Catch Me If You Can Design Doc

Overview

Android application that allows users to save Runs and race against their own time

Milestones

Aa Tasks	☰ Status	☰ Requirements
<u>Create Home Activity</u>	Completed	- Redirects to **HomeFragment** (if user is active) - Redirects to **StartupFragment** (if user session is not active)
<u>Implement FirebaseAuth</u>	Completed	
<u>Create Startup</u>	Completed	- **SignupFragment** - **LoginFragment** - **FirebaseAuth** to login / signup
<u>Implement StartupFragment backend components</u>	Completed	- **UserModel** to store user info - **UserRepository** - **SignupFragmentViewModel** - **LoginFragmentViewModel**
<u>Create navigation components</u>	Completed	
<u>Create HomeFragment</u>	Completed	- To show user location - Ability to record a run - Permissions: **FINE_LOCATION** (user location tracking), **ACTIVITY_RECOGNITION** (user step count)
<u>Implement Google Maps API</u>	Completed	- API Key: *AIzaSyDWWpifWc9lsfcE4PD0K6FobxlDQoEmVyc*
<u>Add Motion Layout for Home Fragment</u>	Completed	
<u>Implement Dagger for Dependency Injection</u>	Completed	- **AppComponent** - **ActivityModule** → provides Activity dependencies - **ApplicationModule** → provides Application dependencies - **DaoModule** → provides Dao dependencies - **FragmentModule** → provides Fragment dependencies - **NetworkModule** → provides Retrofit + OkHttpClient - **ViewModelModule** → provides ViewModel dependencies

Tasks	Status	Requirements
Implement HomeFragment backend components	Completed	- **HomeFragmentViewModel** - Ability to save a user run
Implement FirebaseDatabase	Completed	
Implement RxJava for endpoint calls	Completed	- **ApiService** - **LoadingDialog**
Create RunsFragment	Completed	- To show all history of user Runs
Implement RunsFragment backend components	Completed	- **RunsFragmentViewModel** - **RunsRepository - RunsModel** (Retrofit)
Create RunDetailsFragment	Completed	
Implement RunDetailsFragment backend components	Completed	- **RunDetailsFragmentViewModel** - Geofence implementation: **GeofenceBroadcastReceiver -** Permissions: **ACCESS_BACKGROUND_LOCATION** (for geofencing / used for start and finish line)
Create AccountFragment		
Implement AccountFragment backend components		- **AccountFragmentViewModel** - **FirebaseStore** for user profile picture - Permissions: **READ_STORAGE** (choosing image from device storage), **CAMERA** (take a photo for profile picture)
Create ChangePasswordFragment	Completed	- Uses **FirebaseAuth** to update account password
Create DeleteAccountFragment	Completed	- Uses **FirebaseAuth** to delete account
Create UpdateAccountNameFragment	Completed	- Uses **FirebaseAuth** to update user name
Implement Room for create local database	Completed	
Implement Dao for LocalDatabase	Completed	- Allow **RunsModel** to be used for Room - **RunsDao** - **AppDatabase** - **RunsLocalRepository** → implements **RunsDataSource**
Create ForgotPasswordFragment	In Progress	- Will implement in future

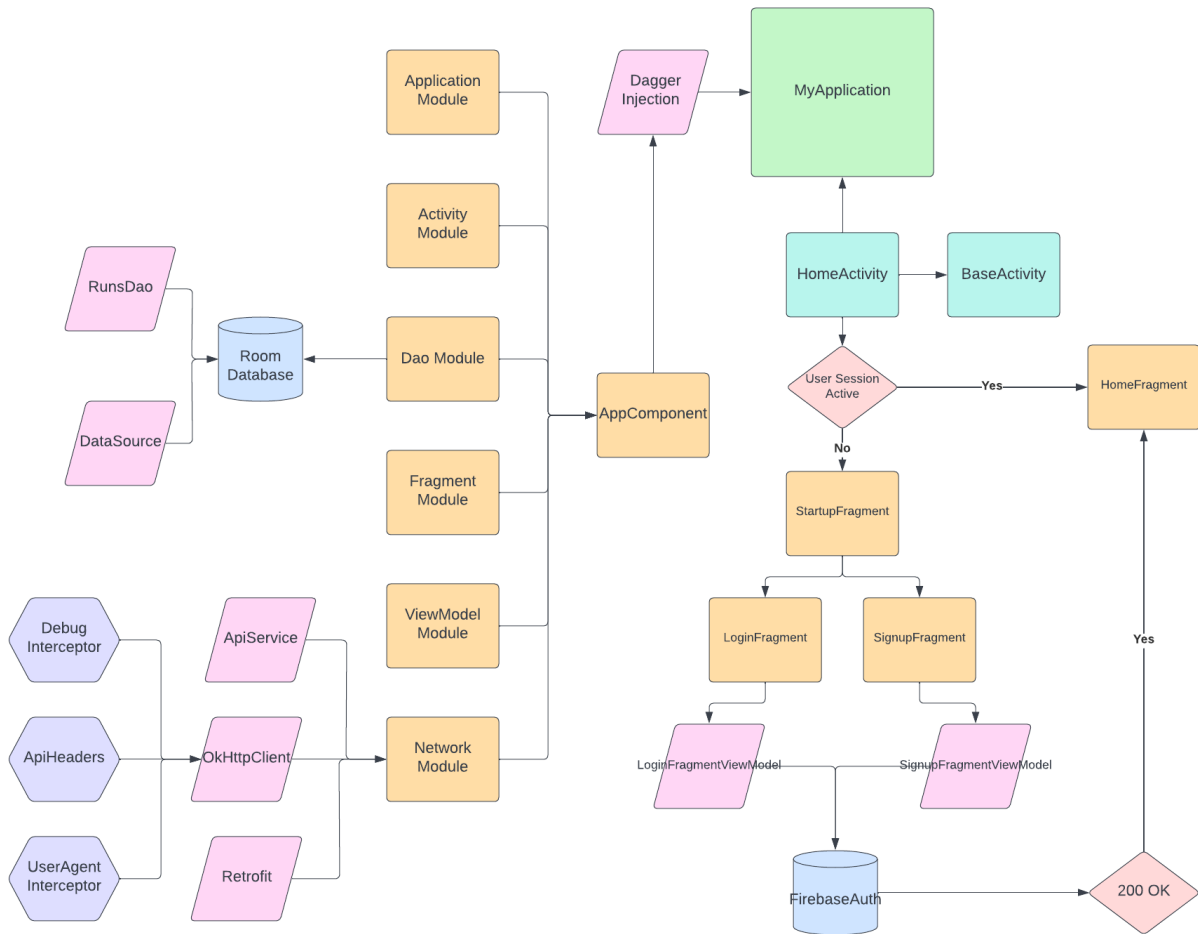| Aa Tasks	☰ Status	☰ Requirements
Implement ForgotPasswordFragment backend components	In Progress	- Will implement in future
Create ChallengesFragment	Out of Scope	- Ability to see challenges from friends or other users
Implement ChallengesFragment backend components	Out of Scope	
Create FriendsFragment	Out of Scope	- List of friends
Implement FriendsFragment backend components	Out of Scope	
Create NewsFragment	Out of Scope	- News from saved friends or users
Implement NewsFragment backend components	Out of Scope	

Dependencies

Google Maps API Key

ApiKey = `AIzaSyDWWpifWc9lsfcE4PD0K6FobxlDQoEmVyc`

Firebase JSON File

- Included in Github Repo

Architecture

MyApplication

HomeFragment