Android Workshop

Luke Klinker
Source Allies Inc.

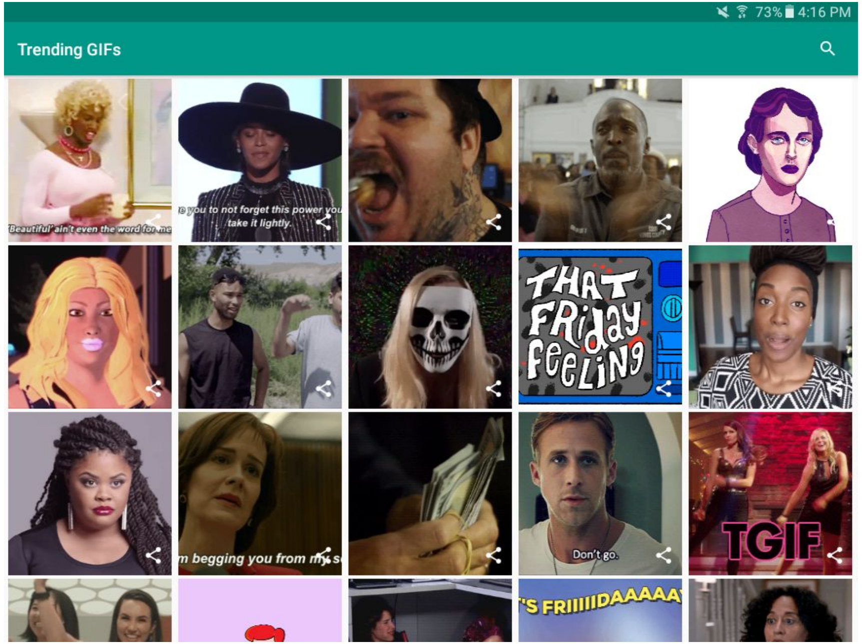
Introduction

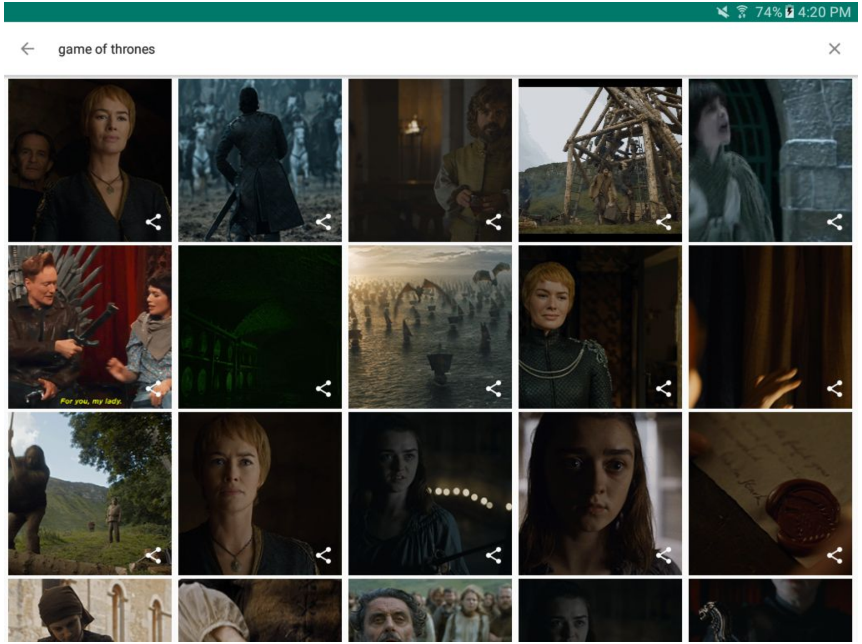
source allies

Today’s Workshop

- Make an app to find and share GIFs
- Consumes the official Giphy API (REST)
- Focus on the Android side
    - Android UI/UX
    - No database for this app
    - Backend is already established through Giphy
    - I have made a Giphy API client to wrap the setup for the endpoints and process the GET requests

Today’s Workshop





Some Notes

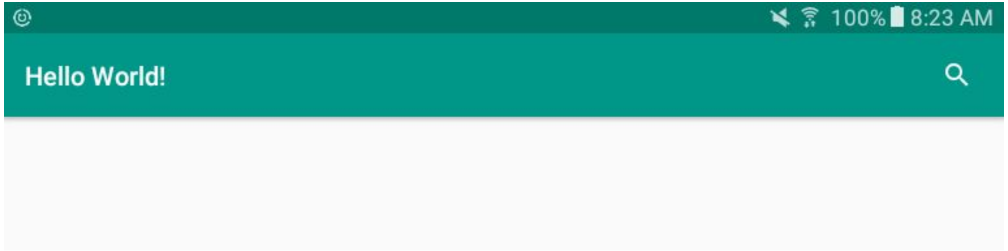
- Giphy API: https://github.com/Giphy/GiphyAPI
- So many different *Android* devices available
  - Resources for different configurations
- Activities, Fragments, Services, and Receivers
- *AndroidManifest.xml*
- Gradle Build System: http://goo.gl/vJQGVq

Getting Started

- GitHub Project: https://github.com/klinker24/giphy-demo
  - Checkout the "part_1" branch to get started
  - There are new branches for every step, but feel free to continue off of your old code instead as you finish the previous parts.
- In Android Studio hit the *Open Existing Android Studio Project* button
- Open the root directory for *giphy-demo*

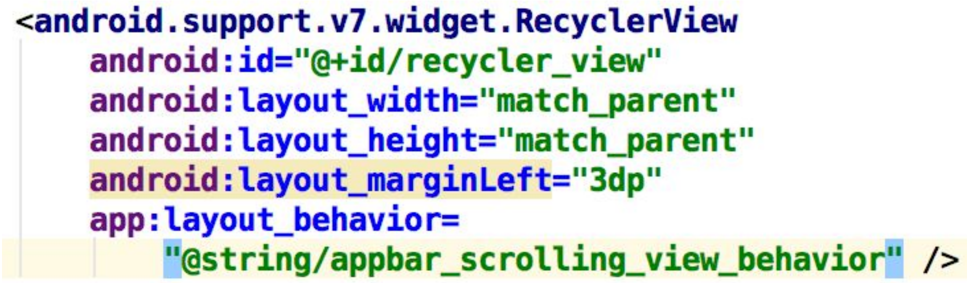
Part 1: Hello World in App Bar

1. Look at the *TrendsActivity*. This is the “Launcher Activity” that is started when we open the app
2. Look at *TrendsActivity* inheritance
3. *SearchActivity* manages our *Toolbar.* How do we change the text?



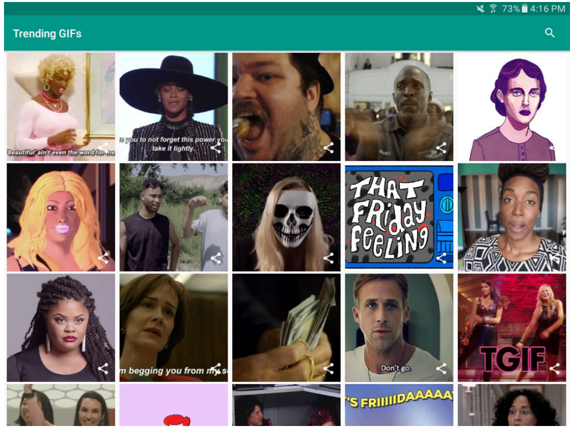
Part 2: Editing the layout

1. *GiphyActivities* uses the *activity_main.xml* layout
2. Add a *RecyclerView* to it
3. Set up that *RecyclerView* within the *GiphyActivity*
4. Change the text in the app bar to “Trending GIFs”



```
<android.support.v7.widget.RecyclerView
    android:id="@+id/recycler_view"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_marginLeft="3dp"
    app:layout_behavior=
        "@string/appbar_scrolling_view_behavior" />
```

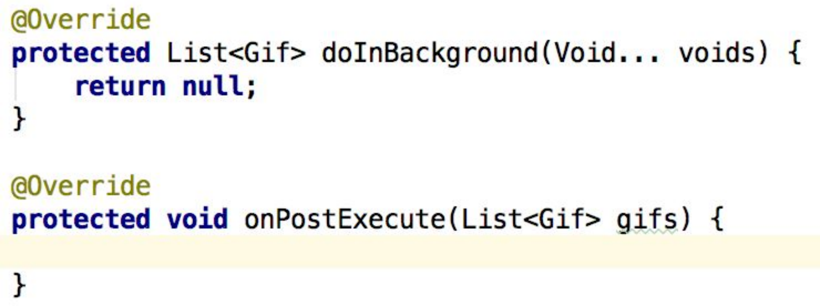
Part 3: Implement the Adapter



1. Why didn’t the *RecyclerView* show anything?
2. Adapters control and populate lists in *Android* (*ListView/RecyclerView)*
3. Why is it called a *RecyclerView*?
4. Look at the *adapter_item_gif.xml*
5. Implement adapter and Glide to load data
6. Where do these libraries come from?

Part 4: A simple AsyncTask

1. *AsyncTask*’s control background threads in *Android*
2. We were already using one, but now we are going to implement it ourselves

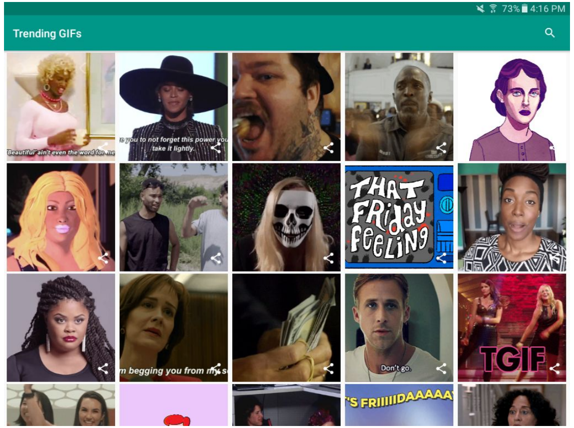


```
@Override
protected List<Gif> doInBackground(Void... voids) {
    return null;
}

@Override
protected void onPostExecute(List<Gif> gifs) {

}
```

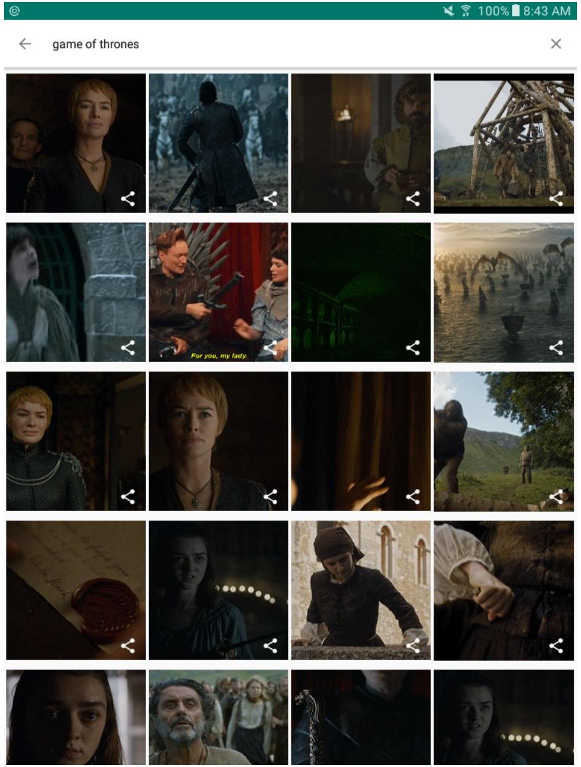
3. Add a *doInBackground()* and *onPostExecute()* to *GiphyTask*

Part 5: Downloading and Sharing GIFs

1. Go back to the *adapter_item.xml* and add a share button
2. Check out the more complex *ShareGifTask*
3. Use it in the *GifViewHolder*



Part 6: Implementing Searches



game of thrones

1. Look at *SearchActivity* to see how the *SearchView* works
2. Static factory methods are a great way to send arguments with an *Intent*
3. How do we use those extras on the *Intent*?

Other Topics to Explore

- Databases
- Custom Widgets
  - Ex: *SimpleVideoView* or *LabeledEditText*
- *IntentServices*
- *BroadcastReceivers*
- Material Design