PV239 #android2

cv2

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YOU WANT TO SCROLL?
LISTVIEW

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ListView

- A view that shows items in a vertically scrolling list.
- Typical use case is phonebook
- Model -> Adapter -> ViewHolder

  ```
  ListView.setAdapter(adapter);
  ```

- More efficient -> RecyclerView (more complicated; try at home)

NETWORKING

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Networking

- AndroidManifest.xml
  - <uses-permission android:name="android.permission.INTERNET" />
- Images
  - Glide / Picasso / Fresco
- Http
  - OkHttpClient
  - HttpUrlConnection
- REST
  - Retrofit 2
- JSON
  - GSON

Glide / Picasso / Fresco

- Nice overview
  - http://stackoverflow.com/questions/29363321/picasso-v-s-imageloader-v-s-fresco-vs-glide
- We use **Glide**
  - https://github.com/bumptech/glide#download
  - https://github.com/bumptech/glide#how-do-i-use-glide
- Glide.with(this).load("http://goo.gl/gEgYUd").into(imageView);
- Nice tutorials
  - https://futurestud.io/tutorials/glide-image-resizing-scaling

EXERCISE1

Playing with images.

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Show Item in the Listview with 120x120 resolution

- Add Glide into Gradle file
- Add ImageView into item layout
- Then
- ```
  Glide
      .with(context)
      .load(url)
      .override(120, 120)
      .fitCenter()
      .into(imageView);
  ```
  ```

Gson

- Java serialization/deserialization Library by Google
- https://mvnrepository.com/artifact/com.google.code.gson/gson
- Let's say

```
public class User {
    public String name; // + getter, setter
}
```

- Then

```
Gson gson = new Gson();
User user = new User(); user.setName("Fero");
String userJson = gson.toJson(user);
User userCopy = gson.fromJson(userJson, User.class)
```

OkHttpClient

- An HTTP & HTTP/2 client for Android and Java applications
- http://square.github.io/okhttp/
- https://mvnrepository.com/artifact/com.squareup.okhttp3/okhttp
- Nice example from Android1 slides:

```
Request request = new Request.Builder()
     .url(url)
     .post(RequestBody.create(.., json))
     .build();
Response response = client
     .newCall(request)
     .execute();
response.body().string();
```

Retrofit2 - once you hear REST, use this

- A type-safe HTTP client for Android and Java
- https://square.github.io/retrofit/
- https://mvnrepository.com/artifact/com.squareup.retrofit2/retrofit

```
public interface GitHubService {
  @GET("users/{user}/repos")
  Call<List<Repo>> listRepos(@Path("user") String user);
}
Retrofit retrofit = new Retrofit.Builder()
    .baseUrl("https://api.github.com/")
    .build();
GitHubService service = retrofit.create(GitHubService.class);
Call<List<Repo>> repoListCall = service.listRepos("octocat");
repoListCall.enqueue(...);
```

EXERCISE2

Playing with REST.

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Show avatar from Github username in the ImageView

- API Docs: https://developer.github.com/v3
  - https://developer.github.com/v3/users/#get-a-single-user
- GSON
- Glide
- Retrofit2

THANK YOU

See you on Slack.

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