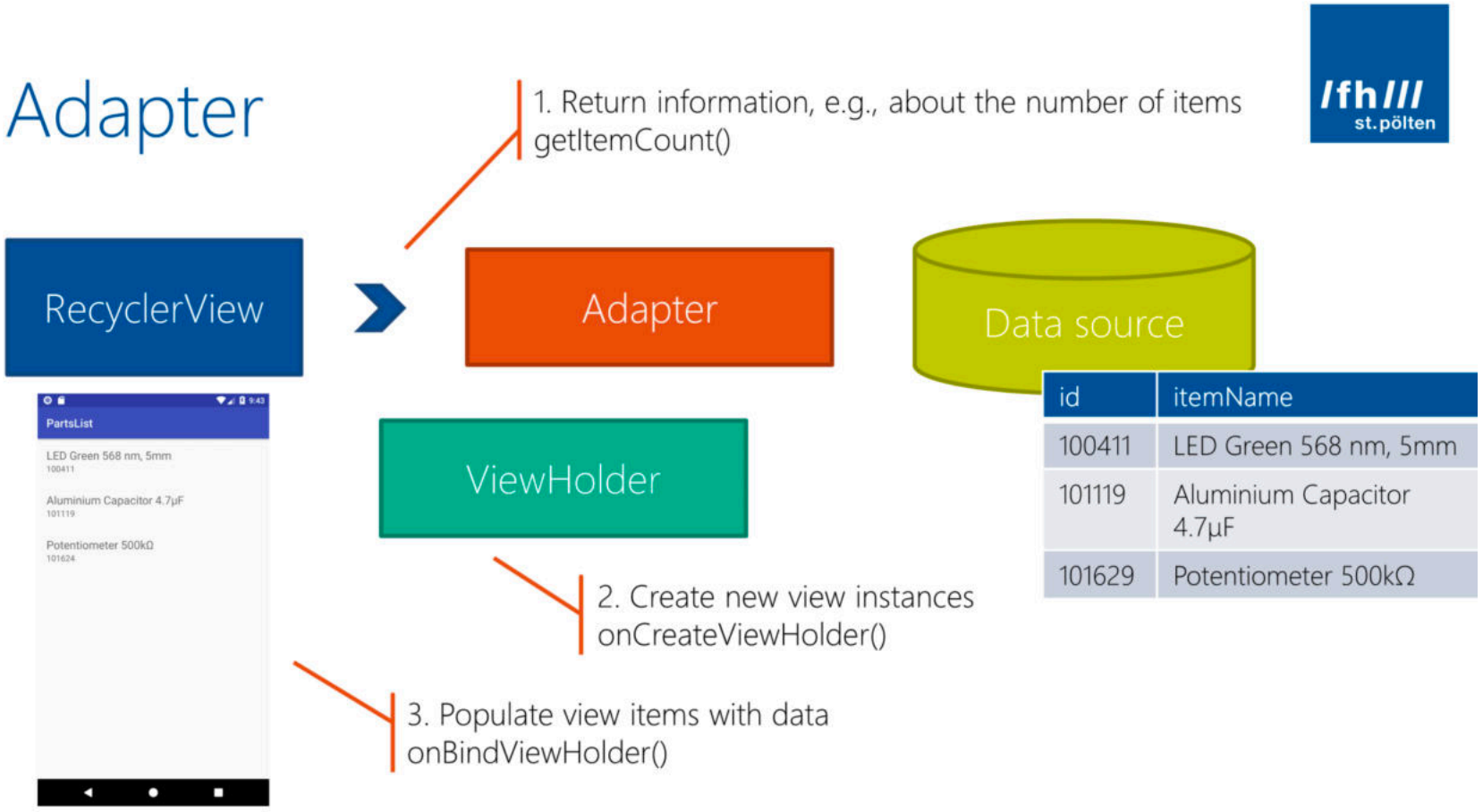


Image credits: Google, https://developer.android.com/training/material/lists-cards.html

Adapter



id	itemName
100411	LED Green 568 nm, 5mm
101119	Aluminium Capacitor 4.7µF
101629	Potentiometer 500kΩ