iOS native mobile coursework

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```swift
//
//  AirPollutionModelData.swift
//  CourseWork2Starter
//
//  Created by Dilan Jayamanne on 02/04/23.
//

import

// MARK: - AirPollutionModelData
struct AirPollutionModelData  Codable
    let coord  Coord
    let list   AirPollutionDataList



// MARK: - Coord
struct Coord Codable
    let lon   Double
    let lat   Double




// MARK: - AirPollutionDataList
struct AirPollutionDataList Codable
    let dt  Int
    let main  AirPollutionDataMain
    let components  AirPollutionDataComponents



// MARK: - AirPollutionDataMain
struct AirPollutionDataMain Codable
    let aqi Int


// MARK: - AirPollutionDataComponents
struct AirPollutionDataComponents Codable
    let co Double
    let no Double
```

```swift
    let no2 Double
    let o3 Double
    let so2 Double
    let pm2_5 Double
    let pm10 Double
    let nh3 Double



//
//  PollutionView.swift
//  Coursework2
//
//  Created by GirishALukka on 30/12/2022.
//

import

struct PollutionView  View

    // @EnvironmentObject and @State varaibles here
    //@EnvironmentObject var PollutionData:
AirPollutionModelData
    @EnvironmentObject var modelData  ModelData
    @State var locationString  String   "Location
loading..."


    var body  some View

        ZStack

            // Use ZStack for background images
            Image "background"
                resizable
                ignoresSafeArea
                blur radius  7

            VStack
                Text "  locationString "
                    padding EdgeInsets top  20  leading
10  bottom  50  trailing  10
                    font  title
                    foregroundColor  black
                    shadow color  black  radius  0.5
                    multilineTextAlignment  center
```

```
ScrollView
    VStack spacing  30

Text "   Int  modelData forecast  current temp  ºC"
                    padding
                    font  largeTitle

 foregroundColor modelData forecast  current feelsLike
15   Color red  30.0 255  green  41.0 255  blue
193.0 255    Color red  186.0 255  green  75.0 255  blue
15.0 255

                    background

RoundedRectangle cornerRadius  10

 foregroundColor modelData forecast  current feelsLike
15   Color blue opacity 0.1    Color orange opacity 0.1


                    HStack
                        AsyncImage url  URL string
"https://openweathermap.org/img/wn/  modelData forecast
current weather 0       @2x.png"
                            frame width  70  height
70

Text "  modelData forecast  current weather 0
        rawValue "
                            padding
                            font  title2
                            foregroundColor  black
                            shadow color   black
radius  0.5

                Text "Feels Like:
   Int  modelData forecast  current feelsLike  ºC"
                    padding

 foregroundColor modelData forecast  current feelsLike
15   Color red  30.0 255  green  41.0 255  blue
193.0 255    Color red  186.0 255  green  75.0 255  blue
15.0 255

                    background

RoundedRectangle cornerRadius  10
```

```
foregroundColor modelData forecast  current feelsLike
15   Color blue opacity 0.1    Color orange opacity 0.1



                          Text "Air Quality
Data:"  bold   font  title2



                     HStack
                        VStack
                           Image "so2"
                              resizable


 aspectRatio contentMode   fit

 clipShape RoundedRectangle cornerRadius  10

                              Text "  String format
"%.2f" modelData airPollution  list 0            so2
0.0  "

                         VStack
                           Image "no"
                              resizable


 aspectRatio contentMode    fit

 clipShape RoundedRectangle cornerRadius  10

                              Text "   String
"%.2f" modelData airPollution  list 0            no2
0.0  "

                         VStack
                           Image "voc"
                              resizable


 aspectRatio contentMode    fit

 clipShape RoundedRectangle cornerRadius  10
                              Text "   String
"%.2f" modelData airPollution  list 0            co
0.0  "

                         VStack
```

```swift
                                Image("pm")
                                    .resizable()
                    .aspectRatio(contentMode: .fit)
                    .clipShape(RoundedRectangle(cornerRadius: 10))
                                Text("\(String(format: "%.2f", modelData.airPollution?.list[0].pm10 ?? 0.0))")
            .onAppear {
                Task.init {
                    let try await modelData.loadAirPollutionData()
                    self.locationString = await getLocFromLatLong(lat: modelData.forecast?.lat, lon: modelData.forecast?.lon)
                }
            }

struct Pollution_Previews: PreviewProvider {
    static var previews: some View {
        PollutionView().environmentObject(ModelData())
    }
}

//
//  LocationHelper.swift
//  Coursework2
//
//  Created by G Lukka.
//

import

import
```

```swift
func getLocFromLatLong lat  Double  lon  Double  async
String

    var               String
    var           CLPlacemark
    let        CLLocationCoordinate2D
CLLocationCoordinate2D latitude      longitude

    let     CLGeocoder   CLGeocoder

    let     CLLocation   CLLocation latitude
     latitude  longitude         longitude
    do
               try await

       if           count   0

          if           0         isEmpty

                              0

            else
                              0   locality
    "No City"


        return

    catch
       print "Reverse geodecoe fail:
       localizedDescription "
                    "No City, No Country"

      return


    return "Error getting Location"


//
//  WindDirHelper.swift
//  Coursework2
//
//  Created by G Lukka.
```

```swift
//

import

func convertDegToCardinal(deg: Int) -> String {
    let ["N", "NNE", "NE", "ENE", "E", "ESE", "SE", "SSE", "S", "SSW", "SW", "WSW", "W", "WNW", "NW", "NNW", "N"]

    return [Int(round(Double(360) / 22.5).nextDown) % 1]
}



import

class ModelData: ObservableObject {

    @Published var forecast: Forecast
    @Published var userLocation: String = ""
    @Published var airPollution: AirPollutionModelData


    init {
        self.forecast = load("london.json")
    }


    // function to load weather data from API
    func loadData(lat: Double, lon: Double) async throws -> Forecast {

        let URL string = "https://api.openweathermap.org/data/3.0/onecall?lat=\(lat)&lon=\(lon)&units=metric&appid=85b4fd8ba41c782d11db5c52f15fcbf1"

        let URLSession(configuration: default)

        let try await data from


        do {
            //print(data)
            let try JSONDecoder().decode(Forecast.self, from:
```

```swift
                        main async
            self forecast


            return
        catch
            throw


    // function to load air pollution data from API
    func loadAirPollutionData   async throws

        guard let      forecast  lat  let
forecast  lon else
            fatalError "Couldn't find in lat & lon in
forcast data."


        let      URL string
"https://api.openweathermap.org/data/2.5/air_pollution?la
t=      &lon=      &appid=85b4fd8ba41c782d11db5c52f15fcbf
1"

        let          URLSession configuration   default

        let          try await      data from

        do
            let                try
JSONDecoder   decode AirPollutionModelData self   from

                        main async
            self airPollution

    "testing" self airPollution  list 0

            catch
            throw



    func load          Decodable  _          String


        let      Data
```

```swift
        guard let         Bundle main url forResource
         withExtension   nil
        else
            fatalError "Couldn't find               in main
bundle."


        do
                try Data contentsOf
          catch
            fatalError "Couldn't load               from
main bundle:\n          "


        do
          let             JSONDecoder
            return try        decode            self
from
          catch
            fatalError "Couldn't parse              as
          self :\n          "




// This file was generated from JSON Schema using
quicktype, do not modify it directly.
// To parse the JSON, add this file to your project and
do:
//
//   let forecast = try?
newJSONDecoder().decode(Forecast.self, from: jsonData)

import

// MARK: - Forecast
struct Forecast  Codable  Identifiable
    let id   UUID
    let lat  lon  Double
    let timezone  String
    let timezoneOffset  Int
    let current  Current
    let minutely   Minutely
    let hourly   Current
```

```swift
    let daily: Daily

    enum CodingKeys: String, CodingKey {
        case lat, lon, timezone
        case timezoneOffset = "timezone_offset"
        case current, minutely, hourly, daily
    }
}


// MARK: - Current
struct Current: Codable, Identifiable {
    let id: UUID
    let dt: Int
    let sunrise, sunset: Int
    let temp, feelsLike: Double
    let pressure, humidity: Int
    let dewPoint, uvi: Double
    let clouds, visibility: Int
    let windSpeed: Double
    let windDeg: Int
    let weather: Weather
    let windGust, pop: Double
    let rain: Rain

    enum CodingKeys: String, CodingKey {
        case dt, sunrise, sunset, temp
        case feelsLike = "feels_like"
        case pressure, humidity
        case dewPoint = "dew_point"
        case uvi, clouds, visibility
        case windSpeed = "wind_speed"
        case windDeg = "wind_deg"
        case weather
        case windGust = "wind_gust"
        case pop, rain
    }
}


// MARK: - Rain
struct Rain: Codable {
    let the1H: Double

    enum CodingKeys: String, CodingKey {
        case the1H = "1h"
    }
}
```

```swift
// MARK: – Weather
struct Weather: Codable {
    let id: Int
    let main: Main
    let weatherDescription: Description
    let icon: String

    enum CodingKeys: String, CodingKey {
        case id, main
        case weatherDescription = "description"
        case icon
    }
}


// MARK: – Main
enum Main: String, Codable {
    case clear = "Clear"
    case clouds = "Clouds"
    case rain = "Rain"
    case mist = "Mist"
    case smoke = "Smoke"
    case haze = "Haze"
    case dust = "Dust"
    case fog = "Fog"
    case sand = "Sand"
    case ash = "Ash"
    case squall = "Squall"
    case tornado = "Tornado"
    case snow = "Snow"
    case drizzle = "Drizzle"
    case thunderstorm = "Thunderstorm"
}

// MARK: – Description
enum Description: String, Codable {
    case brokenClouds = "broken clouds"
    case clearSky = "clear sky"
    case fewClouds = "few clouds"
    case lightRain = "light rain"
    case moderateRain = "moderate rain"
    case overcastClouds = "overcast clouds"
    case scatteredClouds = "scattered clouds"
    case thunderstormWithLightRain = "thunderstorm with light rain"
    case thunderstormWithRain = "thunderstorm with rain"
    case thunderstormWithHeavyRain = "thunderstorm with heavy rain"
}
```

```
    case lightThunderstorm   "light thunderstorm"
    case thunderstorm   "thunderstorm"
    case heavyThunderstorm   "heavy thunderstorm"
    case raggedThunderstorm   "ragged thunderstorm"
    case thunderstormWithLightDrizzle   "thunderstorm
with light drizzle"
    case thunderstormWithDrizzle   "thunderstorm with
drizzle"
    case thunderstormWithHeavyDrizzle   "thunderstorm
with heavy drizzle"
    case heavyIntensityDrizzle   "heavy intensity
drizzle"
    case lightIntensityDrizzleRain   "light intensity
drizzle rain"
    case drizzleRain   "drizzle rain"
    case heavyIntensityDrizzleRain   "heavy intensity
drizzle rain"
    case showerRainAndDrizzle   "shower rain and drizzle"
    case heavyShowerRainAndDrizzle   "heavy shower rain
and drizzle"
    case showerDrizzle   "shower drizzle"
    case heavyIntensityRain   "heavy intensity rain"
    case veryHeavyRain   "very heavy rain"
    case extremeRain   "exteme rain"
    case freezingRain   "freezing rain"
    case lightIntensityShowerRain   "light intensity
shower rain"
    case showerRain   "shower rain"
    case heavyIntensityShowerRain   "heavy intensity
shower rain"
    case raggedShowerRain   "ragged shower rain"
    case lightSnow   "light snow"
    case Snow   "Snow"
    case HeavySnow   "Heavy snow"
    case Sleet   "Sleet"
    case LightShowerSleet   "Light shower sleet"
    case ShowerSleet   "Shower sleet"
    case LightRainAndSnow   "Light rain and snow"
    case RainAndSnow   "Rain and snow"
    case LightShowerSnow   "Light shower snow"
    case ShowerSnow   "Shower snow"
    case HeavyShowerSnow   "Heavy shower snow"
    case mist   "mist"
    case Smoke   "Smoke"
    case Haze   "Haze"
    case sandDustWhirls   "sand/dust whirls"
```

```swift
    case fog    "fog"
    case sand    "sand"
    case dust    "dXust"
    case volcanicAsh    "volcanic ash"
    case squalls    "squalls"
    case tornado    "tornado"
    case fewClouds1125    "few clouds: 11-25%"
    case scatteredClouds2550    "scattered clouds: 25-50%"
    case brokenClouds5184    "broken clouds: 51-84%"
    case overcastClouds85100    "overcast clouds: 85-100%"


// MARK: - Daily
struct Daily  Codable  Identifiable
    let id    UUID
    let dt  sunrise  sunset  moonrise  Int
    let moonset  Int
    let moonPhase  Double
    let temp  Temp
    let feelsLike  FeelsLike
    let pressure  humidity  Int
    let dewPoint  windSpeed  Double
    let windDeg  Int
    let windGust  Double
    let weather  Weather
    let clouds  Int
    let pop  Double
    let rain  Double
    let uvi  Double

    enum CodingKeys  String  CodingKey
        case dt  sunrise  sunset  moonrise  moonset
        case moonPhase    "moon_phase"
        case temp
        case feelsLike    "feels_like"
        case pressure  humidity
        case dewPoint    "dew_point"
        case windSpeed    "wind_speed"
        case windDeg    "wind_deg"
        case windGust    "wind_gust"
        case weather  clouds  pop  rain  uvi


// MARK: - FeelsLike
struct FeelsLike  Codable
```

```swift
    let day, night, eve, morn: Double


// MARK: - Temp
struct Temp: Codable {
    let day, min, max, night: Double
    let eve, morn: Double
}


// MARK: - Minutely
struct Minutely: Codable {
    let dt: Int
    let precipitation: Double
}

//
//  NavBar.swift
//  Coursework2
//
//  Created by G Lukka.
//

import

struct NavBar: View {

    @EnvironmentObject var modelData: ModelData

    // Tab view accent color changes to orange if the
temp is > 50 otherwise its blue

    var body: some View {
        TabView {
            Home()
                .tabItem {

                    Label("City", systemImage:
"magnifyingglass")

            CurrentWeatherView()
                .tabItem {

                    Label("WeatherNow", systemImage:
"sun.max")


            HourlyView()
```

```swift
                    tabItem

                        Label "HourlyView"  systemImage
"clock.fill"

                ForecastView
                        tabItem

                        Label "ForecastView"  systemImage
"calendar"

                PollutionView
                        tabItem

                        Label "PollutionView"  systemImage
"aqi.high"

            onAppear
                UITabBar appearance   isTranslucent   false

            accentColor modelData forecast  current temp
15    Color  blue    Color  orange




struct NavBar_Previews  PreviewProvider
    static var previews  some View
        NavBar    environmentObject ModelData




//
//  DailyView.swift
//  Coursework2
//
//  Created by G Lukka.
//

import

struct DailyView  View
    var day   Daily
```

```swift
var body: some View {

    HStack {

        AsyncImage(url: URL(string:
"https://openweathermap.org/img/wn/\(day.weather[0])
@2x.png"))
            .frame(width: 70, height: 70, alignment:
.leading)

        Spacer()

        VStack {

Text("\(day.weather[0].rawValue)")
                .font(.subheadline)

            Text(Date(timeIntervalSince1970:
Int(day.dt)).formatted(.dateTime.weekda
y.day))
                .font(.subheadline)



        Spacer()

        // color changes to orange if the temperature
> 15

Text("\(Int(day.temp.max))°C/\(Int(day.temp.min))°C")
                .foregroundColor(day.temp.max < 15 ?
Color(red: 30.0/255, green: 41.0/255, blue: 193.0/255) :
Color(red: 186.0/255, green: 75.0/255, blue: 15.0/255))
                .background(
                    RoundedRectangle(cornerRadius: 10)
                        .foregroundColor(day.temp.max <
15 ? Color.blue.opacity(0.1) : Color.orange.opacity(0.1))

                .font(.subheadline)
                .frame(alignment: .trailing)


    }
    .padding()
    .foregroundColor(.black)
    .frame(maxWidth: .infinity, alignment: .leading)
```

```swift
                background RoundedRectangle cornerRadius
10  foregroundColor  white  opacity 0.7
                shadow color    white   radius   0.5


struct DailyView_Previews  PreviewProvider
    static var day   ModelData   forecast  daily

    static var previews   some View
        DailyView day  day 0




//
//  SearchView.swift
//  CWK2_23_GL
//
//  Created by GirishALukka on 11/03/2023.
//

import
import

struct SearchView  View
    @EnvironmentObject var modelData  ModelData

    @Binding var isSearchOpen   Bool
    @State var location    ""
    @Binding var userLocation  String

    var body   some View

        ZStack


//              Blur(style: .systemUltraThinMaterial)
//                          .ignoresSafeArea()
//              RoundedRectangle(cornerRadius: 20)
//                              .fill(Color.teal)
//                              .opacity(0.8)
//                              .ignoresSafeArea()

            // color changes to orange if the temperature
> 15
```

```swift
if modelData forecast  current feelsLike
15
            Color blue opacity 0.3

background  ultraThinMaterial opacity 0.7
                ignoresSafeArea
        else
            Color orange opacity 0.3

background  ultraThinMaterial opacity 0.7
                ignoresSafeArea


        VStack

            HStack
                TextField "Enter New Location"  text
self $location  onCommit


CLGeocoder   geocodeAddressString location
                    in



                        if let
        first  location  coordinate latitude
                        let
        first  location  coordinate longitude

                        Task
                        let     try await
modelData loadData lat     lon
                    userLocation
location


                        isSearchOpen toggle




                    padding 10
```

```
                              shadow color  blue  radius  10
                              cornerRadius 10
                              fixedSize
                              font  custom "Ariel"  size  26

    textFieldStyle RoundedBorderTextFieldStyle
                              cornerRadius 15


                    Button action

CLGeocoder   geocodeAddressString location
                    in
                              if let
            first  location  coordinate latitude
                              let
            first  location  coordinate longitude
                        Task
                              let     try await
modelData loadData lat      lon
                              userLocation
location


                              isSearchOpen toggle




                    Image systemName
"magnifyingglass"
                        foregroundColor  white
                        font  system size  26
                        padding
                        background

RoundedRectangle cornerRadius  20

 fill modelData forecast  current temp   15
Color blue opacity 0.7   Color orange opacity 0.7
                              shadow color
Color black opacity 0.3  radius  10  x  0  y  5




                    Button action
```

```
self isSearchOpen toggle
                                label
                                 Text "Cancel"
                                  font  title2

                          padding
                          foregroundColor  white
                          background

RoundedRectangle cornerRadius  20

 fill modelData forecast  current temp   15
Color blue opacity 0.7    Color orange opacity 0.7
                                  shadow color
Color black opacity 0.3   radius  10  x  0  y  5
```

```swift
// Custom blur effect
struct Blur  UIViewRepresentable
    var style  UIBlurEffect Style
 systemUltraThinMaterial

    func makeUIView context  Context
UIVisualEffectView
        let        UIVisualEffectView effect
UIBlurEffect style  style
        return


    func updateUIView _        UIVisualEffectView
context  Context

//
//  HomeView.swift
//  CWK2_23_GL
```

```swift
//
//  Created by GirishALukka on 10/03/2023.
//

import
import

struct Home  View

    @EnvironmentObject var modelData  ModelData
    @State var isSearchOpen  Bool   false
    @State  var userLocation  String   ""


    var body   some View

        ZStack
            Image "background2"
                resizable
                ignoresSafeArea
                blur radius  7
            VStack

                Button
                    self isSearchOpen toggle
                  label
                    HStack  spacing  8
                        Image systemName
"location.fill"

                          font  system size  24
//
.foregroundColor(.white)

                        Text "Change Location"
                            bold
                            font  system size  30

//
.foregroundColor(.white)

                    padding  vertical  12
                        padding  horizontal  16
                        foregroundColor  white
                        background

RoundedRectangle cornerRadius  20
```

```
fill modelData forecast  current temp   15
Color blue opacity 0.7    Color orange opacity 0.7
                          shadow color
Color black opacity 0.3   radius  10  x  0  y  5



              sheet isPresented  $isSearchOpen
                 SearchView isSearchOpen
$isSearchOpen  userLocation  $userLocation

 background BackgroundClearView
                  padding



          ScrollView
              VStack

                    Text userLocation
                        font  title
                        foregroundColor  black
                        shadow color   black
radius  0.5

 multilineTextAlignment  center

                    Text Date timeIntervalSince1970
          Int  modelData forecast  current dt
0

 formatted  dateTime year   hour   month   day
                    padding
                    font  largeTitle
                    foregroundColor  black
                    shadow color   black  radius  1
                    padding EdgeInsets top  10
leading  10  bottom  20  trailing  10

                    Spacer

                    Text "Temp:
   Int  modelData forecast  current temp  ºC"
                        padding
                        font  title2
```

```
                              shadow color   black
radius  0.5


 foregroundColor modelData forecast  current feelsLike
15   Color red  30.0 255  green  41.0 255  blue
193.0 255    Color red  186.0 255  green  75.0 255  blue
15.0 255
                            background

RoundedRectangle cornerRadius  10

 foregroundColor modelData forecast  current feelsLike
15   Color blue opacity 0.1    Color orange opacity 0.1


                    Text "Humitidy:
   Int  modelData forecast  current humidity  %"
                       padding
                       font  title2
                       foregroundColor  black
                       shadow color   black
radius  0.5


                    Text "Pressure:
   Int  modelData forecast  current pressure   hpa"
                       padding
                       font  title2
                       foregroundColor  black
                       shadow color   black
radius  0.5


                    HStack
                       AsyncImage url  URL string
"https://openweathermap.org/img/wn/  modelData forecast
current weather 0      @2x.png"
                          frame width  70  height
70

Text "  modelData forecast  current weather 0
     rawValue "
                       padding
                       font  title2
                       foregroundColor  black
                       shadow color   black
radius  0.5
```

```swift
                            Spacer




                onAppear
                    Task init
                        self userLocation   await
getLocFromLatLong lat  modelData forecast  lat  lon
modelData forecast  lon
                        self modelData userLocation
userLocation




struct Home_Previews  PreviewProvider
    static var previews  some View
        Home   environmentObject ModelData



struct BackgroundClearView  UIViewRepresentable
    func makeUIView context  Context     UIView
        let        UIView
                    main async
              superview  superview  backgroundColor
 clear


        return


    func updateUIView _        UIView  context  Context



    //
```

```swift
//  Hourly.swift
//  Coursework2
//
//  Created by G Lukka.
//

import

struct HourlyView  View

    @EnvironmentObject var modelData  ModelData
    @State var locationString  String   ""


    var body  some View
        ZStack
            Image "background"
                resizable
                ignoresSafeArea
                blur radius  7

            VStack
                Text "  locationString "  font  title
                    foregroundColor  black
                    shadow color  black  radius  0.5
                    multilineTextAlignment  center
                    padding  top

                List
                    // color changes to orange if the
temperature > 15
                    ForEach modelData forecast  hourly
    in
                        HourCondition current




 listRowBackground modelData forecast  current temp   15
   Color  blue  opacity 0.1
Color  orange  opacity 0.1



                scrollContentBackground  hidden

        onAppear
            Task init
```

```
                    self locationString   await
getLocFromLatLong lat  modelData forecast  lat  lon
modelData forecast  lon




struct Hourly_Previews  PreviewProvider
    static var previews  some View
        HourlyView   environmentObject ModelData




//
//  HourCondition.swift
//  Coursework2
//
//  Created by G Lukka.
//

import

struct HourCondition  View
    var current    Current


    var body  some View

        ZStack
            HStack  spacing  8
                Text Date timeIntervalSince1970
            Int  current dt     formatted  dateTime ho
ur   weekday
                        font  headline
                        frame alignment   leading
                Spacer

                AsyncImage url  URL string
"https://openweathermap.org/img/wn/  current weather 0
    @2x.png"
                        frame width  70  height  70
```

```swift
Text "  current weather 0                    rawValue "
                    font  subheadline
                    frame alignment   leading

            Spacer
            // color changes to orange if the
temperature > 15
            Text "   Int  current temp  °C"
                    foregroundColor current temp   15
Color red  30.0 255  green  41.0 255  blue  193.0 255
Color red  186.0 255  green  75.0 255  blue  15.0 255
                    background
                    RoundedRectangle cornerRadius
10

                            foregroundColor current temp
  15    Color blue opacity 0.1
Color orange opacity 0.1

                    font  subheadline
                    frame alignment   trailing

            padding
            foregroundColor  black
            frame maxWidth    infinity  alignment
  leading
            background RoundedRectangle cornerRadius
10  foregroundColor  white  opacity 0.7
            shadow color   white  radius  0.5




struct HourCondition_Previews  PreviewProvider
    static var hourly   ModelData  forecast  hourly

    static var previews  some View
        HourCondition current  hourly 0




//
//  Forecast.swift
//  Coursework2
```

```swift
//
//  Created by G Lukka.
//

import

struct ForecastView  View
    @EnvironmentObject var modelData  ModelData
    @State var locationString  String  "Location
loading..."

    var body  some View

        ZStack
            Image "background2"
                resizable
                ignoresSafeArea
                blur radius  7

            VStack
                Text "  locationString "  font  title
                    foregroundColor  black
                    shadow color  black  radius  0.5
                    padding EdgeInsets top  20  leading
10  bottom  10  trailing  10
                List
                    ForEach modelData forecast  daily
    in

                        DailyView day


 listRowBackground modelData forecast  current temp   15
  Color  blue  opacity 0.2
Color  orange  opacity 0.2



                scrollContentBackground  hidden


        onAppear
            Task init
                self locationString  await
getLocFromLatLong lat  modelData forecast  lat  lon
modelData forecast  lon
```

```swift
struct Forecast_Previews  PreviewProvider
    static var previews  some View
        ForecastView   environmentObject ModelData



//
//  Conditions.swift
//  Coursework2
//
//  Created by G Lukka.
//

import

struct CurrentWeatherView  View

    @EnvironmentObject var modelData  ModelData

    @State var locationString  String   "Location
loading..."



    var body  some View
        ZStack

            Image "background2"
                resizable
                ignoresSafeArea
                blur radius  7


            VStack

                Text "  locationString "
                    font  title
                    foregroundColor  black
                    shadow color  black  radius  0.5
                    multilineTextAlignment  center
                    padding
```

```swift
ScrollView
    VStack  spacing  30
        // Text color changes according
to the temperature

Text "   Int  modelData forecast  current temp  ºC"
                        padding
                        font  system size  60


 foregroundColor modelData forecast  current feelsLike
15   Color red  30.0 255  green  41.0 255  blue
193.0 255   Color red  186.0 255  green  75.0 255  blue
15.0 255
                    background

RoundedRectangle cornerRadius  10

 foregroundColor modelData forecast  current feelsLike
15   Color blue opacity 0.1   Color orange opacity 0.1




        HStack
            AsyncImage url  URL string
"https://openweathermap.org/img/wn/  modelData forecast
current weather 0      @2x.png"
                    frame width  70  height
70

Text "  modelData forecast  current weather 0
    rawValue "
                        padding
                        font  title2
                        foregroundColor  black
                        shadow color   black
radius  0.5



        // color changes to orange if the
temperature > 15
            Text "Feels Like:
  Int  modelData forecast  current feelsLike  ºC"  paddi
ng
```

```
foregroundColor modelData forecast  current feelsLike
15   Color red  30.0 255  green  41.0 255  blue
193.0 255    Color red  186.0 255  green  75.0 255  blue
15.0 255


 font Font custom "Helvetica"  size  24
                                background

RoundedRectangle cornerRadius  10

 foregroundColor modelData forecast  current feelsLike
15   Color blue opacity 0.1    Color orange opacity 0.1


                    HStack

                         Text "Wind Speed:
  String format  "%.0f"
modelData forecast  current windSpeed   m/s"
                         Text "Direction:
  convertDegToCardinal deg modelData forecast  current wi
ndDeg  "




                    HStack

                         Text "Humidity:
  modelData forecast  current humidity  %"
                         Spacer
                         Text "Pressure:
  modelData forecast  current pressure  hPg"
                         padding


                    HStack

                    Label

Text "  Date timeIntervalSince1970
          Int  modelData forecast  current sunrise
    0    formatted  dateTime hour  minute    "
                         icon
```

```swift
                                    Image systemName
"sun.and.horizon.fill"  foregroundColor  yellow


                        Label

Text "  Date timeIntervalSince1970
                Int  modelData forecast  current sunset
0     formatted  dateTime hour   minute     "
                            icon
                        Image systemName
"sun.and.horizon.fill"  foregroundColor  yellow



                        padding

                    padding   font  title2




            foregroundColor  black
            shadow color   black   radius  0.5


        onAppear
            Task init
                self locationString   await
getLocFromLatLong lat  modelData forecast  lat  lon
modelData forecast  lon




struct Conditions_Previews  PreviewProvider
    static var previews  some View
        CurrentWeatherView
            environmentObject ModelData


import
```

```swift
import

struct ContentView  View
    var body   some View
        NavBar



struct ContentView_Previews  PreviewProvider
    static var previews   some View
        ContentView
```