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Instructions on how to set up and run our game

Client Tier

The client has been configured to run on the Android Studio emulator. It's not hard to get it onto an actual Android phone, but you'd have to update the IP/Port at the top of MainActivity to the actual server listening address. On our setup for the presentation this was "10.0.2.2" and "8080".
Use these credentials to do a serverless test run: user = remlap, pass = palmer

1. Install Android Studio. Like PyCharm, it's very similar to IntelliJ.
2. In the top context menu: Help → Find Action → Device Manager → Create Device
    a. Select any device. The app has been tested with Pixel 2 and Pixel 5 emulators
    b. Select API Level 26 (Android Oreo 8.0)
        i. You will have to download this release first, it will be ~800MB
    c. On the 'Verify Configuration' screen click 'Show Advanced Settings'
    d. Ensure the device camera dropdowns are set to your webcam
3. By the time the device is created Gradle should have had enough time to finish setting up. Ensure the build configuration is set to 'app' and the device is set to your selected virtual device in the dropdowns.
4. Build and run the app. The emulator should automatically open and begin its initial configurations. This will only need to be done once.
5. With the servers running, proceed through the app, clicking on the emulator for touch control. The emulator also takes keyboard input so no need to use the on-screen input UI.
6. Once you've landed on the game screen (with the timer ticking up) you'll be presented with the 'Scan' button. Clicking this will ask for camera permissions the first time you run the app on this emulator. Hit accept.
7. Proceed slowly for this step since the emulator can be a bit finicky. At this point the emulator should display your webcam's input. Show it the three provided QR codes, one scan per button press. After the third scan the game should end and display the game stats for your session.

Application Tier

1. Development Environment Specifications
    a. Mac OS - Big Sur version 11.6.5
    b. IntelliJ IDEA version 2021.3.3 Community Edition
    c. Dropwizard version 2.0.28
2. Open folder containing services
3. “mvn clean install” for each service
4. run each service, order does not matter
    a. java -jar target/GameService-1.0-SNAPSHOT.jar server config.yml
    b. java -jar target/PlayerService-1.0-SNAPSHOT.jar server config.yml
    c. java -jar target/RoomService-1.0-SNAPSHOT.jar server config.yml
    d. java -jar target/FlagService-1.0-SNAPSHOT.jar server config.yml
5. Database must be running for services to start correctly

Database Tier

1. Database was created using Postgres and PSQL. The database was exported using this reference method #1 as a guide: https://www.a2hosting.com/kb/developer-corner/postgresql/import-and-export-a-postgresql-database
    a. The username with database access is: game_service_db_user
    b. The password is: CaptureTheFlag
    c. The database name is capture_the_flag
2. Import database as instructed in method #1 for importing via psql.
3. Run database: /usr/local/opt/postgresql/bin/postgres -D /usr/local/var/postgres