December 15, 2023

Introduction to iOS - Final Exam

Duration: 2 hours

The content of this exam should cover everything we've learned together in class. I will be evaluating you based on the following points:

- Coding in Swift

- Using UIKit

- Building your UI through nib files

- Referencing IBOutlets and IBActions (e.g. UIButtons)

- Applying basic concepts in Clean Architecture (e.g. ViewModels)

- Simple Dependency Injection (of your View Models)

- Navigations

- Table Views & Picker Views

- Using User Defaults to save your user's preferences

Content

You were asked by the FIA to build their first F1 app to showcase their competing teams in the Formula 1 World Championship.
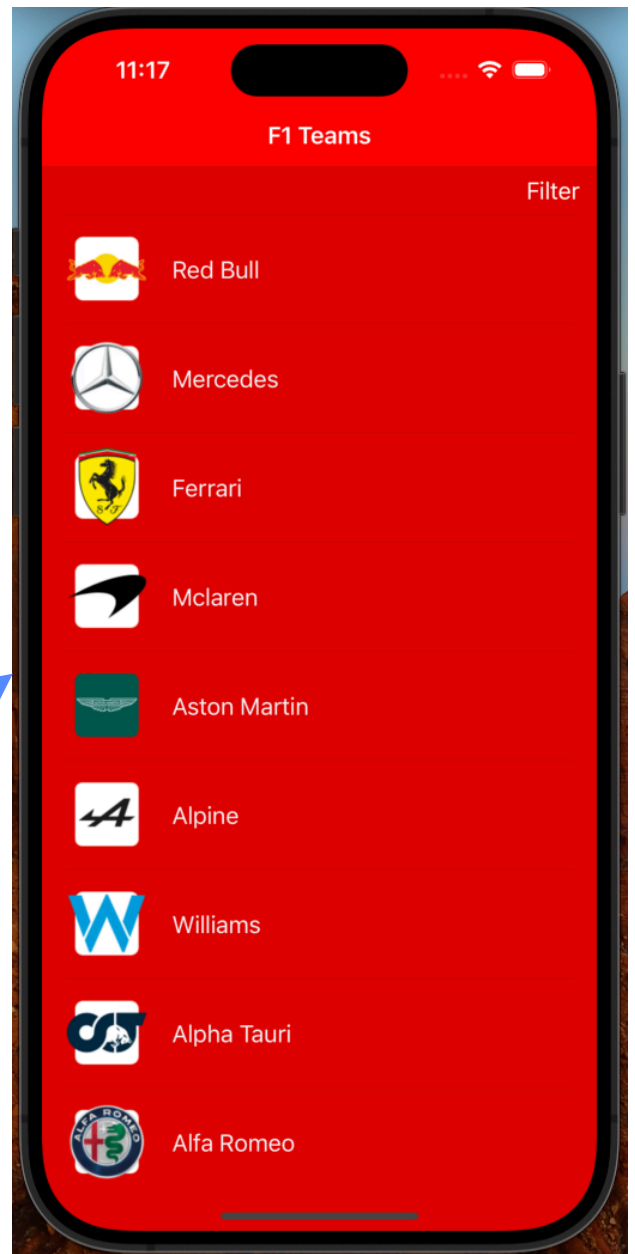
You will be creating four screens

- Home Screen (Also known as the ViewController)

- Teams View Controller with its viewModel

- Filter View Controller with its viewModel

- Detail View Controller with its viewModel

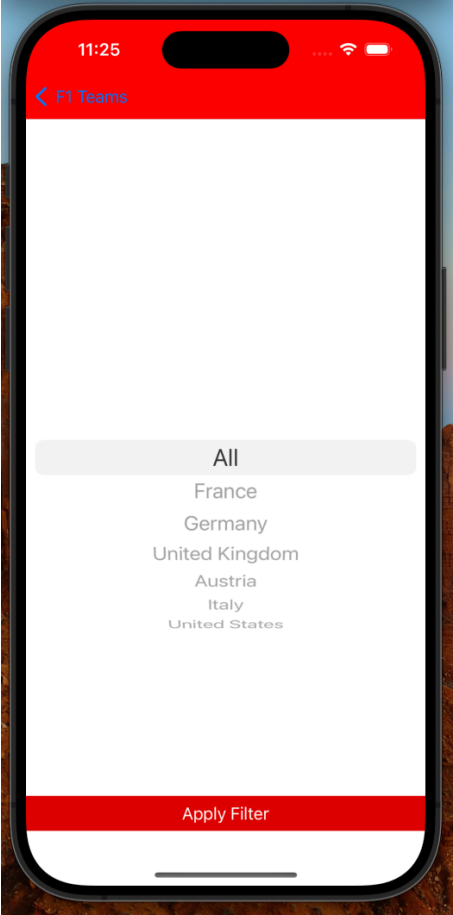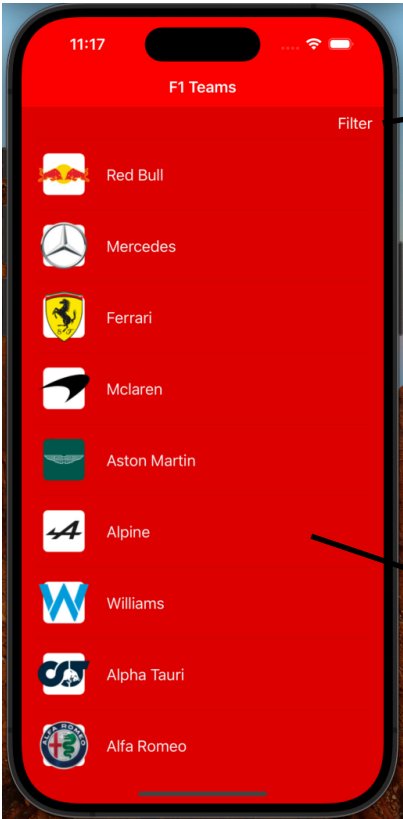Please find below the UIs of the above mentioned Screens.

Home Screen

Teams View Controller

Filter View Controller

Teams View Controller

Detail View Controller

Requirements

In order to populate your Table View and Detail Screen, you must create and use a list of Team Class Object:

```swift
enum Country: String {
    case all = "All"
    case france = "France"
    case germany = "Germany"
    case usa = "United States"
    case austria = "Austria"
    case italy = "Italy"
    case uk = "United Kingdom"
}

class Team {
    let name: String
    let description: String
    let image: String
    let country: Country

    init(name: String, description: String, image: String, country: Country) {
        self.name = name
        self.description = description
        self.image = image
        self.country = country
    }
}
```
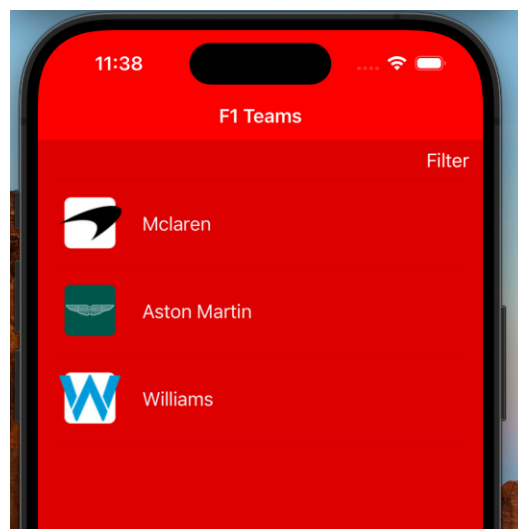
Your Table View should only contain cells which display an image, representing the team's logo, and the name of that team.

When populating your Table View, you should display all of the teams by default by using the filter option ALL by default.

If the user selects a specific country, then only teams originating from that country should be displayed like the example below:

You will be given a text file with the entire texts needed to display the content, a folder with an F1 logo and each team's respective logo.

Submission Requirement

Before submitting, make sure to put your project inside a folder with the following name and to send it to me through *AirDrop*:

FirstName-*LastName*-iOS-Exam (e.g. Rami-Moubayed-iOS-Exam)