Michigan UP Adventure Map - Android Project Setup Guide

📁 Project Structure

Create these files in your Windsurf project:

```
UPAdventureMap/
├── app/
│   ├── src/
│   │   └── main/
│   │       ├── java/com/uptrip/adventuremap/
│   │       │   └── MainActivity.kt
│   │       ├── res/
│   │       │   ├── layout/
│   │       │   ├── values/
│   │       │   │   └── strings.xml
│   │       │   └── mipmap/
│   │       └── AndroidManifest.xml
│   └── build.gradle
├── build.gradle
└── settings.gradle
```

📄 File Contents

1. settings.gradle (Project root)

```gradle
include ':app'
rootProject.name = "UPAdventureMap"
```

2. build.gradle (Project root)

```gradle
buildscript {
    ext.kotlin_version = '1.8.0'
    repositories {
        google()
        mavenCentral()
    }
    dependencies {
        classpath 'com.android.tools.build:gradle:8.0.0'
        classpath "org.jetbrains.kotlin:kotlin-gradle-plugin:$kotlin_version"
    }
}

allprojects {
    repositories {
        google()
        mavenCentral()
    }
}
```

3. app/build.gradle

```gradle
apply plugin: 'com.android.application'
apply plugin: 'kotlin-android'

android {
    compileSdk 33

    defaultConfig {
        applicationId "com.uptrip.adventuremap"
        minSdk 24
        targetSdk 33
        versionCode 1
        versionName "1.0"
    }

    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android-optimize.txt'), 'proguard-ru
        }
    }

    compileOptions {
        sourceCompatibility JavaVersion.VERSION_1_8
        targetCompatibility JavaVersion.VERSION_1_8
    }

    kotlinOptions {
        jvmTarget = '1.8'
    }
}

dependencies {
    implementation 'androidx.core:core-ktx:1.9.0'
    implementation 'androidx.appcompat:appcompat:1.6.1'
    implementation 'com.google.android.gms:play-services-location:21.0.1'
}
```

4. app/src/main/AndroidManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.uptrip.adventuremap">

    <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
    <uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
    <uses-permission android:name="android.permission.INTERNET" />

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="UP Adventure Map"
        android:theme="@style/Theme.AppCompat.Light.NoActionBar">

        <activity
            android:name=".MainActivity"
            android:screenOrientation="landscape"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>

    </application>

</manifest>
```

5. app/src/main/res/values/strings.xml

```xml
<resources>
    <string name="app_name">UP Adventure Map</string>
</resources>
```

🛠️ Building the APK

Using Windsurf Terminal:

```bash
# Navigate to project directory
cd UPAdventureMap

# Build debug APK
./gradlew assembleDebug

# Find your APK at:
# app/build/outputs/apk/debug/app-debug.apk
```

Or use Android Studio:

1. Open project in Android Studio
2. Build → Build Bundle(s) / APK(s) → Build APK(s)
3. Locate APK in `app/build/outputs/apk/`

📱 Installing on Your Phone

1. **Enable Developer Options** on your Android phone:
   - Settings → About Phone → Tap "Build Number" 7 times

2. **Enable "Install Unknown Apps"**:
   - Settings → Security → Unknown Sources → Allow

3. **Transfer and Install**:
   - Copy the APK to your phone via USB/email/cloud
   - Open the APK file on your phone
   - Tap "Install"

🎮 App Features

- **2D Game-Style Map**: Colorful, animated Michigan UP map
- **Interactive Locations**: Tap any stop for details
- **GPS Tracking**: Shows your location in real-time (when available)
- **Offline Ready**: Works without internet
- **Pinch to Zoom**: Zoom in/out of the map
- **Drag to Pan**: Move around the map
- **Route Visualization**: See your entire trip path
- **Alternative Routes**: Built-in backup routes

🎨 Customization Tips

Want to modify the app? Here are some easy changes:

Change Colors:

```kotlin
// In GameMapView.kt
private val mapPaint = Paint().apply {
    color = Color.parseColor("#2E7D32") // Change this hex color
}
```

Add New Locations:

```kotlin
// In tripLocations list
TripLocation("New Place", "Description", latitude, longitude, LocationType.ATTRACTION)
```

Modify Icons:

Look for the `draw*Icon` functions and modify the shapes/colors

📝 Google My Maps Setup

1. Go to Google My Maps
2. Click "Create a New Map"
3. Click "Import" and upload the CSV file
4. Customize icons and colors as desired
5. Share the map or download for offline use

🚗 Have an Amazing Trip!

Your Michigan UP Adventure awaits! This app will help you navigate even in areas with no cell service.
Safe travels! 🏞️ 🌲 🌊