

Desenvolvimento Full Stack

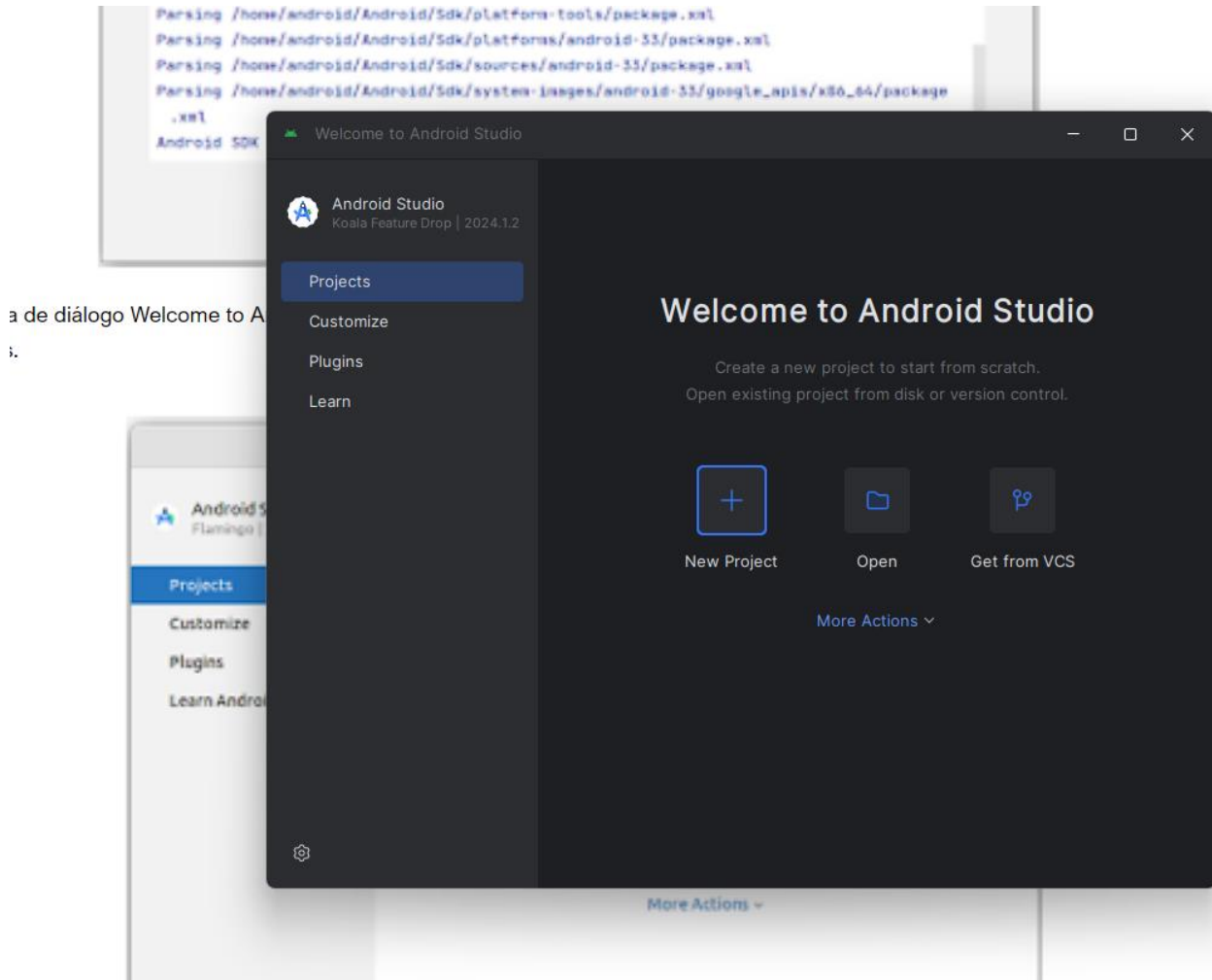
Nível 3: Lidando com sensores em dispositivos móveis

2023.1

Mundo 4 Período 2024.3

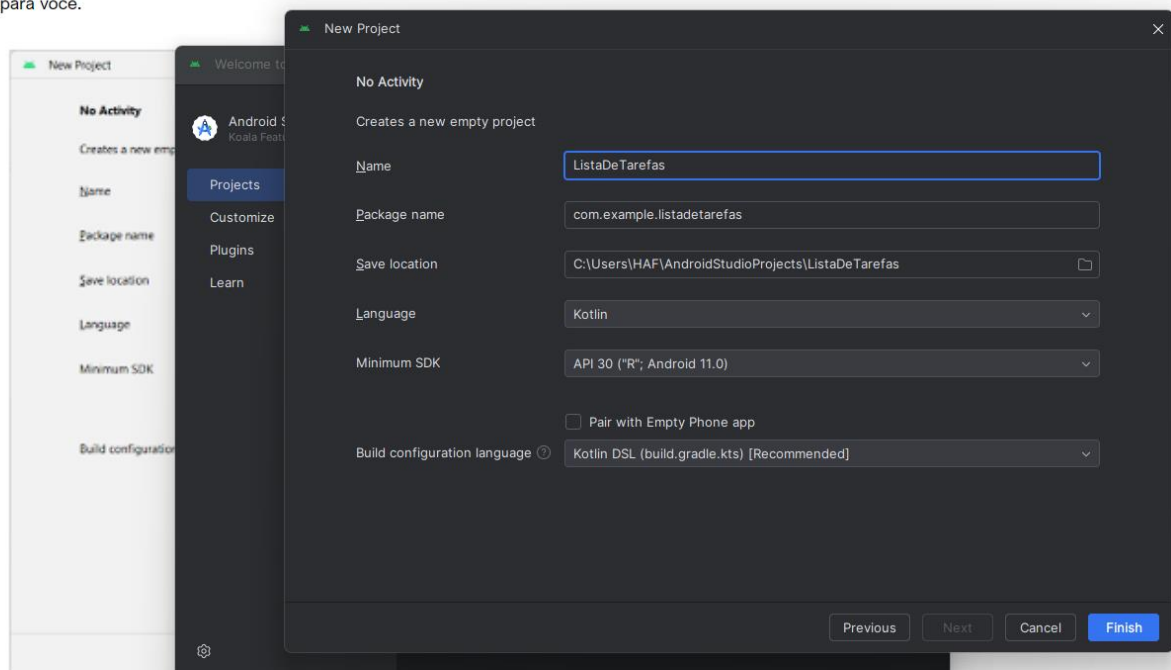
Breno Félix de Souza

Microatividade 1: Implementar a visão geral e melhores práticas para acesso a sensores



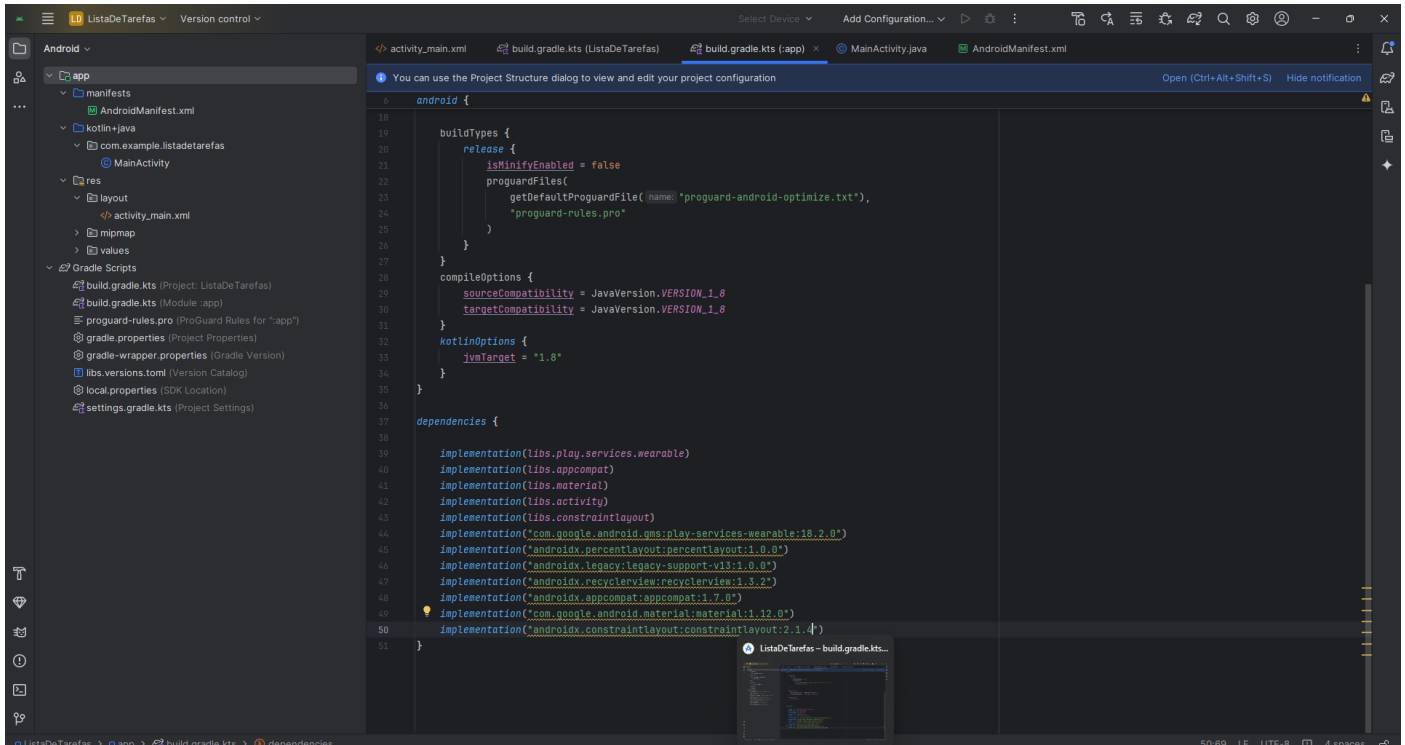
Microatividade 2: Criando um novo projeto no Android Studio

Como com exemplos anteriores. Em "Minimum SDK", utilizaremos a API 30, Android 11.0 (R), por ser a mais recente, depois basta clicar em "Finish" e o Android Studio criará o projeto para você.

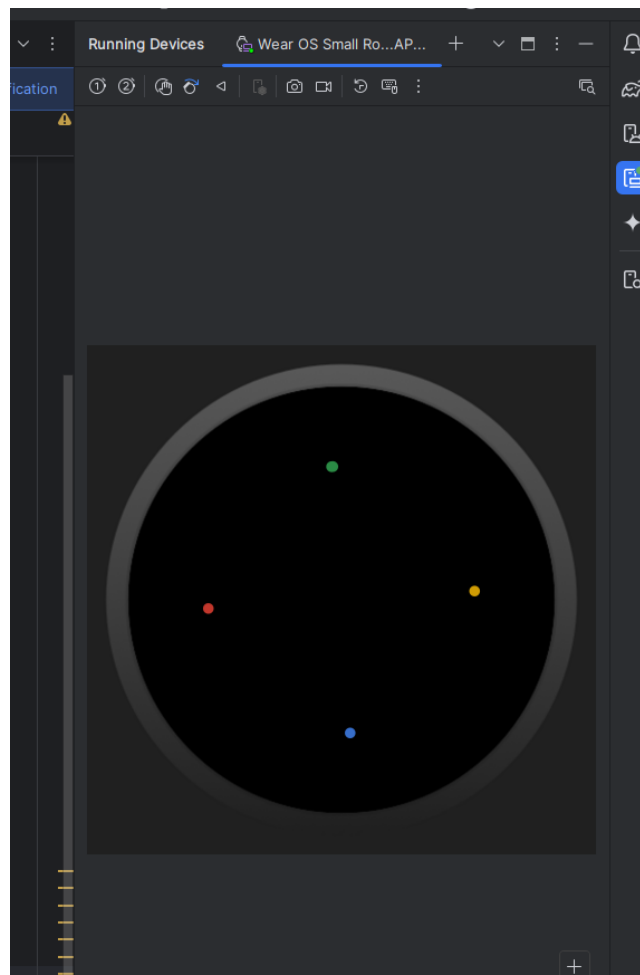


- Resultados esperados ✨

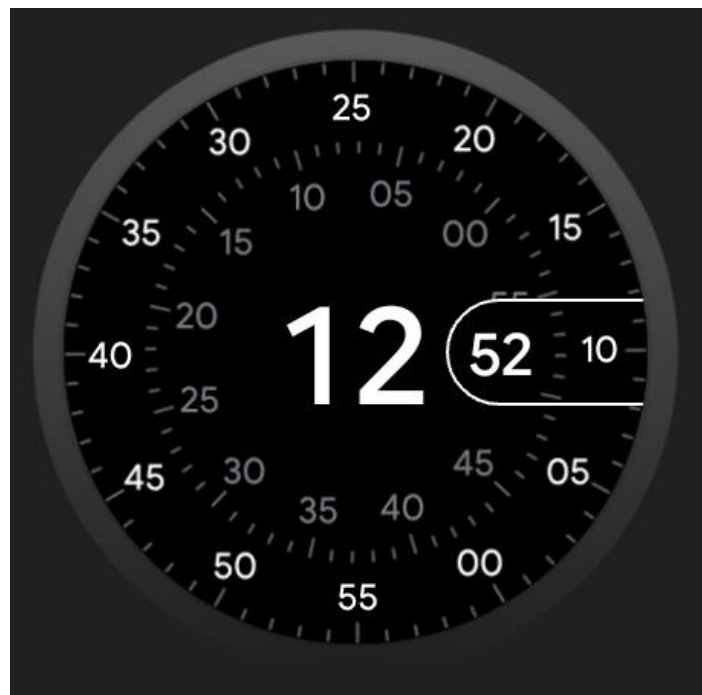
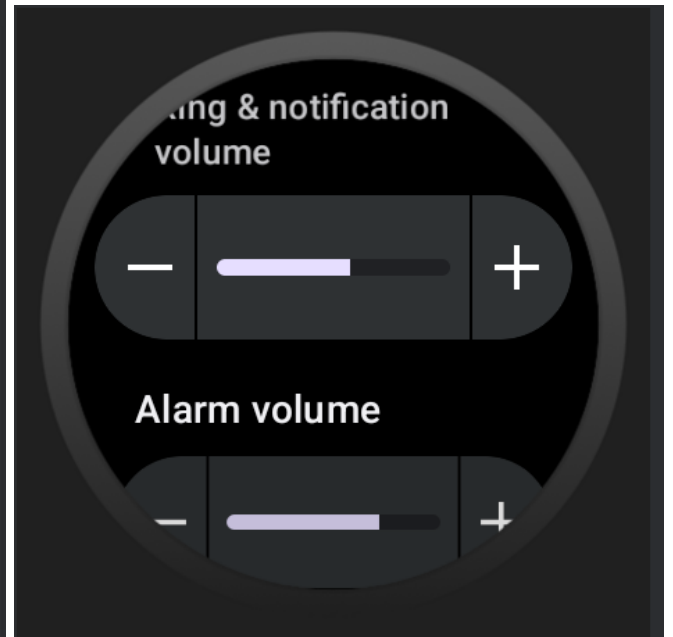
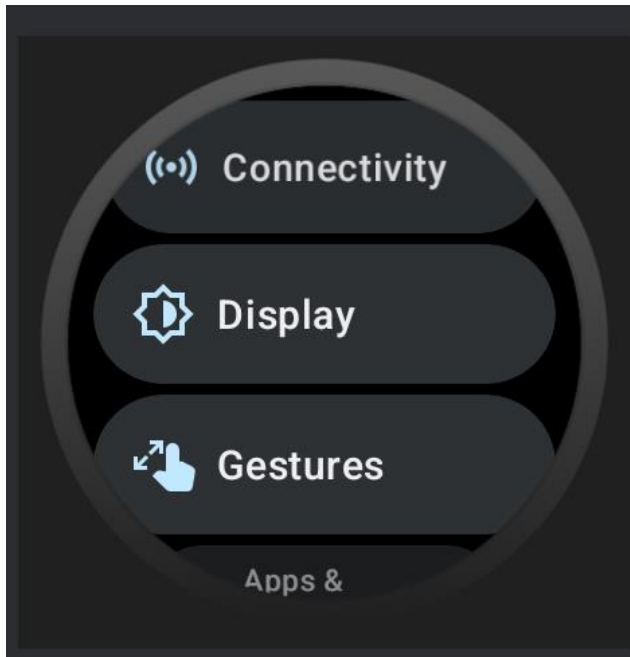
Microatividade 3: Arquivos de Lógica e Configurações



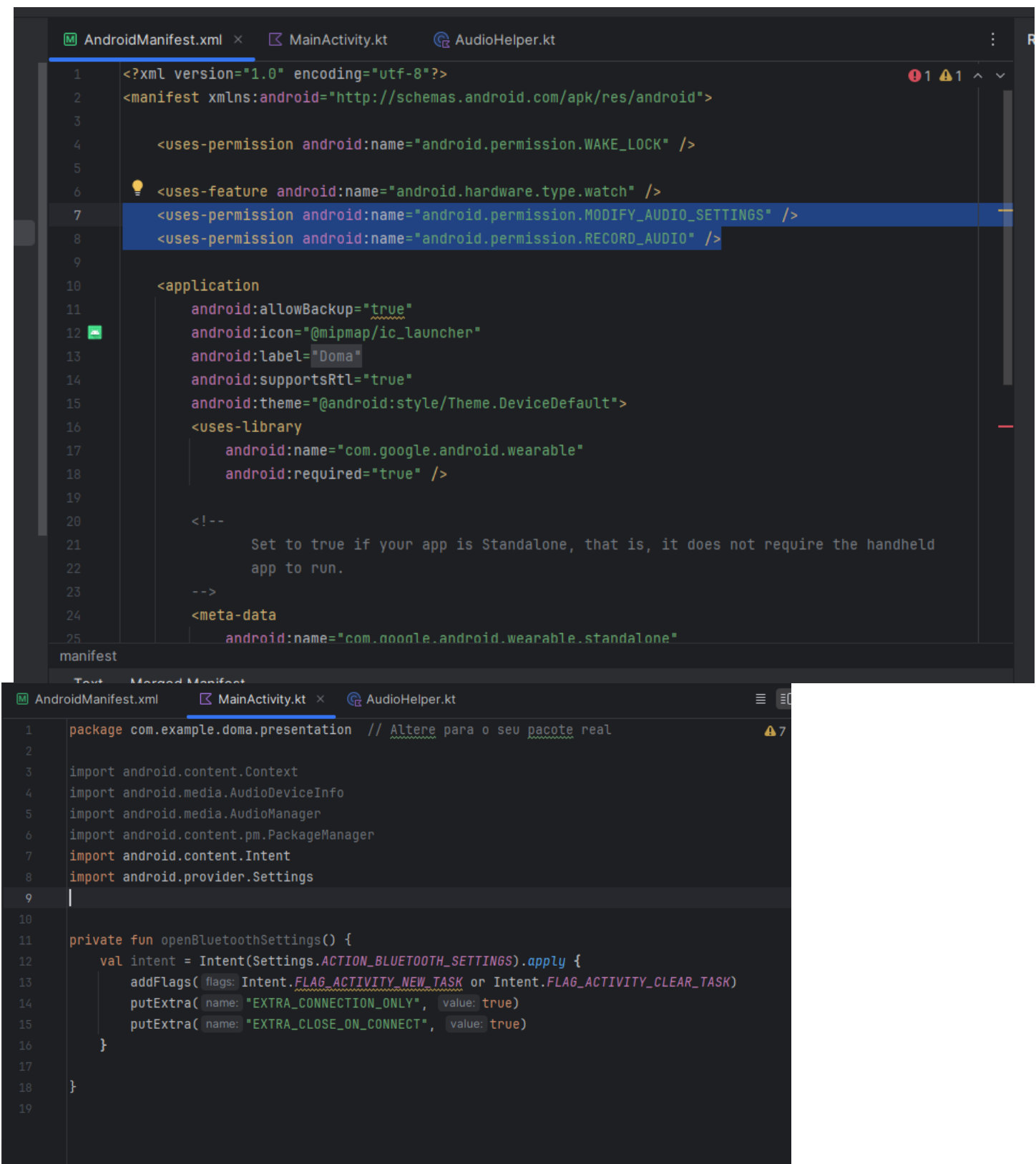
Microatividade 4: Criando um emulador



Microatividade 5: Fazer capturas de telas com app complementar



Missão Prática | Lidando com sensores em dispositivos móveis



The image displays two screenshots of the Android Studio IDE, showing the development of an Android application.

The top screenshot shows the `AndroidManifest.xml` file. The code defines the application's permissions and features. The permissions listed are `android.permission.WAKE_LOCK`, `android.permission.MODIFY_AUDIO_SETTINGS`, and `android.permission.RECORD_AUDIO`. The application is named "Doma" and uses the theme `@android:style/Theme.DeviceDefault`. It also includes the `com.google.android.wearable` library.

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android">
    <uses-permission android:name="android.permission.WAKE_LOCK" />
    <uses-feature android:name="android.hardware.type.watch" />
    <uses-permission android:name="android.permission.MODIFY_AUDIO_SETTINGS" />
    <uses-permission android:name="android.permission.RECORD_AUDIO" />

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="Doma"
        android:supportsRtl="true"
        android:theme="@android:style/Theme.DeviceDefault">
        <uses-library
            android:name="com.google.android.wearable"
            android:required="true" />

        <!--
            Set to true if your app is Standalone, that is, it does not require the handheld
            app to run.
        -->
        <meta-data
            android:name="com.google.android.wearable.standalone"
            android:value="true" />
    </application>
</manifest>
```

The bottom screenshot shows the `MainActivity.kt` file. The code imports necessary Android classes and defines a function `openBluetoothSettings()` that opens the Bluetooth settings and applies flags to the intent.

```
package com.example.doma.presentation // Altere para o seu pacote real

import android.content.Context
import android.media.AudioDeviceInfo
import android.media.AudioManager
import android.content.pm.PackageManager
import android.content.Intent
import android.provider.Settings

private fun openBluetoothSettings() {
    val intent = Intent(Settings.ACTION_BLUETOOTH_SETTINGS).apply {
        addFlags(Intent.FLAG_ACTIVITY_NEW_TASK or Intent.FLAG_ACTIVITY_CLEAR_TASK)
        putExtra("EXTRA_CONNECTION_ONLY", true)
        putExtra("EXTRA_CLOSE_ON_CONNECT", true)
    }
}
```

```
1 package com.example.doma.presentation
2
3 import android.content.Context
4 import android.content.Intent
5 import android.media.AudioDeviceInfo
6 import android.media.AudioManager
7 import android.content.pm.PackageManager
8 import android.provider.Settings
9
10 class AudioHelper(private val context: Context) {
11     private val audioManager: AudioManager = context.getSystemService(Context.AUDIO_SERVICE) as AudioManager
12
13     fun audioOutputAvailable(type: Int): Boolean {
14         if (!context.packageManager.hasSystemFeature(PackageManager.FEATURE_AUDIO_OUTPUT)) {
15             return false
16         }
17
18         return audioManager.getDevices(AudioManager.GET_DEVICES_OUTPUTS).any { it.type == type }
19     }
20
21     fun openBluetoothSettings() {
22         val intent = Intent(Settings.ACTION_BLUETOOTH_SETTINGS)
23         context.startActivity(intent)
24     }
25 }
26
```

Endereço do projeto no GITHUB

https://github.com/BrenoSouza2023/Missao_Pratica-_Nivel_3_Mundo_4.git