



FMT Reversi Android

by
[Francesco Benincasa](#)



Roadmap

- ▶ Intro
- ▶ The project
- ▶ Demo
- ▶ Let's dive into the code
- ▶ Conclusions



Introduction

- The aim of the project is to realize a Reversi implementation on Android platform:
 - Match on the same device
 - Match between two devices (each player on his own device)
- The game rules are based on [Reversi on Wikipedia](#) and [Federazione Nazionale Gioco Othello](#)



The project - what did we use?



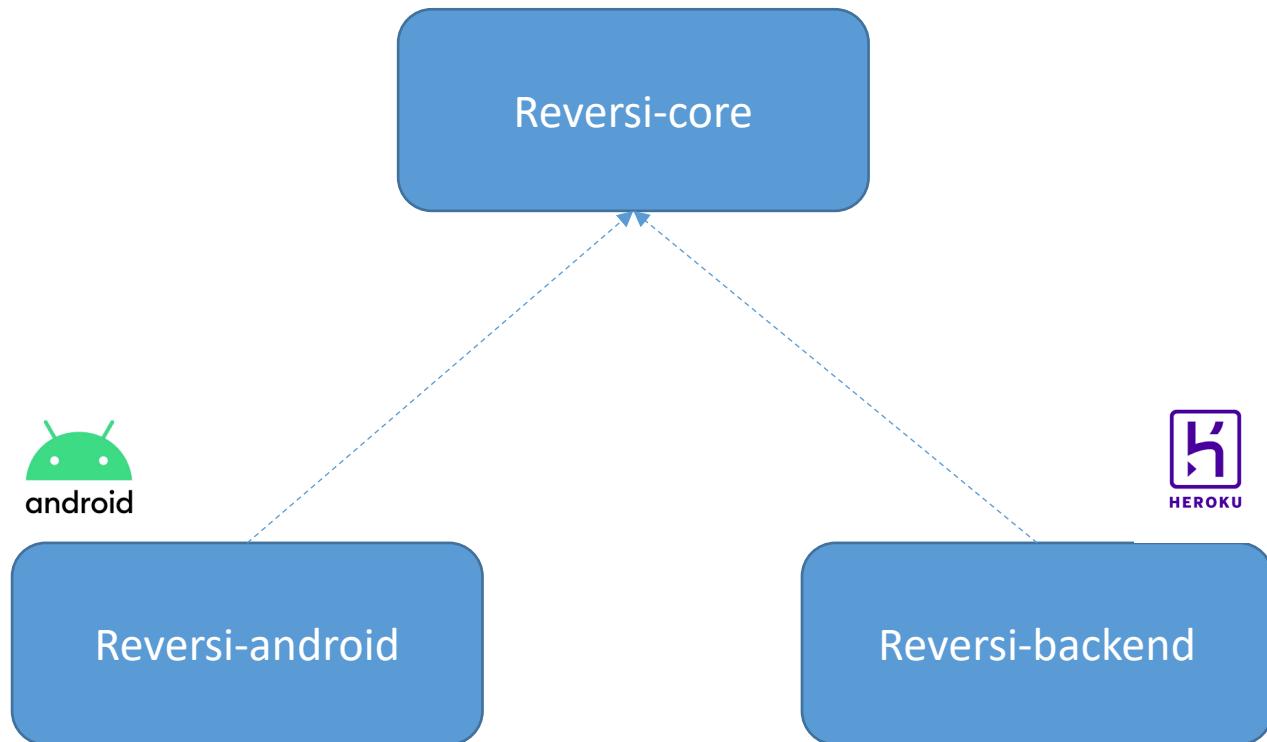
Maven[™]



ngrok



The project - modules





Build process

Android development



android

Backend development



ngrok



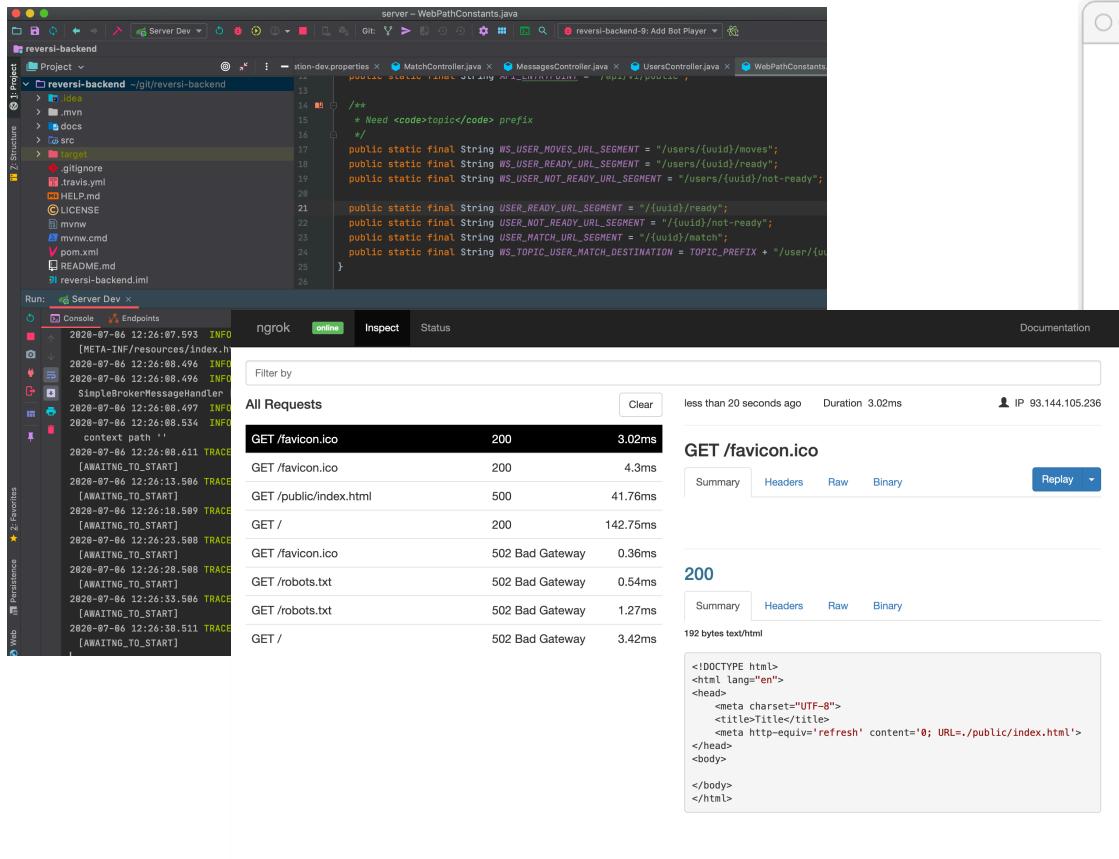
<https://836c360b507d.ngrok.io>



<https://fmt-reversi.herokuapp.com/>

Backend development

NGROK was used to expose local server on the web during development



Backend development

To deploy backend server, github, travis and heroku were used

The image displays three screenshots illustrating the deployment process for a backend application:

- Github Repository (xcesco/reversi-backend):** Shows the repository structure with files like .mvn/wrapper, docs, src, .gitignore, .travis.yml, HELP.md, LICENSE, README.md, mvnw, mvnw.cmd, pom.xml, reversi-backend.iml, and system.properties. A recent commit by xcesco is shown.
- Heroku Application (fmt-reversi):** Shows the Heroku dashboard for the app, including sections for Overview, Resources, Deploy, Metrics, Activity, Access, and Settings. It indicates no add-ons are installed and shows deployment history.
- Travis CI Build Log (xcesco/reversi-backend):** Shows the build status as "passing". The log details a successful build (#50) for the master branch, comparing commits 9897118 and 3c462ee5, running on an AMD64 machine.



Android development

- ▶ View model & live data
- ▶ Shared preferences
- ▶ Navigation
- ▶ Intent
- ▶ Retrofit
- ▶ Websocket & STOMP
- ▶ Recycler View
- ▶ Jackson
- ▶ RX java
- ▶ Timber
- ▶ Firebase
- ▶ Dagger2



websocket navigation

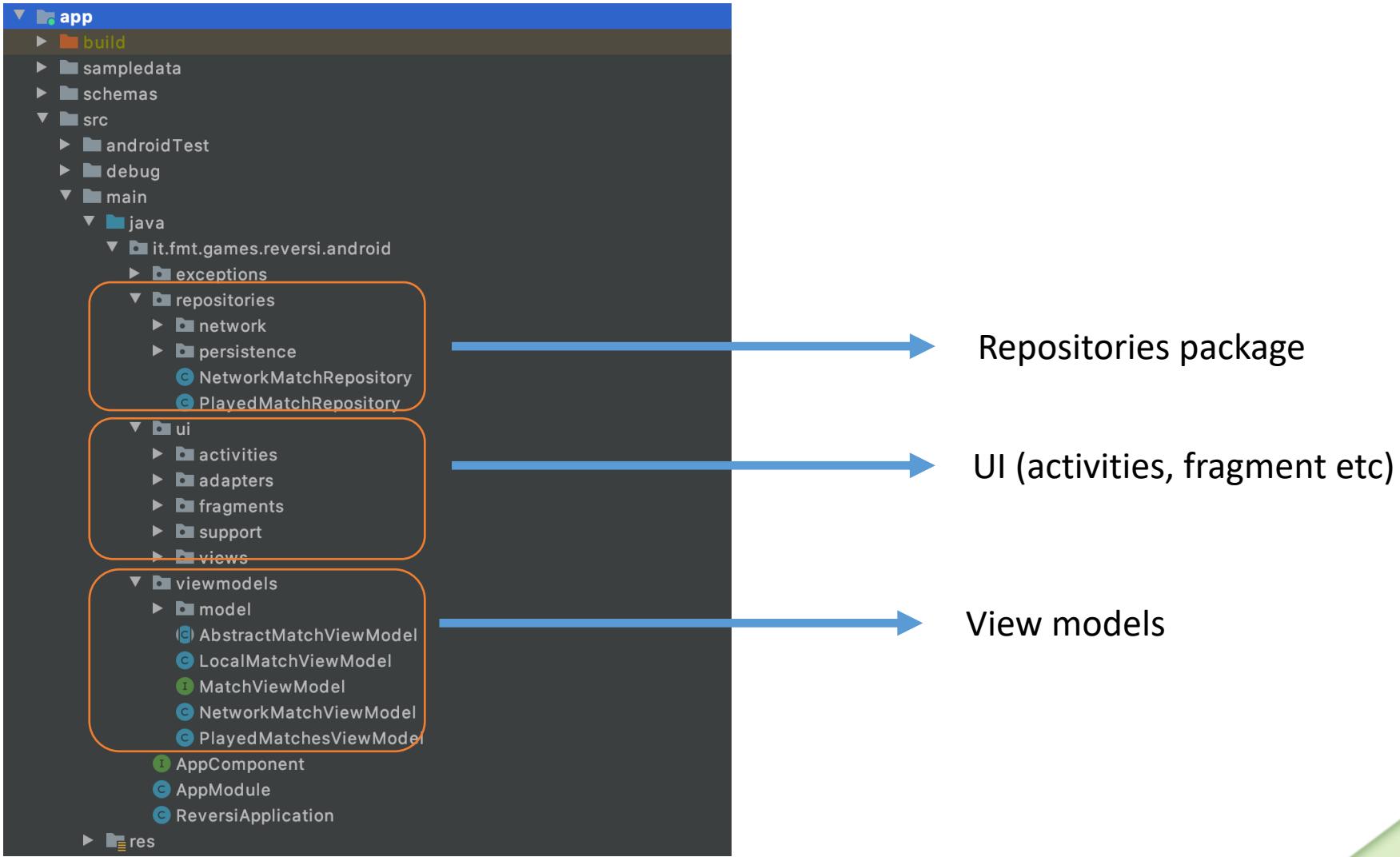
timber model_view
rx_java live_data
firebase jackson intent
dagger2 view retrofit
recycler_view room
view_binding



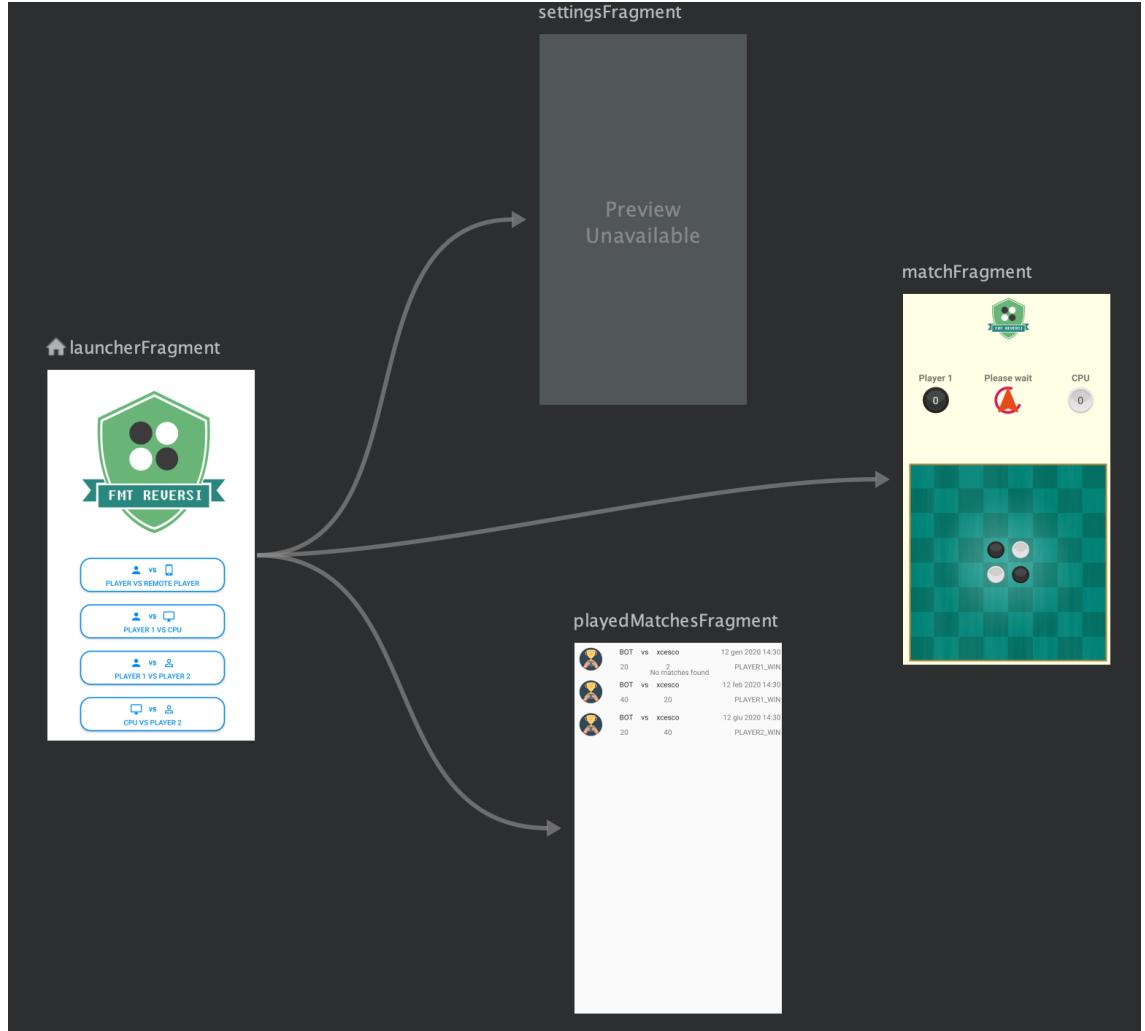
About Android development

- ▶ Retrofit: <https://square.github.io/retrofit/>
- ▶ Okhttp: <https://square.github.io/okhttp/>
- ▶ Websocket & STOMP protocol: <https://github.com/NaikSoftware/StompProtocolAndroid>
- ▶ Jackson: <https://github.com/FasterXML/jackson>
- ▶ ViewBinding: <https://developer.android.com/topic/libraries/view-binding#java>
- ▶ Dagger: <https://github.com/google/dagger>
- ▶ Navigation component: <https://developer.android.com/guide/navigation/navigation-pass-data>
- ▶ ModelView & Live data components:
<https://developer.android.com/topic/libraries/architecture/livedata>
- ▶ Timber: <https://github.com/JakeWharton/timber>
- ▶ Firebase
<https://firebase.google.com/docs/crashlytics/get-started?authuser=0&platform=android>

Source code organization

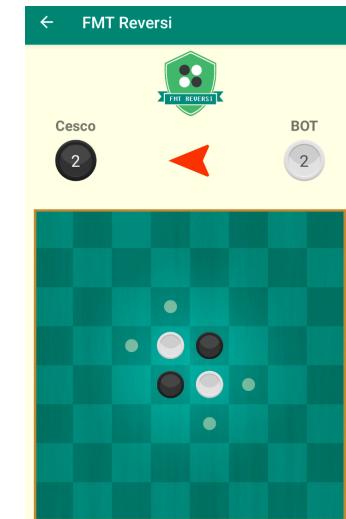
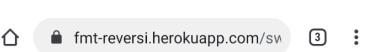
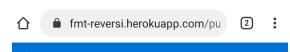


Navigation between fragments



1 activity, 4 fragments, 1 navigation graph

Navigation between fragments



Demo



It's time to play!

Android version available on [Google Play Store](#)

<https://play.google.com/store/apps/details?id=it.fmt.games.reversi.android>



Network match demo on <https://youtu.be/RUfBwd1IXWg>





Source code on GitHub

- ▶ [FMT Reversi Android source code on Github](#)
- ▶ [FMT Reversi Backend source code on Github](#)
- ▶ [FMT Reversi source code on Github](#)



Conclusions

- ▶ FMT Reversi can be improved:
 - ▶ Support for other platform (web)
 - ▶ Improved IA for CPU players
 - ▶ Google play game service
 - ▶ PS4 version cooming soon!
- ▶ Any question?

Thanks!

