Android Development Lab

- **Course no.: 61985**

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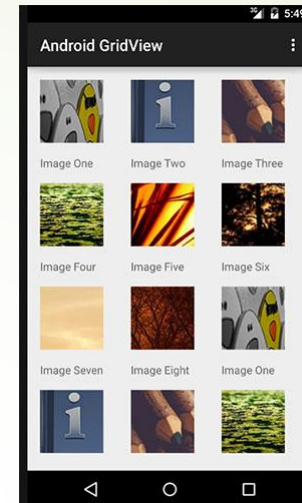- **Topics: RecyclerView & Adapter**

The RecyclerView widget

- A container view (ViewGroup) that is populated with widgets items <u>during run time</u>

- each item inside the AdapterView can be:
  - Basic widget (like ImageView…),
  - A layout with several widgets, or…
  - A fragment

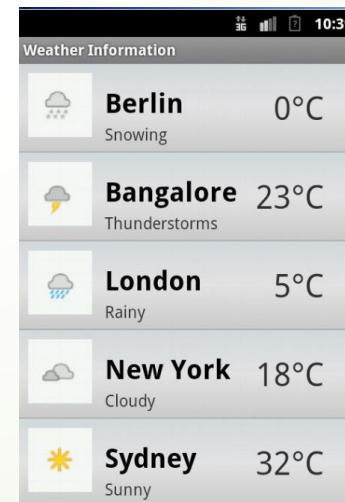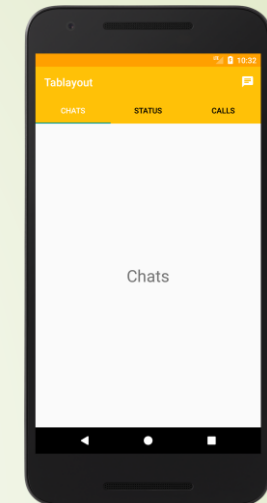- The RecyclerView must work in conjunction with an **Adapter** object that will be discussed on next slide …

Recycler View ←→ Adapter ←→ Data Source
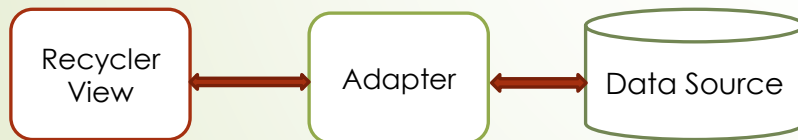
- Details about the RecyclerView in this <u>link</u>…

Grid

ViewPager

List

Spinner

Activity/Fragment class

Name : Jaja **Age**   : 22
Name : Hira **Age**   : 18
Name : Kunto **Age**   : 26
Name : Oop **Age**   : 29

MyAdapter extends RecyclerView.Adapter class

getItemCount()

onBindViewHolder()

onCreateViewHolder()

RecyclerView.ViewHolder class

TextView tvName, tvAge;
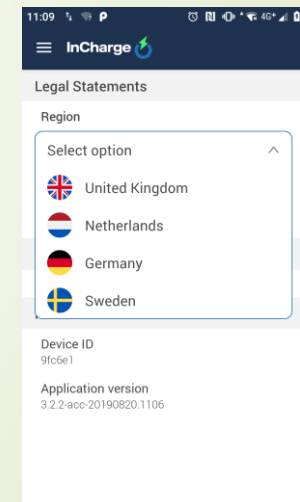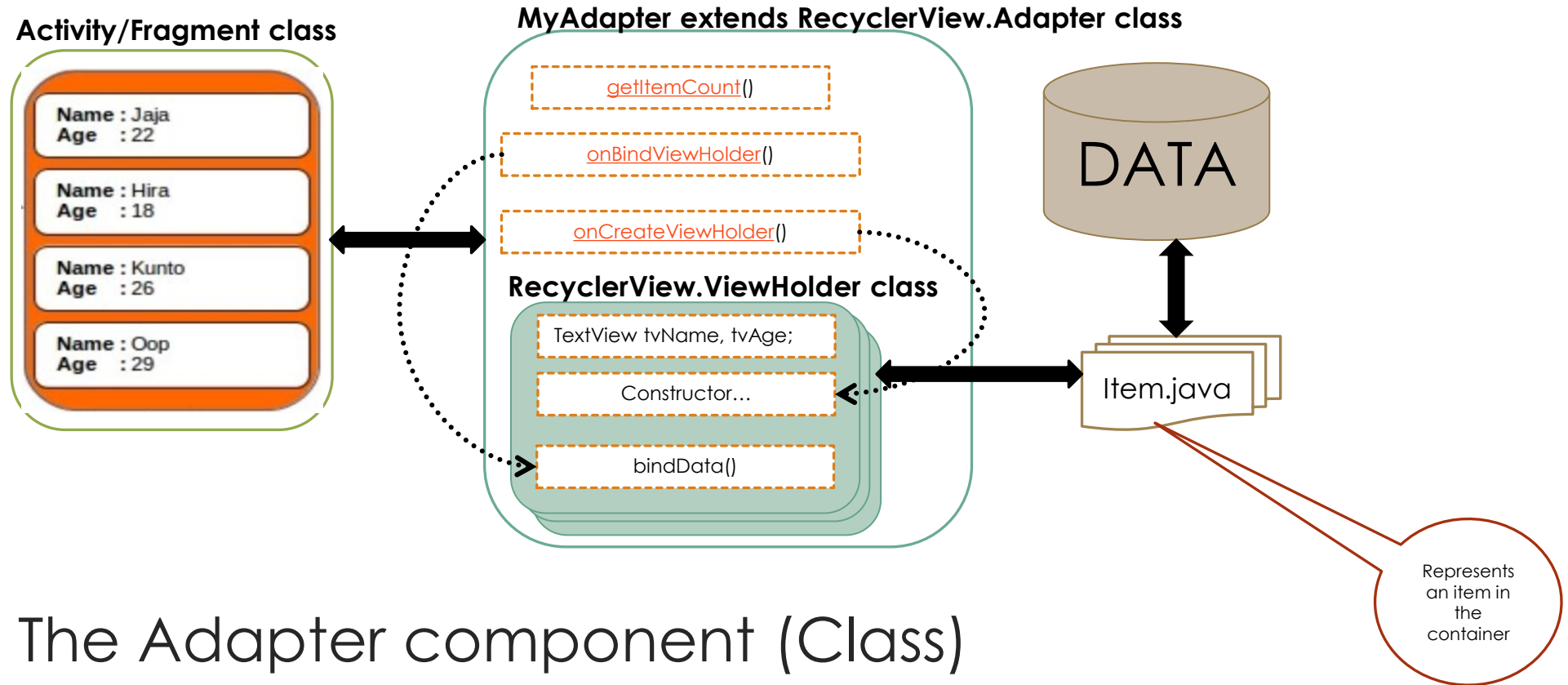
Constructor…

bindData()
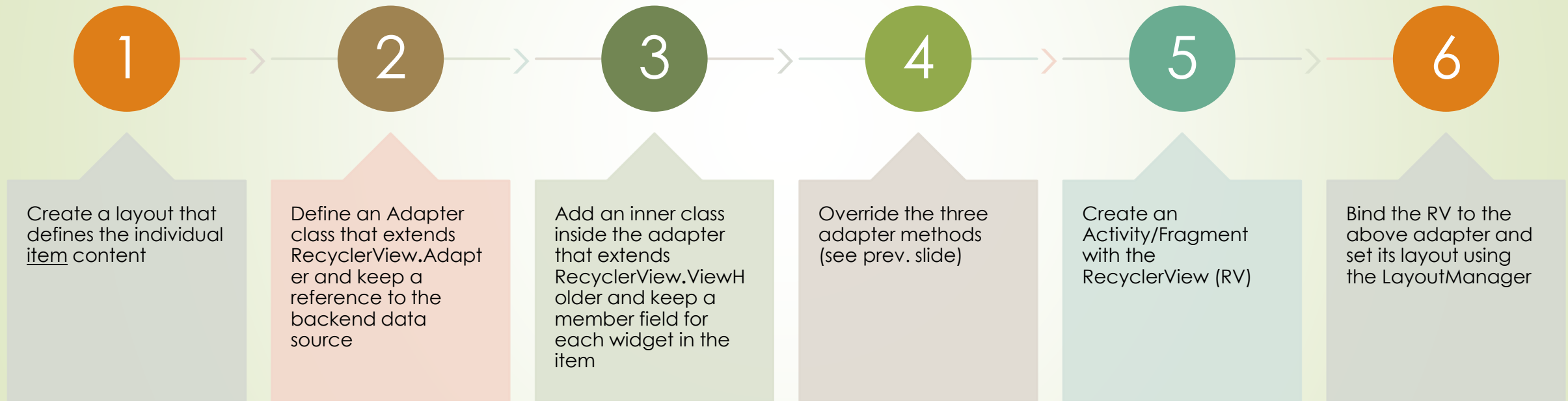
DATA

Item.java

Represents an item in the container

The Adapter component (Class)

- The middle block between the 'presentation' and the 'data source'
- Must define an inner (non static) class that extends from ViewHolder
  - Holds the widgets references inside each item
- The Adapter (outer class) must override <u>three</u> methods:
  1. getItemCount()
  2. onCreateViewHolder(…)
  3. onBindViewHolder(…)

See details in this <u>link…</u>

What are the steps when working with RecyclerView?

1 Create a layout that defines the individual <u>item</u> content

2 Define an Adapter class that extends RecyclerView.Adapter and keep a reference to the backend data source

3 Add an inner class inside the adapter that extends RecyclerView.ViewHolder and keep a member field for each widget in the item

4 Override the three adapter methods (see prev. slide)

5 Create an Activity/Fragment with the RecyclerView (RV)

6 Bind the RV to the above adapter and set its layout using the LayoutManager

See a code example <u>here</u>…

This week assignment – EX7

- An Application with 1 Activity that has 1 fragment that has a RecyclerView, exactly like in the image on the right…

- Each item includes:

  - ImageView of the country flag

  - TextView of the country name

  - TextView of the country population

- LongClick on an item will remove it from the list

  - Where the listener should be defined?

- A bunch of files are provided to you to facilitate the creation of this project, see next slide…
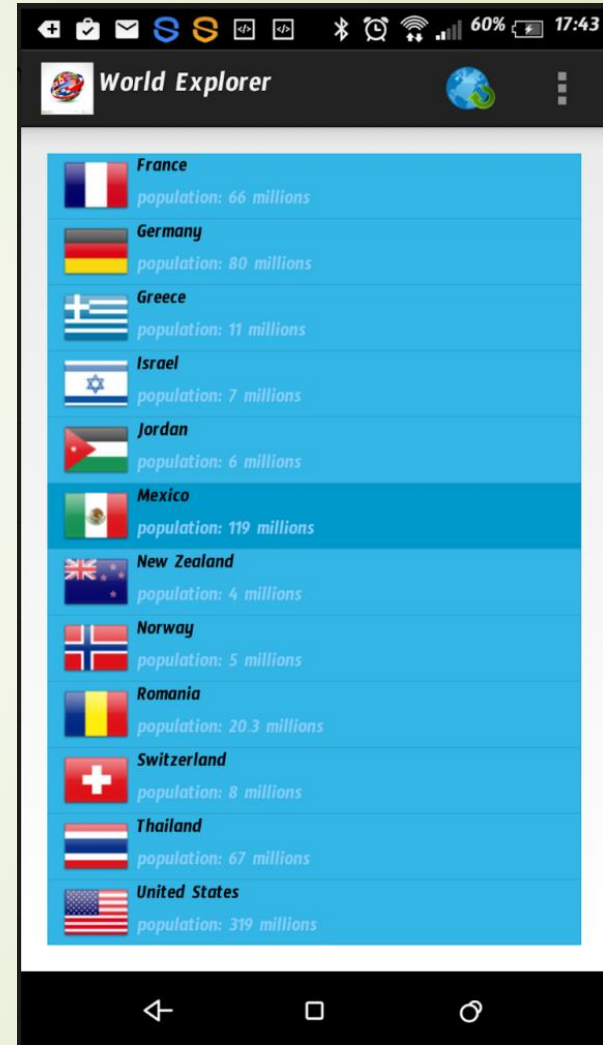
EX7 Helper files …

1. cflags.zip that contains all the countries flags images

   Should be imported into the 'drawable' folder

2. countries.xml that contains information about each country

   Should be imported into 'app\assets' folder

3. Country.java – represent a country POJO

4. CountryXMLParser.java that has a static method that parses the countries xml file and return an array of Country objects

   Should be called by the adapter