

Design Document – Android Kotlin Developer Capstone

This document is part of the Udacity Android Kotlin Developer Capstone project.

The app developed for the purpose it's a Formula 1 theme application, since I like the sport.

The milestones developed were:

- Milestone 1
 - Develop a screen to list 2021 drivers and it's details
 - Develop a screen to list 2021 constructors and it's details
- Milestone 2
 - Add location functionality by providing a map opened next to a F1 circuit, and the user can choose to add POI of their interested that are saved
- Milestone 3
 - Add an about the app screen with motion layout

The rubric points are met in the following way:

Android UI/UX

Application contains 8 screens:

- Main Fragment
- Main Driver Fragment
- Main Constructor Fragment
- Detail Driver Fragment
- Detail Constructor Fragment
- Grand Prix Fragment
- About Fragment

Android navigation is used to navigate between screen and an application bundle is used on Detail Driver Fragment and Detail Constructor Fragment to meet first criteria.

Constraint layouts are used across all fragments, recycler views are used both on Main Driver Fragment and Main Constructor Fragment.

"res" directory is used across majority of the fragments, and all fragments contain id's and vertical constraints. This meets the second criteria.

A motion layout screen is included in the About Fragment, meeting the third criteria.

Local and Network Data

Application used external data sources and REST communication to feed the data sources in both drivers and constructor screens. Code can be checked at "F1Gateway.kt" and "NetworkUtils.kt", meeting the first criteria.

Picasso library is used to load images asynchronously from the internet. Code can be checked at "BindingAdapter.kt".

Room database is used as local data source, to save driver, constructor and favorite locations. Code can be checked at "database" package inside the application.

Android System and hardware integration

Framgment, Activities, Models and ViewModels are used across the application.

Observer pattern is used. Check, for example, "MainConstructorFragment.kt"

Android permissions are handled. Check "GrandPrixFragment.kt"

Location is used to meet the hardware requirements.