FMT Reversi Android

by

Francesco Benincasa

Roadmap

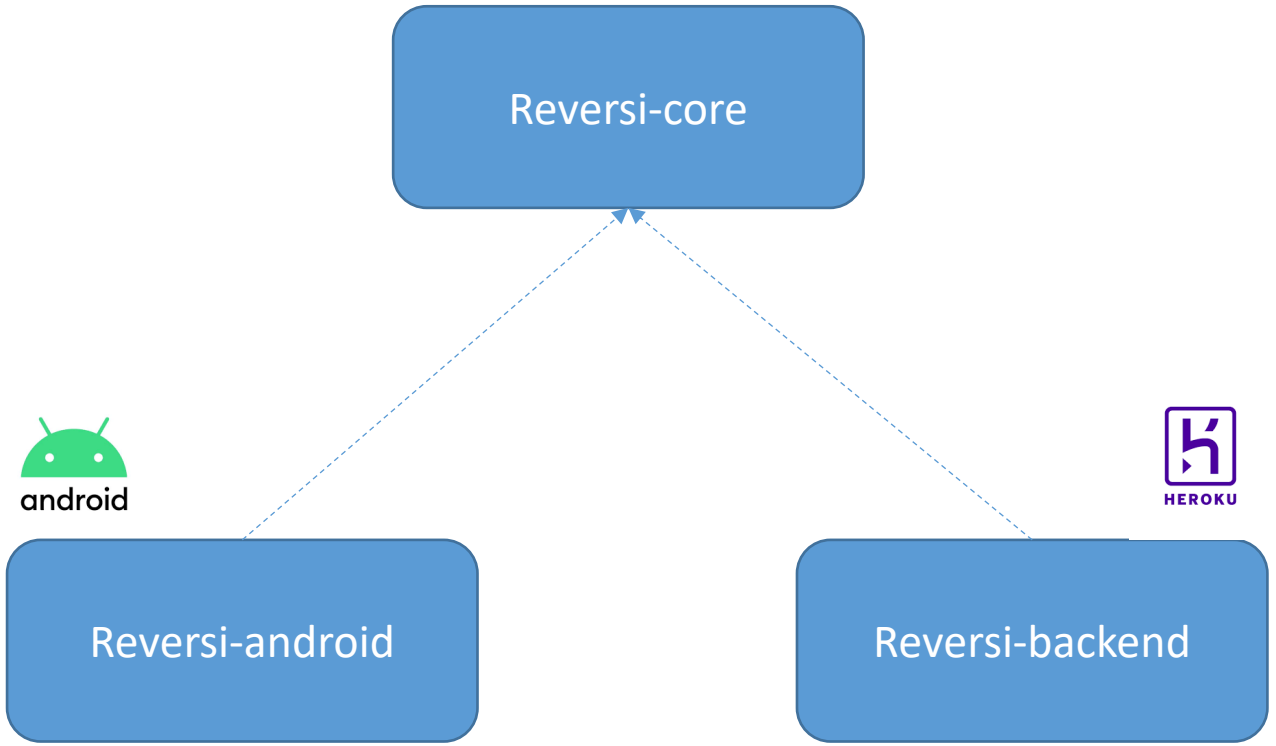
- Intro
- The project
- Demo
- Let’s dive into the code
- Conclusions

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?

The project - modules



Build process

Android development

Backend development

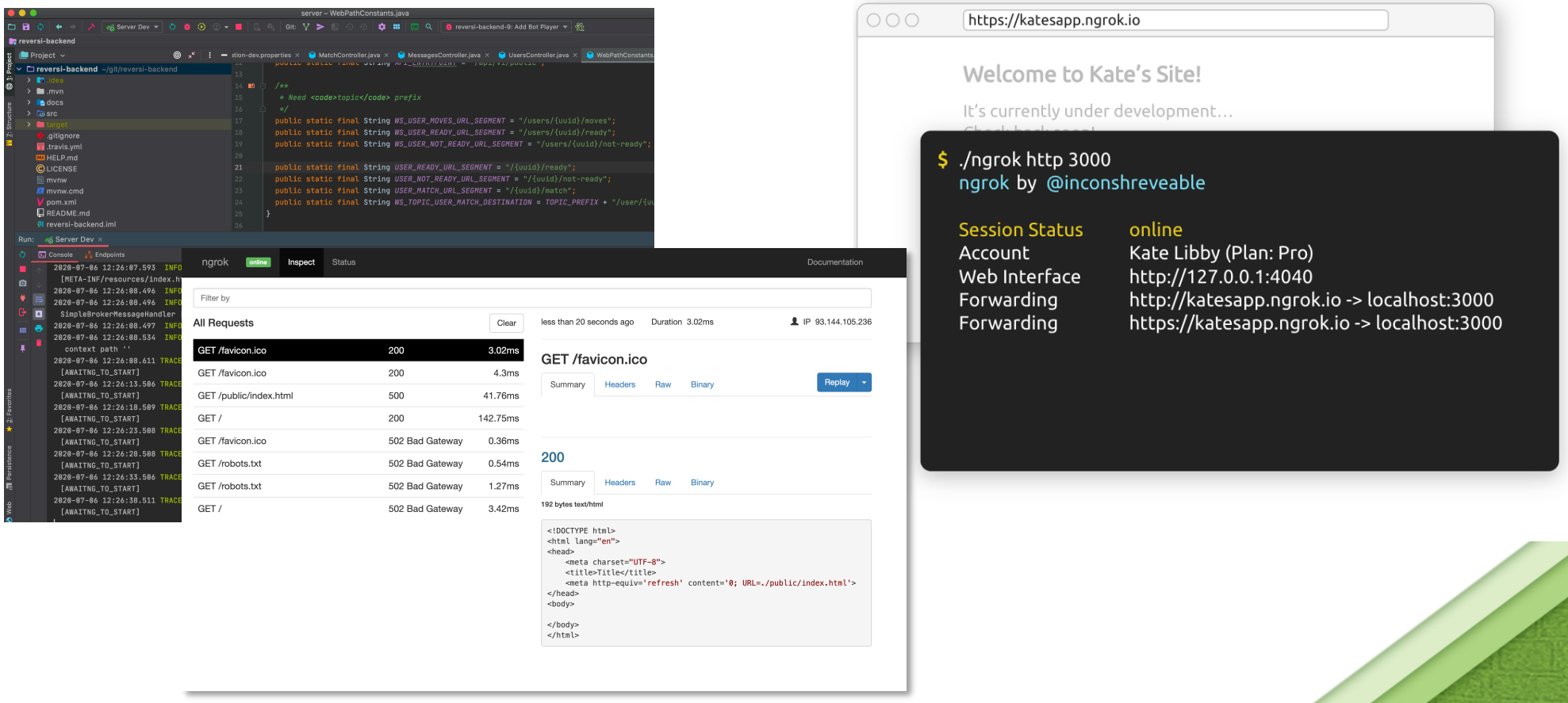
ngrok

https://836c360b507d.ngrok.io

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

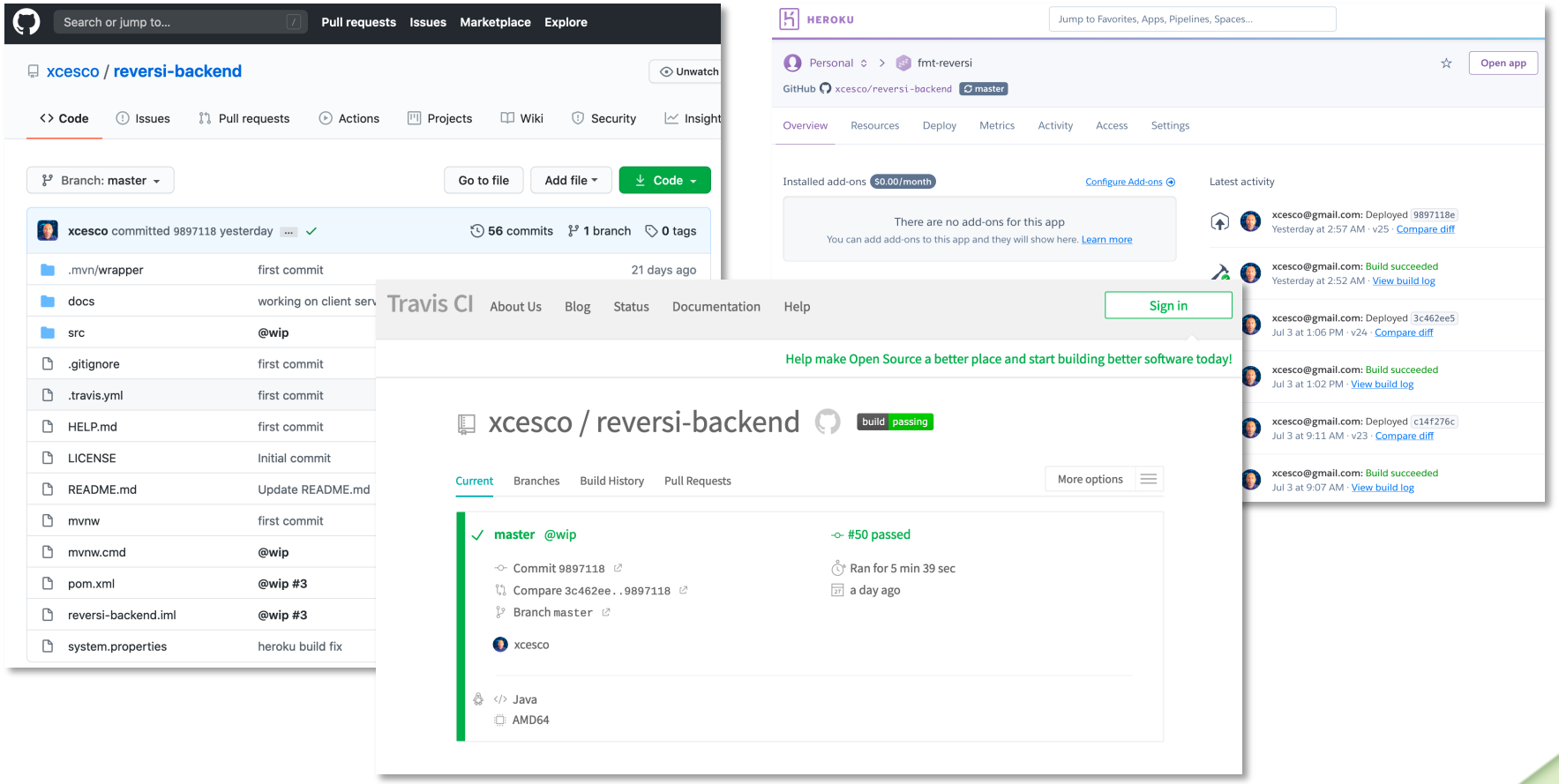
Backend development

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



Backend development

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



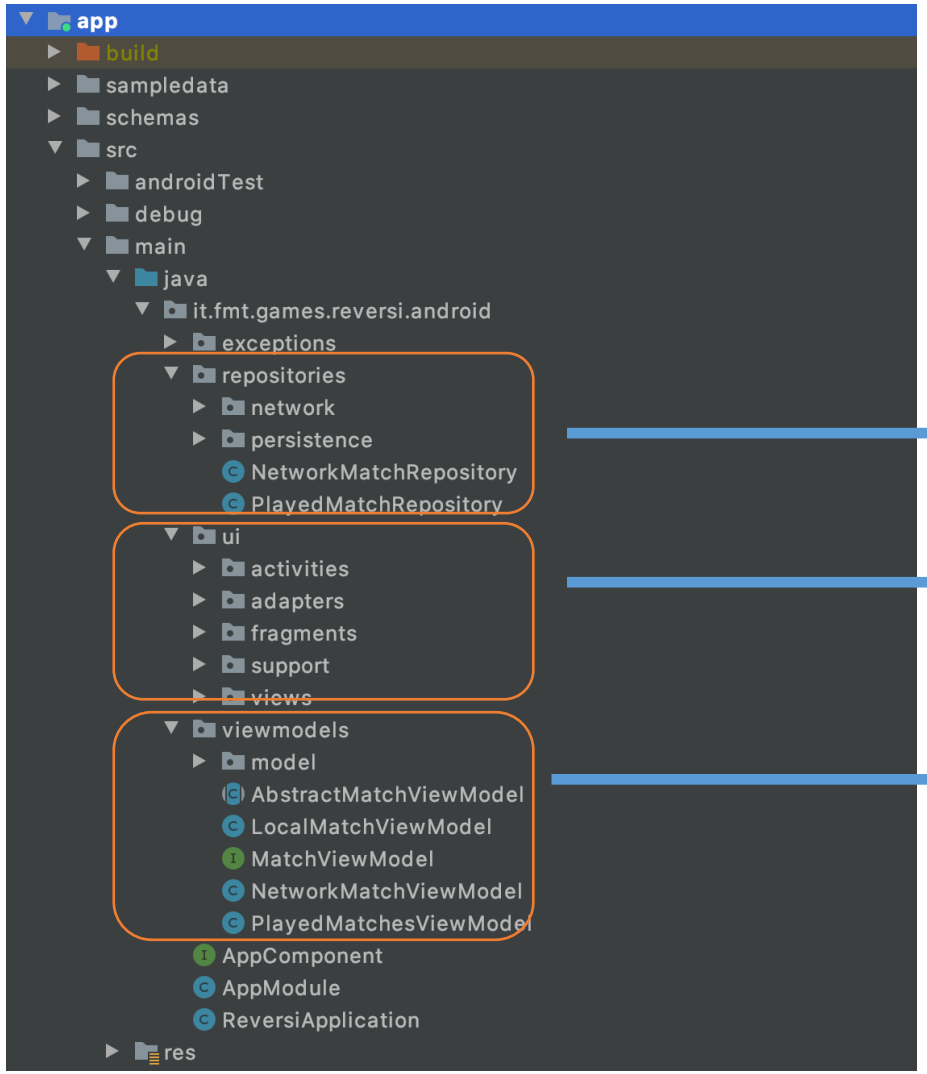
Android development

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

About Android development

- Retrofit: https://square.github.io/retrofit/
- Okhttp: https://square.github.io/okhttp/
- Websocket & STOMP protocol: https://github.com/NaikSoftware/StompProtocolAndroid
- ViewBinding: https://developer.android.com/topic/libraries/view-binding#java
- Daggger: 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



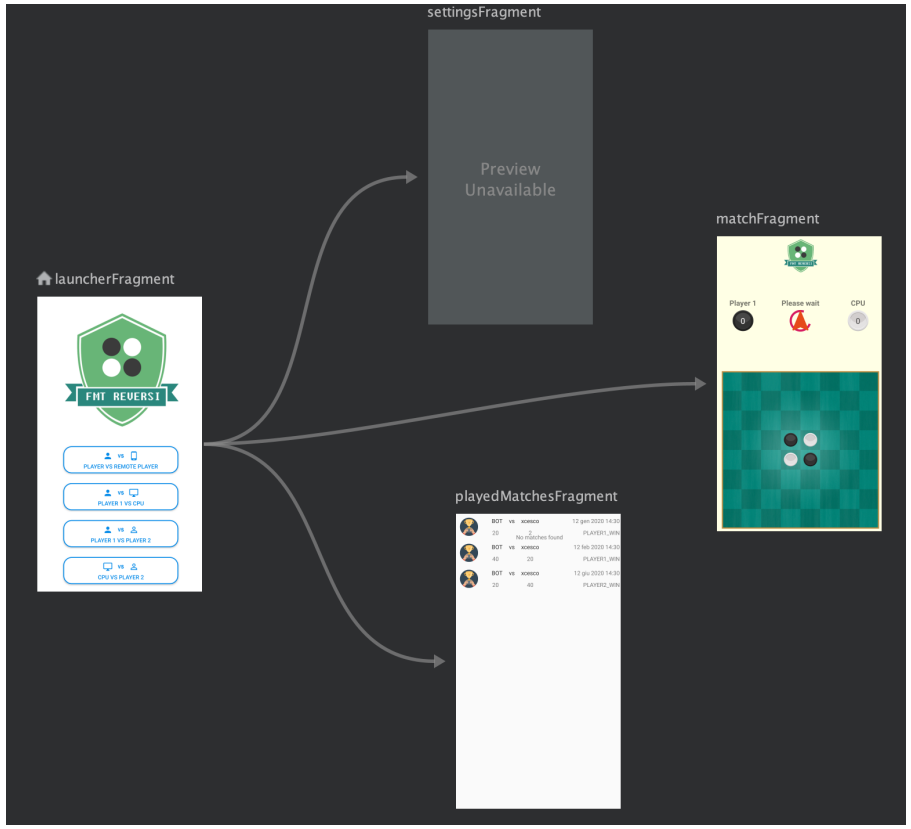
Repositories package

UI (activities, fragment etc)

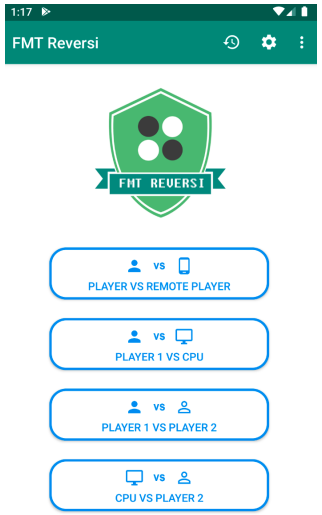
View models

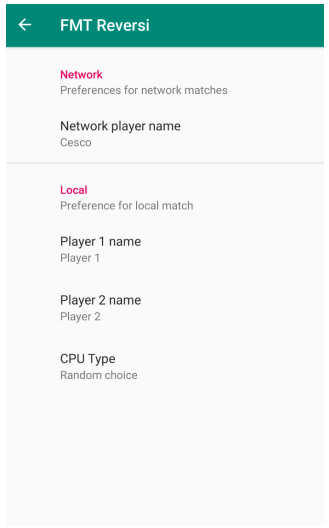
Navigation between fragments

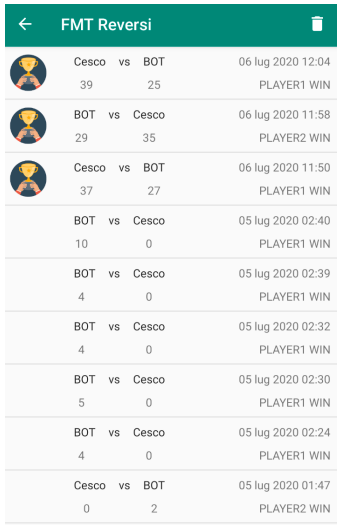
1 activity, 4 fragments, 1 navigation graph

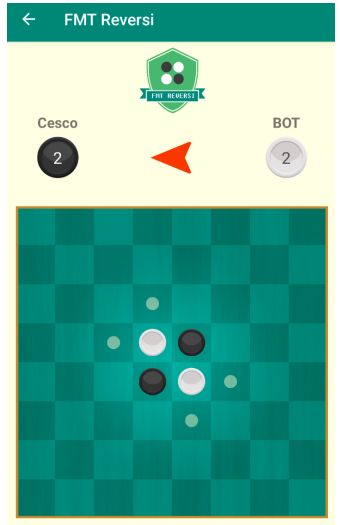


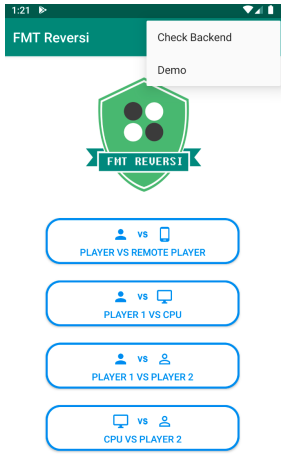
Navigation between fragments

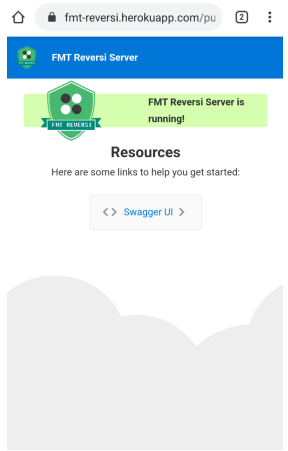


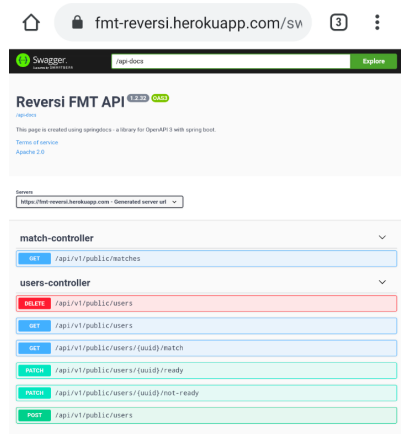




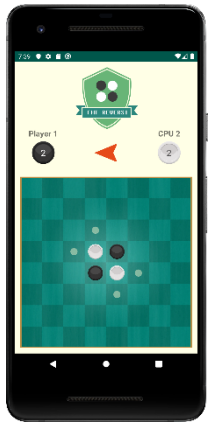








Demo



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

SCAN ME

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!